SHAWNEE STATE UNIVERSITY

1995-96 CATALOG

Putting You in Touch with Success!

To learn more about Shawnee State University, call:

(614) 355-2221
or
1-800-959-2SSU
(admission questions)
or
Office of Admission
Suzanne Shelpman
Director, Admission and Retention
(614) 353-0109 or 353-0199

The Shawnee State University *Catalog* is published annually by Shawnee State University, Portsmouth, Ohio

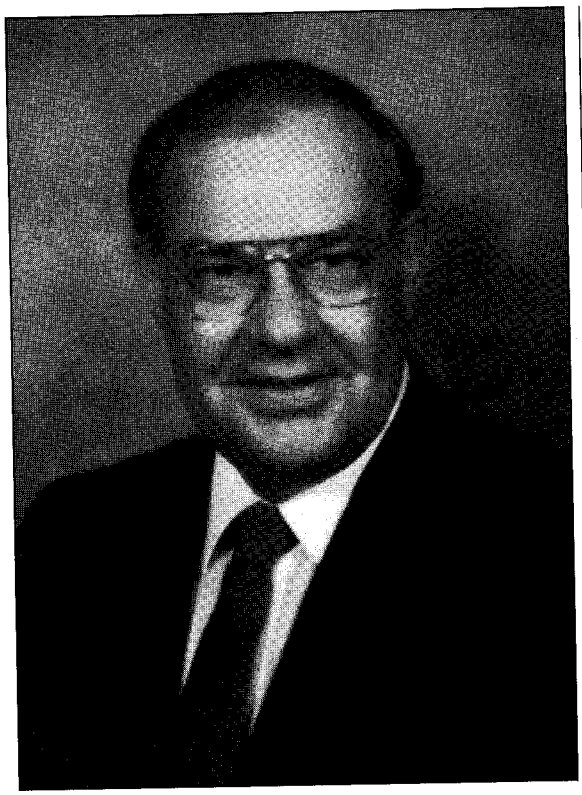
Non-profit rate—
Permit No. 93
Portsmouth, Ohio

Post Office Address:
Shawnee State University
940 Second Street
Portsmouth, Ohio 45662-4344

The Shawnee State University 1995-96 *Catalog* was completely written, typeset, and keylined on the Shawnee State campus. Photo credits: Roy Green, pgs. 56, 73, 83, and 108; Professor John Kelley, pg. 163; all remaining photos, Shawnee State University, Printing & Graphic Services.

To all new students

If you are entering Shawnee State University in 1995-96, keep this book. The requirements outlined here are the ones you must meet for graduation. However, Shawnee State University reserves the right to make changes in its programs.



Welcome

This catalog contains the key that will open the doors of your future.

Between its covers, you'll find the history and mission of Shawnee State, the academic year calendar, admission information, degree and graduation requirements, fees and how to pay them through financial aid, and information about many of the Shawnee State people who are dedicated to helping you become a college-educated person.

But, best of all, you will find course descriptions. Each one represents a small key to knowledge. When the courses are combined to meet graduation requirements for a degree, they form a single master key to a higher quality of life that a college education brings you.

I strongly encourage you to open as many doors as possible during your studies at Shawnee State. Explore. Experiment. Enjoy. Step into classes outside your major and into someone else's major and become excited about learning. I challenge you to help us put you in touch with success!

Clive C. Veri
President

How to Reach Us

Mailing Address

Shawnee State University
940 Second Street
Portsmouth, Ohio 45662-4344

Telephone Number

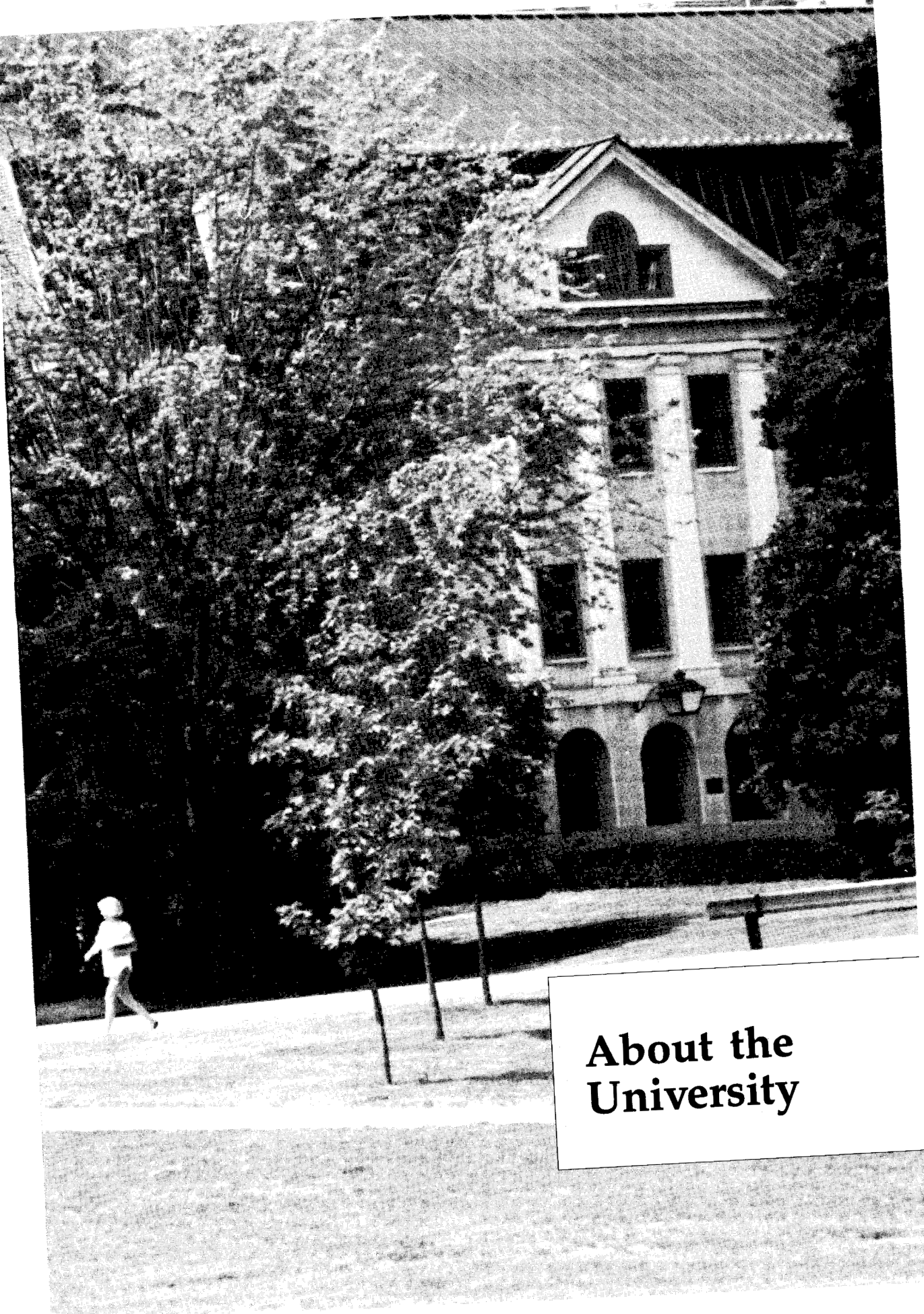
(614) 354-3205

FAX Number

[614] 355=2416

Communication with Shawnee State will be easier if your first message is addressed to the officers named below. The telephone numbers listed provide direct access to those offices.

Academic Assessment Services (Placement Tests): *Learning Center* • 355-2499
Admission and Retention: *Director* • 355-2221
Alumni Affairs: *Assistant Director, Development* • 355-2284
Arts and Humanities, Department of: *Chairperson* • 355-2300
Arts and Sciences, College of: *Dean* • 355-2554
Athletic Center: *Athletic Director* • 355-2285
Athletics, Intercollegiate and Intramural: *Director* • 355-2285
Books: *Bookstore Manager* • 355-2418
Business, Department of: *Chairperson* • 355-2215
Business Office (payment of bills): *Bursar* • 355-2279
Cafeteria: *Manager* • 355-2578
Campus Tours: *Director, Admission* • 355-2221 or 355-2557
Career Planning: *Director, Counseling and Career Services* • 355-2259
Center for Integrative Studies: *Coordinator* • 355-2554
Center for Teacher Education • 355-2451
Clubs and Organizations: *Director, Student Activities* • 355-2217
Continuing Education: *Director* • 355-2494
Counseling: *Director, Counseling and Career Services* • 355-2259
Dental Hygiene Clinic • 355-2241
Developmental Education: *Director* • 355-2277
Disability Services • 355-2456
Donations, Gifts, Bequests: *Director, Development and Community Relations* • 355-2284
Engineering Technologies, Department of: *Chairperson* • 355-2224
Financial Aid: *Director* • 355-2237
G.R.O.W. Program: *Coordinator* • 355-2370
Health Sciences, Department of: *Chairperson* • 355-2225
Housing: *Coordinator* • 355-2217
International Students: *Advisor* • 355-2221
JOBS Student Retention Program: *Director* • 353-6400
Library/Media Services: *Director* • 355-2323
Mathematics, Department of: *Chairperson* • 355-2301
Minority Affairs • 355-2276
Natural Sciences, Department of: *Chairperson* • 355-2301
Orientation, New Student: *Registrar* • 355-2262
Personnel, Faculty: *Provost* • 355-2260
Personnel, Staff: *Director, Personnel* • 355-2420
Presidential and Trustee Affairs: *President* • 355-2289
Professional Studies, College of: *Dean* • 355-2225
Project Discovery: *Coordinator* • 355-2239
Registration: *Registrar* • 355-2262
Social Sciences, Department of: *Chairperson* • 355-2234
Student Advising and Retention (STARS): *Coordinator* • 355-2594 or 355-2592
Student Affairs: *Vice President* • 355-2280
Student Employment: *Director, Counseling and Career Services* • 355-2213
Student Newspaper: *Editor* • 355-2278
Student Senate: *President* • 355-2320
Student Support Services: *Director* • 355-2276
Talent Search: *Director* • 355-2436
Tech Prep: *Director* • 355-2281
Transcripts: *Registrar* • 355-2262
Transfer Admission: *Director, Transfer Placement* • 355-2540
Tutoring: *Learning Center* • 355-2499
University Center: *Information Desk* • 355-2545
Upward Bound: *Director* • 355-2439
Veterans Coordinator: *Director, Financial Aid* • 355-2237



About the University

Shawnee State University: Past and Present

In January of 1975, Shawnee State General and Technical College, created from a merger of the Ohio University regional campus and Scioto Technical College, was chartered by the Ohio Board of Regents to begin operation on July 1, 1975. The college, then operated on two campuses, moved to its present location in 1978. By an act of the Ohio Legislature (Senate Bill 229) on November 4, 1977, Shawnee State General and Technical College became Shawnee State Community College. Then in 1986, another act of the Legislature, put in effect on July 2, created Shawnee State University. Since then, *the* regional state university in south central Ohio has continued to incorporate baccalaureate degree programs with the already successful associate degree programs.

Located on the Ohio River in downtown Portsmouth, Shawnee State is currently in the midst of a massive campus expansion plan that, by the year 2000, will have brought more than $100 million to the University for new buildings, landscaping, land acquisition, and parking.

The campus, which began with a single, five-story, classroom building, has expanded to include 15 additional buildings. A master plan created by Bohm-NBBJ of Columbus, Ohio, with input from Shawnee State and Portsmouth area community members, has created the vision for the institution's growth. Steps toward its completion continue today as the University and community look forward to the fall 1995 completion of the Center for the Arts.

To accommodate the diverse educational needs of an expanding student population, Shawnee State's academic curriculum has continued to grow. Highlights of the 1994-1995 academic year include the approval of baccalaureate degrees in biology, chemistry, fine arts, history, mathematical sciences, occupational therapy, and sports studies.

The University now offers associate degrees in 17 major fields, baccalaureate degrees in 13 major fields, certification in elementary education, and is in the process of developing additional majors.

The Continuing Education Department annually provides learning opportunities to approximately 7,000 community participants. Programs geared toward academically talented young people have proven more popular year after year, and Shawnee State's Dislocated Workers Program has become a model throughout the state and beyond.

The University has also grown in importance and sphere of influence in other ways as well by offering high quality cultural and educational events to students and the community at large.

Mission Statement

Shawnee State University—the regional state university of Southern Ohio—prepares students for the changing needs of business, industry, education, and society through its diversified degree programs. Recognizing the importance of knowledge, values, and cultural enrichment, Shawnee State University is committed to providing an undergraduate education that fosters competence in oral and written communication, scientific and quantitative reasoning, and critical analysis/logical thinking. To enrich the lives of the community, the University provides opportunities for continuing personal and professional development, intellectual discovery, and appreciation for the creative and performing arts.

Goals

Shawnee State is a student-oriented university with a central emphasis on teaching and learning. Within this context, Shawnee State is committed to the goals of:

- Offering affordable and accessible four-year and two-year degree programs and one-year certificate programs.

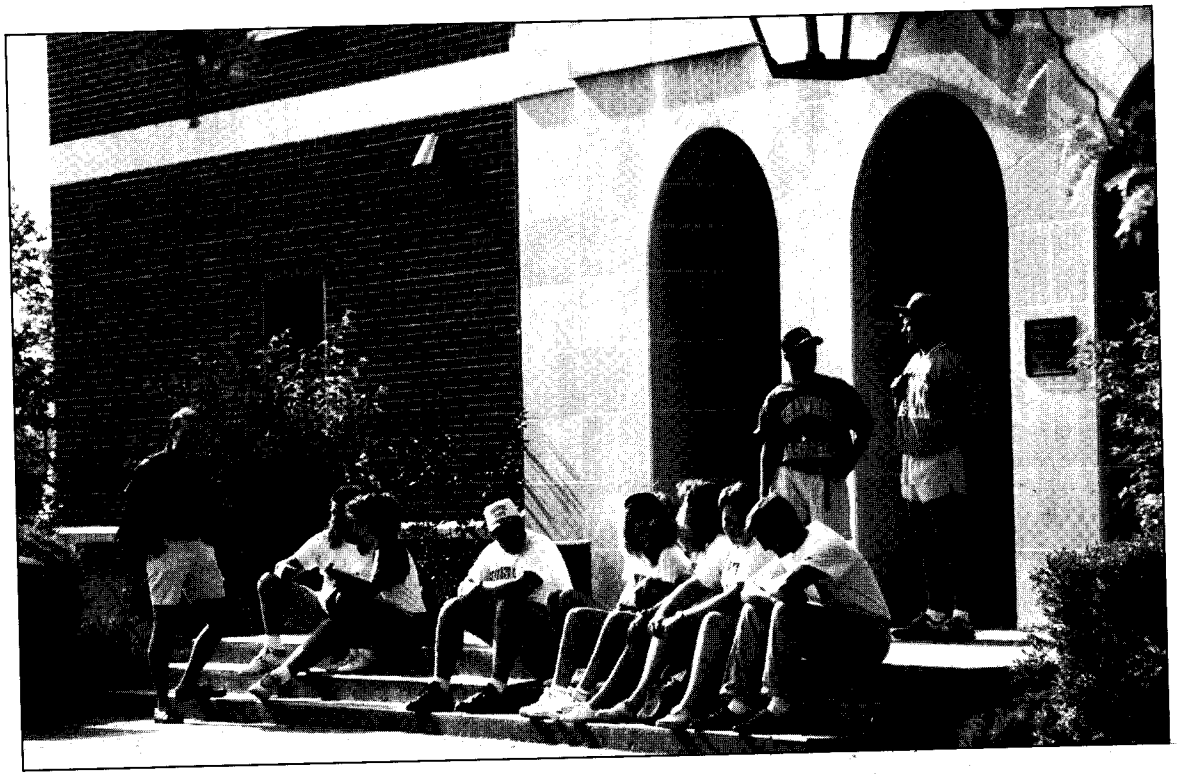
Goals (cont'd.)

- Providing continuously improved learning opportunities, guided by excellent teaching, academic advising, and counseling for students of various ages, diverse backgrounds, and different needs.
- Offering academic and student life programs that provide opportunities for intellectual, personal, ethical, cultural, and social development.
- Providing public service in traditional and continuing education programs to encourage the development of outreach and cooperative education efforts.
- Coordinating the growth and emphasis of its programs with long-range plans and the needs of the regional, state, national, and international community.
- Responding to the changing needs of society by establishing appropriate feedback networks and linkages with practicing professionals, business, industry, community service agencies, and other educational institutions.
- Providing a stimulating environment for its students, faculty, and staff that empowers them to explore their potential. This environment is strengthened by the collegial interaction of people within the University and broader community.

In meeting these goals, all members of the Shawnee State community are engaged in continuing professional development that aids them in becoming better human beings as well as better educators. This includes scholarship, which informs all our other activities, along with creative activities, applied research, and community involvement. Our efforts remain focused on providing the highest quality teaching-learning environment possible.

Enduring Vision Statements

A plan—especially a strategic plan—describes a destination. In 1989, the Shawnee State academic community embarked on a planning process which recommitted Shawnee State to its mission and established a set of goals intended



to implement that mission. The enduring vision statements presented here, and adopted by the Shawnee State University Board of Trustees, are a natural outgrowth of that introspection and describe "what ought to be."

- Recognizing its emerging role and scope, Shawnee State University will become established as THE Regional State University for Southcentral Ohio with visibility on a statewide and national level in select academic areas.
- Recognizing its responsibility to meet the educational needs of the citizens of the region, Shawnee State University will provide a comprehensive higher educational experience for its students.
- Knowing that its reputation stands on the quality of its academic programs, Shawnee State University will establish and maintain academic programs supportive of a focused academic mission founded primarily on technological, career oriented, and professional programs, including the liberal arts and sciences, which innovatively address the needs of the region.
- The continued strong development of Shawnee State University can only be accomplished through constructive collaboration among all constituencies, particularly those internal to the University. Such collegial collaboration can best occur in an environment in which all members are knowledgeable, treated equitably, and consider themselves a true and respected part of the future of the campus community. Accordingly, Shawnee State University will act to improve communication and coordination among members of the university community with a goal of informed decision making.
- Shawnee State University will enhance and manage the resources available to it in a manner that facilitates the attainment of its vision.

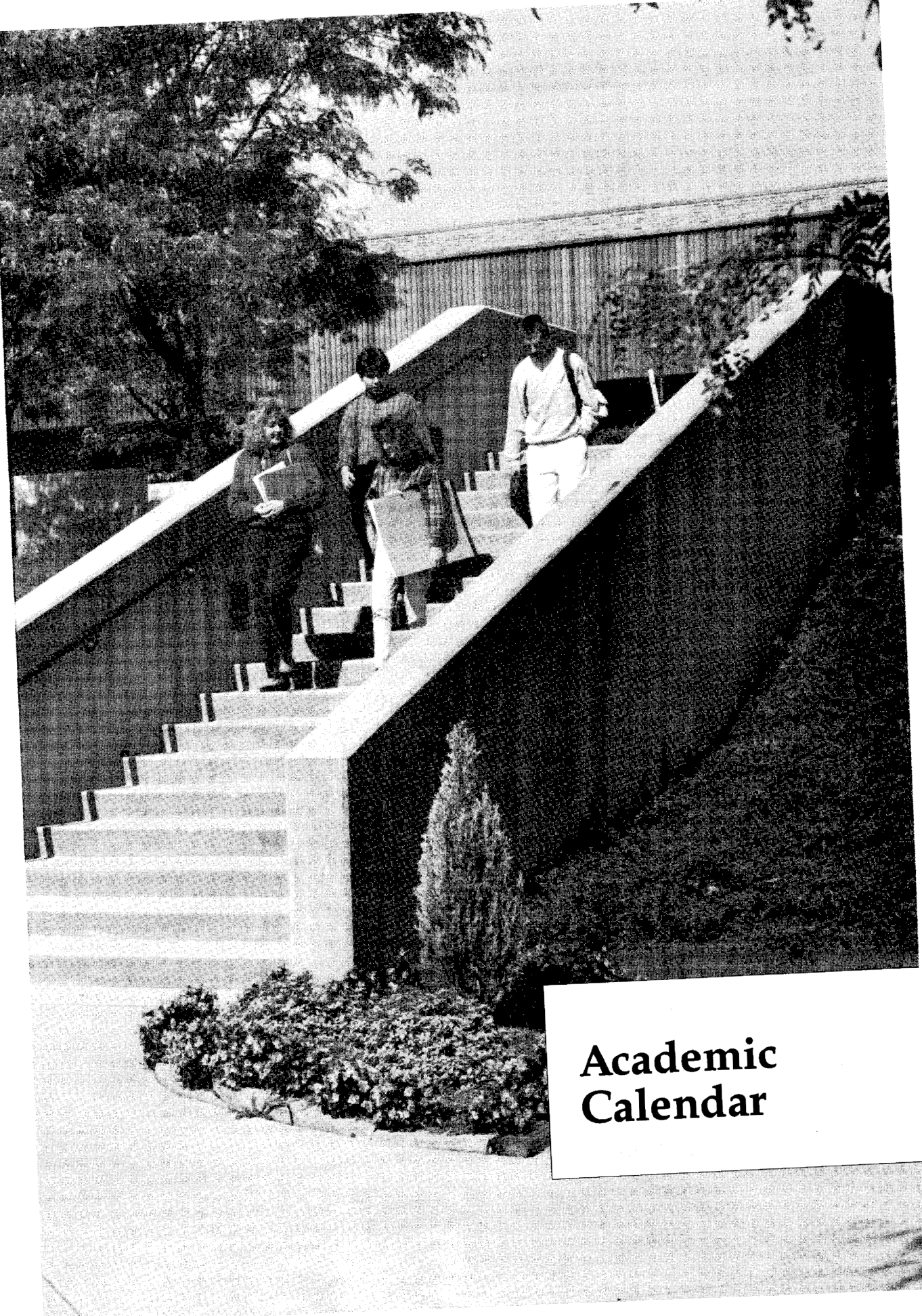
Strategies for implementing these enduring vision statements are included in *A View of the Future: Guidelines for Strategic Planning at Shawnee State University,* available in the Shawnee State Library or in the University's administrative offices.

Accreditations and Approvals

Shawnee State University is accredited by the North Central Association of Colleges and Schools to offer baccalaureate and associate degrees and certificates.

In addition, the institution or specific programs are accredited or approved by the following agencies:

American Dental Association, Commission on Dental Accreditation
American Occupational Therapy Association
Commission on Accreditation in Physical Therapy Education
College Entrance Examination Board
Joint Review Committee for Respiratory Therapy Education, Commission on Accreditation of Allied Health Education Programs
Joint Review Committee on Education in Radiologic Technology
National Accrediting Agency for Clinical Laboratory Science
Ohio Board of Nursing
Ohio Board of Regents
Ohio College Association
Ohio Department of Highway Safety, Division of Public Safety Services (EMT-A and Paramedic training programs)
Social Security Department
State of Ohio, Department of Education
State of Ohio, Department of Education, Division of Vocational Education
United States Department of Education



Academic Calendar

1995-96 Academic Calendar

Summer Quarter, 1995

May 8	Advance registration opens for summer and fall quarters
June 15	Late registration for summer quarter
June 19	First day of summer quarter—classes begin (full summer quarter and first five-week term); Last day for 100% refund for complete withdrawal (full summer quarter and first five-week term)
June 21	Last day to add a class (first five-week term); Last day to apply for pass/no-credit (first five-week term)
June 23	Last day to add a class (full summer quarter); Last day for partial refund for complete withdrawal (first five-week term)
June 30	Last day for partial refund of instructional fees for complete withdrawal (full summer qtr.); Last day to apply for pass/no-credit (full summer quarter)
July 4	Independence Day—University closed
July 5	Last day to drop a class (first five-week term)
July 21	Last day of first five-week term; Final exams (first five-week term)
July 24	First day of second five-week term; Grades due to Office of the Registrar by noon (first five-week term);
July 24 *(cont'd.)*	Last day for 100% refund for complete withdrawal (second five-week term)
July 28	Last day for partial refund for complete withdrawal (second five-week term)
August 1	Last day to apply for summer graduation
August 4	Last day to apply for non-credit (full summer quarter)
August 7	Last day to drop a class (full summer quarter)
August 9-10	Early registration for fall quarter
August 25	Last day of summer quarter (full summer quarter and second five-week term)
August 28-29	Final exams (full summer quarter and second five-week term)
August 31	Grades due to Office of the Registrar by noon (full summer quarter and second five-week term)

Fall Intersession, 1995

September 1	First day of intersession; Last day to add a class, change a class, apply for pass/no-credit, or receive 100% refund for complete withdrawal
September 15	Last day of intersession; Last day to drop a class or withdraw completely; Final exams
September 18	Grades due to Office of the Registrar by noon

Fall Quarter, 1995

May 8	Advance registration opens for fall quarter
August 9-10	Early registration for fall quarter
September 4	Labor Day — University closed
September 14	Late registration for fall quarter
September 18	First day of fall quarter — classes begin; Last day for 100% refund for complete withdrawal from fall quarter
September 22	Last day to add a class
September 25	First day of Rosh Hashanah — University open

Fall Quarter, 1995 (cont'd.)

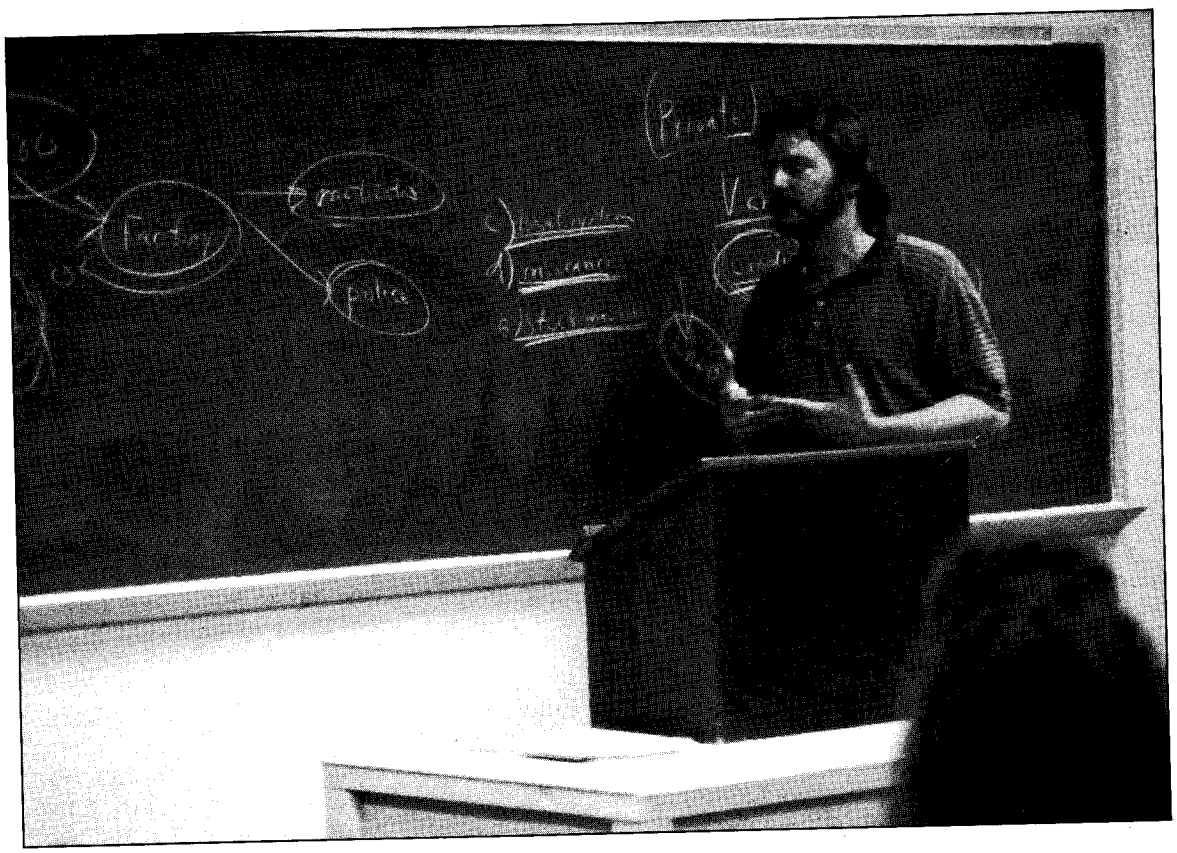
September 29	Last day for partial refund for complete withdrawal from fall quarter; Last day to apply for pass/no-credit
October 2	Last day to apply for fall quarter graduation
October 4	Yom Kippur — University open
October 9	Columbus Day — University open
October 31	Last day to apply for non-credit
November 2	Last day to drop a class
November 6	Advance registration opens for winter quarter
November 10	Veterans Day observed — University closed
November 22	Last day of fall quarter
November 23	Thanksgiving Day — University closed
November 24	University Closed *(in lieu of Columbus Day)*
Nov. 27-Dec. 1	Final exams
December 4	Grades due to Office of the Registrar by noon

Winter Intersession, 1995

December 4	First day of intersession; Last day to add a class, change a class, apply for pass/no-credit, or receive 100% refund for complete withdrawal
December 18	First day of Hanukkah — University open
December 22	Last day of intersession; Last day to drop a class or withdraw completely; Final exams
December 25	Christmas Day — University closed
December 26	Grades due to Office of the Registrar by noon

Winter Quarter, 1996

November 6	Advance registration opens for winter quarter
December 6	Last day to apply for winter quarter graduation



Winter Quarter, 1996 (cont'd.)

January 1	New Year's Day — University closed
January 2	First day of winter quarter — classes begin; Late registration for winter quarter; Last day for 100% refund for complete withdrawal from winter quarter
January 8	Last day to add a class
January 15	Martin Luther King Day — University closed
January 16	Last day for partial refund for complete withdrawal from winter quarter; Last day to apply for pass/no-credit
February 8	Advance registration opens for spring quarter
February 19	President's Day — University closed;
February 20	Last day to apply for non-credit
February 21	Last day to drop a class
March 8	Last day of winter quarter
March 11-15	Final exams
March 18	Grades due to Office of the Registrar by noon

Spring Quarter, 1996

January 31	Last day to apply for spring qtr. graduation (and participate in June commencement)
February 8	Advance registration opens for spring quarter
March 25	First day of spring quarter — classes begin; Late registration for spring quarter; Last day for 100% refund for complete withdrawal from spring quarter
March 29	Last day to add a class
April 5	Last day to apply for pass/no-credit; Last day for partial refund for complete withdrawal from spring quarter
April 7	Easter
May 3	Last day to apply for non-credit
May 6	Last day to drop a class
May 8	Advance registration opens for summer and fall quarters
May 27	Memorial Day — University closed
May 31	Last day of spring quarter
June 3-7	Final exams
June 7	Commencement
June 10	Grades due to Office of the Registrar by noon

(Tentative) 1996-97 Academic Calendar

The following calendar for the 1996-97 academic year is tentative and subject to change.

Summer Quarter, 1996

May 8	Advance registration opens for summer and fall quarters
June 17	First day of summer quarter — classes begin (full summer qtr. and first five-week term); Last day for 100% refund for complete withdrawal (full summer qtr. and first five-week term); Late registration for summer quarter
June 19	Last day to add a class (first five-week term); Last day to apply for pass/no-credit (first five-week term)
June 21	Last day to add a class (full summer qtr.); Last day for partial refund for complete withdrawal (first five-week term)

Summer Quarter, 1996 (cont'd.)

June 28	Last day for partial refund for complete withdrawal (full summer quarter); Last day to apply for pass/no-credit (full summer quarter)
July 3	Last day to drop a class (first five-week term)
July 4	Independence Day—University closed
July 19	Last day of first five-week term; Final exams (first five-week term)
July 22	First day of second five-week term; Grades due to Office of the Registrar by noon (first five-week term)
July 26	Last day to add a class (second five-week term); Last day for partial refund of instructional fees for complete withdrawal (second five-week term)
August 2	Last day to apply for non-credit (full summer quarter); Last day to apply for summer graduation
August 5	Last day to drop a class (full summer quarter)
August 6	Last day to drop a class (second five-week term)
August 7-8	Early registration for fall qtr.
August 23	Last day of quarter (full summer quarter and second five-week term)
August 26-27	Final exams (full summer quarter and second five-week term)

August 29	Grades due to Office of the Registrar by noon (full summer quarter and second five-week term)

Fall Intersession, 1996

August 28	First day of intersession; Last day to add a class, change a class, apply for pass/no-credit, or receive 100% refund for complete withdrawal
September 2	Labor Day — University closed
September 13	Last day of intersession; Last day to drop a class or withdraw completely; Final exams
September 14	First day of Rosh Hashanah — University open
September 16	Grades due to Office of the Registrar by noon

Fall Quarter, 1996

May 8	Advance registration opens for fall quarter
August 7-8	Early registration for fall quarter
September 2	Labor Day — University closed
September 12	Late registration for fall quarter
September 16	First day of fall quarter — classes begin; Last day for 100% refund for complete withdrawal from fall quarter
September 20	Last day to add a class
September 23	Yom Kippur — University open
September 27	Last day for partial refund for complete withdrawal from fall quarter; Last day to apply for pass/no-credit
October 1	Last day to apply for fall quarter graduation
October 14	Columbus Day — University open
November 1	Last day to apply for non-credit
November 4	Advance registration opens for winter quarter
November 5	Last day to drop a class
November 11	Veterans Day — University closed
November 20	Last day of fall quarter
Nov. 21-27	Final exams

Fall Quarter, 1996 (cont'd.)

November 28	Thanksgiving Day — University closed
November 29	University Closed *(in lieu of Columbus Day)*
December 2	Grades due to Office of the Registrar by noon

Winter Intersession, 1996

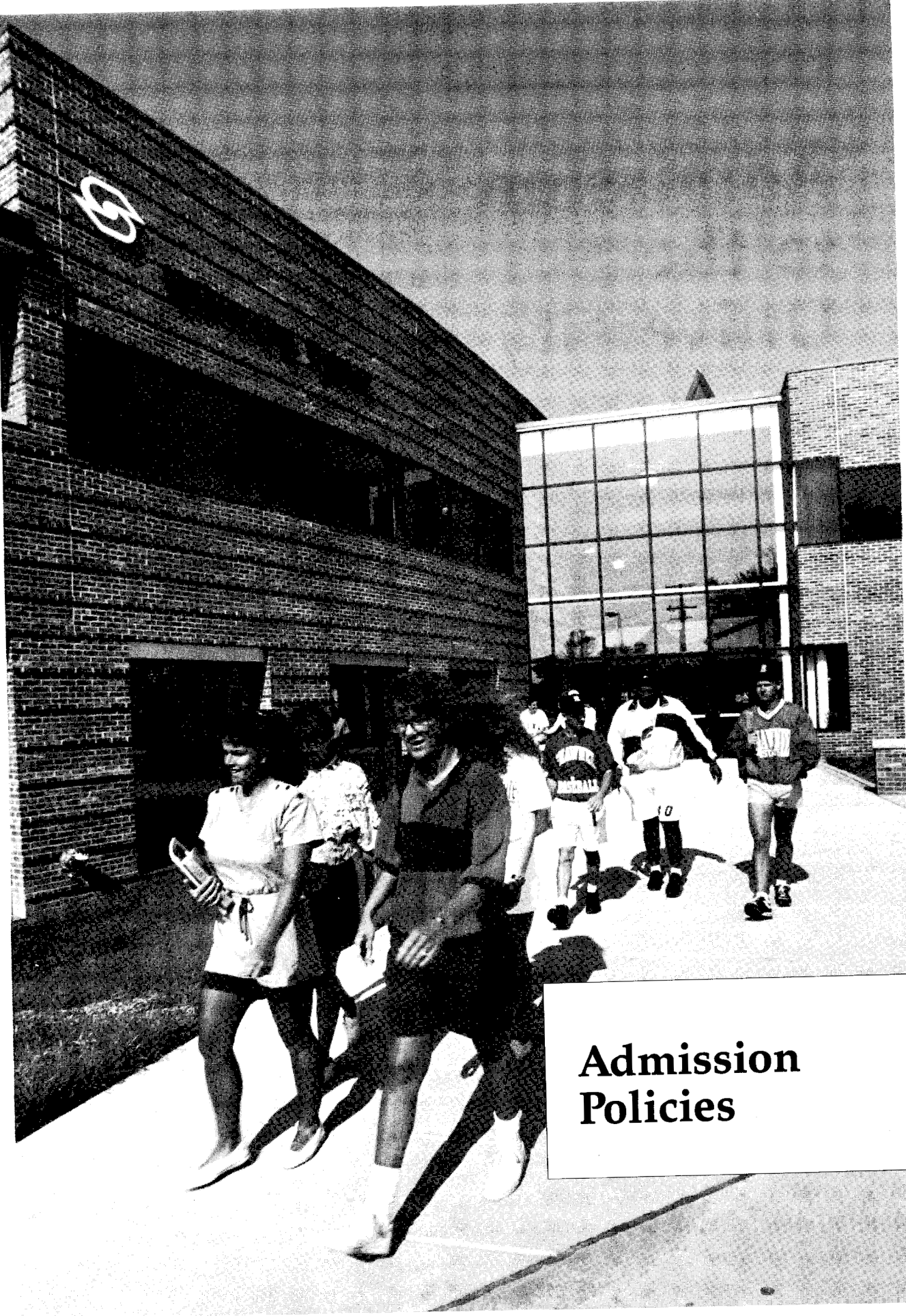
December 2	First day of intersession; Last day to add a class, change a class, apply for pass/no-credit, or receive 100% refund for complete withdrawal
December 6	First day of Hanukkah — University open
December 20	Last day of intersession; Last day to drop a class or withdraw completely; Final exams
December 23	Grades due to Office of the Registrar by noon

Winter Quarter, 1997

November 4	Advance registration opens for winter quarter
December 6	Last day to apply for winter quarter graduation
December 25	Christmas Day — University closed
January 1	New Year's Day — University closed
January 6	First day of winter quarter — classes begin; Late registration for winter quarter; Last day for 100% refund for complete withdrawal from winter quarter
January 10	Last day to add a class
January 17	Last day for partial refund for complete withdrawal from winter quarter; Last day to apply for pass/no-credit
January 20	Martin Luther King Day — University closed
February 17	President's Day — University closed;
February 21	Last day to apply for non-credit
February 25	Last day to drop a class
March 14	Last day of winter quarter
March 17-21	Final exams
March 24	Grades due to Office of the Registrar by noon

Spring Quarter, 1997

January 31	Last day to apply for spring qtr. graduation (and participate in June commencement)
February 10	Advance registration opens for spring quarter
March 30	Easter
March 31	First day of spring quarter — classes begin; Late registration for spring quarter; Last day for 100% refund for complete withdrawal from spring quarter
April 4	Last day to add a class
April 11	Last day to apply for pass/no-credit; Last day for partial refund for complete withdrawal from spring quarter
May 7	Advance registration opens for summer and fall quarters
May 16	Last day to apply for non-credit
May 20	Last day to drop a class
May 26	Memorial Day — University closed
June 6	Last day of spring quarter
June 9-13	Final exams
June 13	Commencement
June 16	Grades due to Office of the Registrar by noon



Admission Policies

Admission to the University

Admission to degree programs at Shawnee State University is open to graduates who hold a state-approved diploma from state chartered or regionally accredited high schools and to students who have earned high school equivalency through the General Education Development (GED) program. However, admission to the University does not guarantee admission to specific programs of study. If you intend to apply for admission to a health science program in the College of Professional Studies, you should refer to the appropriate section of this catalog for specific admission requirements.

Admission to students not seeking a degree at Shawnee State University is also open. The minimum requirements for admission of all students, both degree seeking and non-degree seeking, include:

- A completed application for admission
- The current non-refundable application fee

There are varying additional requirements for students in different categories, including recent high school graduates, transfer students, special non-degree students, transient students, international students, and eligible students who are still attending high school. Requirements for each are discussed in the following sections.

It is recommended that the high school background of the entering freshman pursuing a degree include:

- 4 units English
- 3 units mathematics (algebra 1 and 2, geometry)
- 3 units social studies
- 3 units science
- 2 units foreign language
- 1 unit visual, performing arts (drama, music, art)

These courses are recommendations, not requirements. However, if you have a deficiency in English or mathematics, you will be required to take developmental courses prior to attempting college level work.

ACT/SAT Requirement

All students who are under the age of 21 and pursuing the four-year baccalaureate or two-year associate degrees or the one-year certificates are required to have scores from the ACT or SAT forwarded to Shawnee State University. Applicants who are 21 years of age or older, as of the first day of their first quarter of enrollment, are exempt from providing ACT or SAT scores.[1]

Although Shawnee State University has an open admission policy and does not use the ACT or SAT for determining admission to the University, it does require results of these tests for use in advisement and placement. If you have not yet taken the ACT or SAT, you may contact the Shawnee State University Admission Office for information about future ACT test dates. Applicants who have not taken the ACT or SAT will be accepted as "provisional students" but must take the ACT during the initial quarter of enrollment. Students who have not taken the ACT by the end of their first quarter of attendance will not be permitted to register for subsequent quarters.

Degree-Seeking High School Graduates

High school graduates who have been awarded a state-approved diploma are required to submit a **final, official transcript** of academic work to Shawnee State University. Students may send a high school transcript request form (available in the Admission Office) or a written request to the high school requesting an official transcript to be forwarded directly to the University.

Transcripts may be mailed directly from the high school to the following address: Office of Admission, Shawnee State University, 940 Second Street, Portsmouth, Ohio 45662-4344.

[1] The American College Test (ACT) is required of **all** applicants for admission to some of the health sciences programs. Specific information about required scores is stated in that section of the catalog.

Applicants may also hand-carry the transcript in an envelope sealed with a guidance counselor's signature. Guidance counselors or high school officials may send transcripts via FAX at [614] 354=7794 if accompanied by a signed transmittal form or by electronic transfer. The University reserves the right to verify the final, official authenticity of any student's transcript. Any transcript document found to be fraudulent becomes the student's responsibility and the University reserves the right to withdraw admission acknowledgement and/or approval of acceptance.

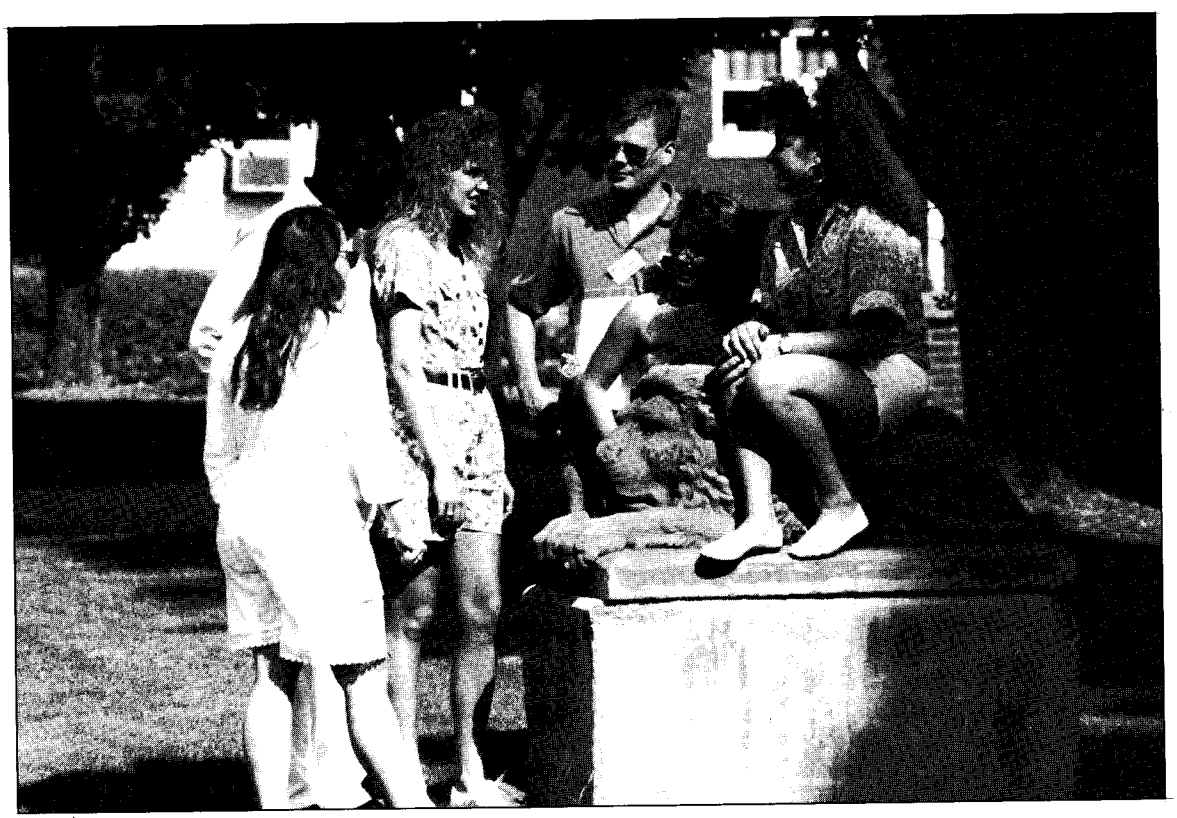
High school transcripts must be received no later than the end of the initial quarter of enrollment. If you have not had your final high school transcript forwarded by the end of your first quarter of enrollment, you will not be permitted to register for subsequent quarters until all missing materials have been provided.

Advanced Placement

You may be awarded college credit for satisfactory performance on certain proficiency examinations. Each May, participating high schools provide their students with an opportunity to take examinations in a variety of subject areas through the Advanced Placement Program (AP™), sponsored by the College Board and administered by Educational Testing Service (ETS). Students who achieve a grade of 3 or above may receive college credit on the basis of these examinations. Credit given through the AP program does not apply toward the residency requirement for graduation.

In addition, Shawnee State University recognizes that some courses completed in high school or vocational school may be equivalent to some entry-level coursework at Shawnee State. In order to avoid repetition of such courses and to encourage advanced study in the respective disciplines, Shawnee State has entered into "Articulation Agreements" with high schools, vocational schools, and school districts. This allows the award of advanced placement credit for certain coursework completed at the high school where articulation agreements are in place. Such credit waives your course requirement. A more advanced class must be completed to replace the waived course.

Please contact the director of transfer placement for information concerning eligibility for credit through advanced placement.



Applicants with the GED

Students who have successfully completed the GED may use the special GED transcript request form (available in the admission office) to have official GED transcripts sent to the University or they may request official transcripts directly from the State GED Office, Ohio Department of Education, 65 South Front Street, Room 812, Columbus, Ohio 43266-0308 or State GED Office, Kentucky Department of Education, Frankfort, Kentucky 40601.

Transcripts should be mailed to the following address: Office of Admission, Shawnee State University, 940 Second Street, Portsmouth, Ohio 45662-4344. **Transcripts must be received directly from the State GED Office.**

Undeclared Major/Undecided Student

If you intend to pursue a degree but are undecided about a major, you may remain "undeclared" until you earn your first 45 quarter hours of credit. At the completion of 45 hours, you are required to declare a major or you are prohibited from registering for classes.

Transfer Students

Students who have attended other regionally-accredited colleges or universities may transfer to Shawnee State University provided they were in good academic standing at the institution attended most recently. In addition to the application for admission, application fee, and high school transcript, you are required to provide an official transcript from each college or university previously attended. **College transcripts must be received directly from those institutions. Photocopies, fax, and hand-carried transcripts are not accepted.** You may be admitted as a "provisional student" until such time as the official transcripts are received from all previous colleges. Lastly, if you are applying for financial aid at Shawnee State University, you must have each college/university previously attended send your financial aid transcript to the financial aid office at Shawnee State.

If you have earned fewer than 45 quarter hours of credit and are under 21 years of age, as of the first day of your first quarter of enrollment, you are required to take the ACT. You may attend Shawnee State as a "provisional student," but you must take the ACT during your initial quarter of enrollment. Transfer students who must take the ACT and have not taken it by the end of their first quarter of attendance will not be permitted to register for subsequent quarters.

Credits applicable to the curriculum for which you are applying which were earned at regionally accredited colleges or universities are accepted at the time of admission. Generally, courses completed with a grade of "C" or better are eligible for transfer. Under certain circumstances, a "D" may be transferable. See the director of transfer placement for further information. The credit hours transferred do not become a part of the grade point average at Shawnee State University.

To receive transfer credit, you must file an official transcript of previous college work. You must earn a minimum of 30 credit hours at Shawnee State University to be considered for the award of an associate degree and a minimum of 45 credit hours to be considered for the award of a baccalaureate degree.

If you have attended non-regionally accredited colleges or universities, you may transfer to Shawnee State University provided you meet all admission standards applicable to other transfer students. Credits applicable to the curriculum for which you are applying which were earned at non-regionally accredited institutions will be considered for acceptance as transfer credit if:

- You have completed the associate degree at that institution, and
- You validate the award of credit by completing, with a grade of "C" or better, a planned program of courses totaling a minimum of 30 credit hours applicable to a four-year curriculum as approved by the director of transfer placement. For students transferring credit from non-regionally accredited colleges or universities, a maximum of 90 quarter hours will be considered for transfer.

State Policy On Articulation and Transfer

Institutional Transfer. The Ohio Board of Regents, following the directive of the Ohio General Assembly, has developed a new statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the State Policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio's higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.

Transfer Module. The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a specific subset or the entire set of a college or university's general education requirements. The Transfer Module contains 54-60 quarter hours or 36-40 semester hours of specified course credits in English composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science, and interdisciplinary coursework.

A transfer module completed at one college or university will automatically meet the requirements of the transfer module at the receiving institution, once the student is accepted. Students may be required, however, to meet additional general education requirements that are not included in the Transfer Module.

Conditions for Transfer Admission. Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the associate of arts or the associate of science degrees. These students will be able to transfer all courses in which they received a passing grade of "D" or better. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module.
2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the

Shawnee State University Transfer Module

Field	General Education Requirements Applied to TM Minimums	Additional General Education Requirements Counted in TM (12-14 sem., 18-24 qtr.)	Additional General Education Requirements Beyond the TM for Graduation
English minimum 6 qtr./3 sem.	ENGL 111S (4) ENGL 112S (4) **8**	ENGL 232 (3) ENGL 240 (3) ENGL 245 (3)	ENGL 115S (4)
Mathematics minimum 3 qtr./3 sem.	MATH 110S (4) **4**	MATH 131 (4) MATH 132 (4) MATH 201 (4) MATH 202 (4) MATH 250 (4) MATH 255 (4)	
Arts/Humanities minimum 9 qtr./6 sem.	ENGL/HIST 225S (4) and two of the following: ARTH 261 (4) ARTH 262 (4) MUSI 220 (3) PHIL 101 (4) ENGL 200 (4) **12**	ENGL 203 (4) ENGL 210 (4) ENGL 211 (4) ENGL 212 (4) MUSI 221 (3) MUSI 222 (3) MUSI 223 (3) PHIL 102 (4) PHIL 103 (4) PHIL 105 (4)	ENGL/HIST 227S (4) PHIL 320S (4)
Social Science minimum 9 qtr./6 sem.	SOCI 110S (4) and HIST/ENGL 226S (4) and one of the following: HIST 111 (4) HIST 112 (4) HIST 113 (4) GEOG 125 (4) PSYC 101 (4) SOCI 101 (4) ECON 101 (4) GOVT 101 (4) **12**	ANTH 101 (4) ANTH 250 (4) ECON 102 (4) GOVT 102 (4) GOVT 120 (4) GOVT 250 (4) HIST 201 (4) HIST 202 (4) HIST 203 (4) PSYC 151 (4) PSYC 273 (4) SOCI 201 (4) SOCI 205 (4)	HIST/ENGL 227S (4)
Natural Science minimum 9 qtr./6 sem.	Select 12 hours from BIOL 110S (4) or PSCI 110S (4) and one or two of the following: CHEM 121[1](4) CHEM 122[1](4) CHEM 141[1](4) CHEM 142[1](4) CHEM 143 (4) *All CHEM — 3 lec./3 lab* PHYS 201 (4) PHYS 202 (4) PHYS 203 (4) *All PHYS — 3 lec./3 lab* BIOL 151 (5) *3 lec./4 lab* GEOL 101 (4) *3 lec./2 lab* **9 - 12**	BIOL 162 (5) BIOL 170 (4) BIOL 202 (5) BIOL 203 (6) CHEM 200 (4) CHEM 201 (4) GEOL 112 (4) PHYS 210 (4)	BIOL 110S (4) or PSCI 110S (4)
			Other 485S (2)[2] 490S (4)[2]
Subtotal minimum 36 qtr./24 sem.	**45-48**	**8 - 11**	
Total	**56**		

54 - 60 quarter hours

[1] Students cannot receive credit for both the CHEM 121/122 and the CHEM 141/142 series.
[2] Prefix varies according to student's major: BADM, ENGL, ETCO, NTSC, or SOCI.

Transfer Module with a grade of "C" or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module and only courses in which a "C" or better has been earned will transfer.

3. The policy encourages receiving institutions to admit, on a non-preferential consideration basis, students who complete the Transfer Module with a grade of "C" or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of "C" or better.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

Responsibilities of Students. In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, you should identify early in your collegiate studies an institution and major to which you desire to transfer. Furthermore, you should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable you to plan and pursue a course of study that will articulate with the receiving institution's major. You are encouraged to seek further information regarding transfer from both your advisor and the college or university to which you plan to transfer.

Appeals Process. A multi-level, broad based appeal process is required to be in place at each institution. A student disagreeing with the application of transfer credit by the receiving institution shall be informed of the right to appeal the decision and the process for filing the appeal. Each institution shall make available to students the appeal process for that specific college or university.

If a transfer student's appeal is denied by the institution after all appeal levels within the institution have been exhausted, the institution shall advise the student in writing of the availability and process of appeal to the state level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

Appeal Procedure Regarding Transfer Credit Applicability

Historical Context. On November 16, 1990, the Ohio Board of Regents passed a resolution mandating that public institutions of higher education establish a multilevel appeal procedure to be followed by students dissatisfied with the applicability of transferred credit. The following multilevel appeal procedure at Shawnee State University is designed to meet the needs of These students and to comply with the Ohio Board of Regents' mandate.

Acceptance of Transfer Credit. Transfer credit is awarded and posted to your Shawnee State University transcript in accordance with accepted national and state standards. Generally, all courses satisfactorily completed at regionally accredited institutions are transferable. The Office of Transfer Placement is responsible for posting this credit to your transcript.

Applicability of Transfer Credit. After transfer credit has been posted to your transcript, the Office of Transfer Placement provides the dean of the college in which you are enrolled with a packet of material enabling the dean and appropriate faculty to determine how transfer courses apply to your graduation requirements. Once this applicability has been determined, the Office of Transfer Placement posts the courses to your Degree Audit and provides you with a copy of the audit.

Multilevel Appeals Procedure. State mandate requires that you be notified of your right to appeal a transfer credit applicability decision. You must file your written appeal within ninety days following receipt of your Degree Audit. The University must respond to your appeal within thirty days of receipt of the appeal, at each appeal level. The appeal levels are defined below.

Level 1

You meet with the dean of the college in which you are enrolled to discuss the course(s) in question. If both the dean and you are in agreement that a change in applicability is desirable, the dean reports the necessary change with rationale to the director of transfer placement. If the dean determines that an applicability change is not warranted, the dean notifies you, the Transfer Credit Appeals Committee chair, and the provost regarding the decision and the rationale.

Level 2

If you and the dean are unable to reach a mutually agreeable resolution, you present your case before the Transfer Credit Appeals Committee. The Transfer Credit Appeals Committee is charged with reviewing the manner in which transfer credit has been applied to your degree program when you and the approprite dean are unable to reach a mutually satisfactory agreement. The committee may vote to support the dean's position, your position, or suggest alternatives for the dean and you to consider. This committee reports to the provost and is composed as follows:

- One faculty representative from each of the following departments
  - Business
  - Engineering Technologies
  - Health Sciences
  - Center for Teacher Education

- One faculty representative from each department within the College of Arts and Sciences
  - Arts and Humanities
  - Mathematics
  - Natural Sciences
  - Social Sciences
- The director of transfer placement and the core coordinator serve as voting *ex officio* members of the committee.

If the committee determines that a change in applicability is desirable, the committee chair reports the necessary change with rationale to you, the dean, and the director of transfer placement. If the committee determines that an applicability change is not warranted, the committee chair notifies you, the dean, and the provost regarding the decision and the rationale.

Level 3

If you and the Transfer Credit Appeals Committee are unable to reach a mutually agreeable resolution, you present your case to the provost. If the provost determines that a change in applicability is desirable, he or she reports the necessary change with rationale to you, the dean, the Transfer Credit Appeals Committee chair, and the director of transfer placement. If the provost determines that a change in applicability is not warranted, the provost notifies you, the dean, and the Transfer Credit Appeals Committee chair of the decision and the rationale. You have no further recourse within the institution. However, if you wish to pursue the matter further, a statewide appeals procedure is available.

Transfer Credit Appeals Committee Membership. Faculty representatives to the Transfer Credit Appeals Committee are determined by a procedure agreed upon by the faculty within their respective units as indicated in Level 2. Committee members annually elect a chair. The committee chair votes only in the event of a tie. Staggered terms of three years begin January 1. Elected representatives may be required to meet during the summer months if a student submits an appeal during that time period. Deans may appoint alternates if necessary. The director of transfer placement and the core coordinator serve as voting *ex officio* committee members.

International Students

International students who are seeking admission to Shawnee State University must submit the following materials:

- An application for admission accompanied by the current application fee.
- All official secondary and postsecondary transcripts. These transcripts must be in the student's native language and be accompanied by a certified English translation. If these credentials cannot be evaluated by the University, they will be sent to an evaluation service, and you will be responsible for the cost of the evaluation.
- An official score of 500, at a minimum, on the Test of English as a Foreign Language (TOEFL) or an equivalent score on the Michigan Test of English Language Proficiency (MTELP) is required for admission to a degree program for students whose native language is **not** English.
- Proof of financial resources which are adequate to support the student for one year. If you intend to finance your education yourself, you must supply a statement from your bank showing funds equal to those required for one year. If you are being sponsored, an affidavit of support and a bank statement showing adequate funds for one year must be submitted. In addition, **all** international students are required to submit a deposit equal to one thousand U.S. dollars ($1,000.00)[1] prior to the issuing of an I-20. This deposit will be held by the University and will be returned **only** when you (1) graduate from Shawnee State, (2) transfer to another college/university, or (3) withdraw from Shawnee State. You must petition the business office, on the required form, for the return of your deposit. Your deposit is returned **only** for the three reasons stated here and only after all financial obligations to the University have been met.

International students are required to accept the cost of university health insurance or produce proof of adequate insurance while in the United States.

Those international applicants who are accepted for admission will receive an acceptance letter and an I-20 form to be used to secure a student visa. The acceptance letter and I-20 will not be issued until the Office of Admission has received all required materials. To be assured consideration for admission, all required materials must be received 60 days prior to the beginning of the quarter in which you plan to enroll.

Questions pertaining to a student visa should be directed to the local office of the Department of Immigration.

Non-Degree Students

Special Non-Degree Students

Students who are not interested in pursuing a degree but who wish to take courses are required to file an application for admission with the current application fee. Transcripts of high school and college work are not required, nor is ACT/SAT testing. However, if at a later time, you decide to pursue a degree program, all admission requirements in effect **at the time of initial enrollment** must be met. These requirements include official transcripts from high school (and/or GED) and college work and testing, recommendations, etc., if any of these are required for the major being declared.

Students enrolled in the GED program are special, non-degree students and, as such, are not required to take the ACT. If, after completion of the GED, you wish to pursue a degree, you will be subject to requirements for admission of a degree applicant.

Special, non-degree students may take courses which have no prerequisites or courses for which they have the appropriate prerequisite. For courses assuming prior knowledge or a certain degree of proficiency, placement testing may be advised or required prior to registration.

[1] Shawnee State University reserves the right to request full payment in advance.

Transient Students

Students who are enrolled at or seeking a degree at another college or university, but who wish to take coursework temporarily at Shawnee State University, are considered transient students. As non-degree students (at Shawnee State), such students are required only to file an application for admission with the current application fee.

Although transcripts of high school and college work are not required of transient students, such transcripts, especially those from your home campus, are helpful in advising appropriate coursework. Unofficial transcripts or grade cards are acceptable if these are needed to verify prerequisites for courses to be taken at Shawnee State University.

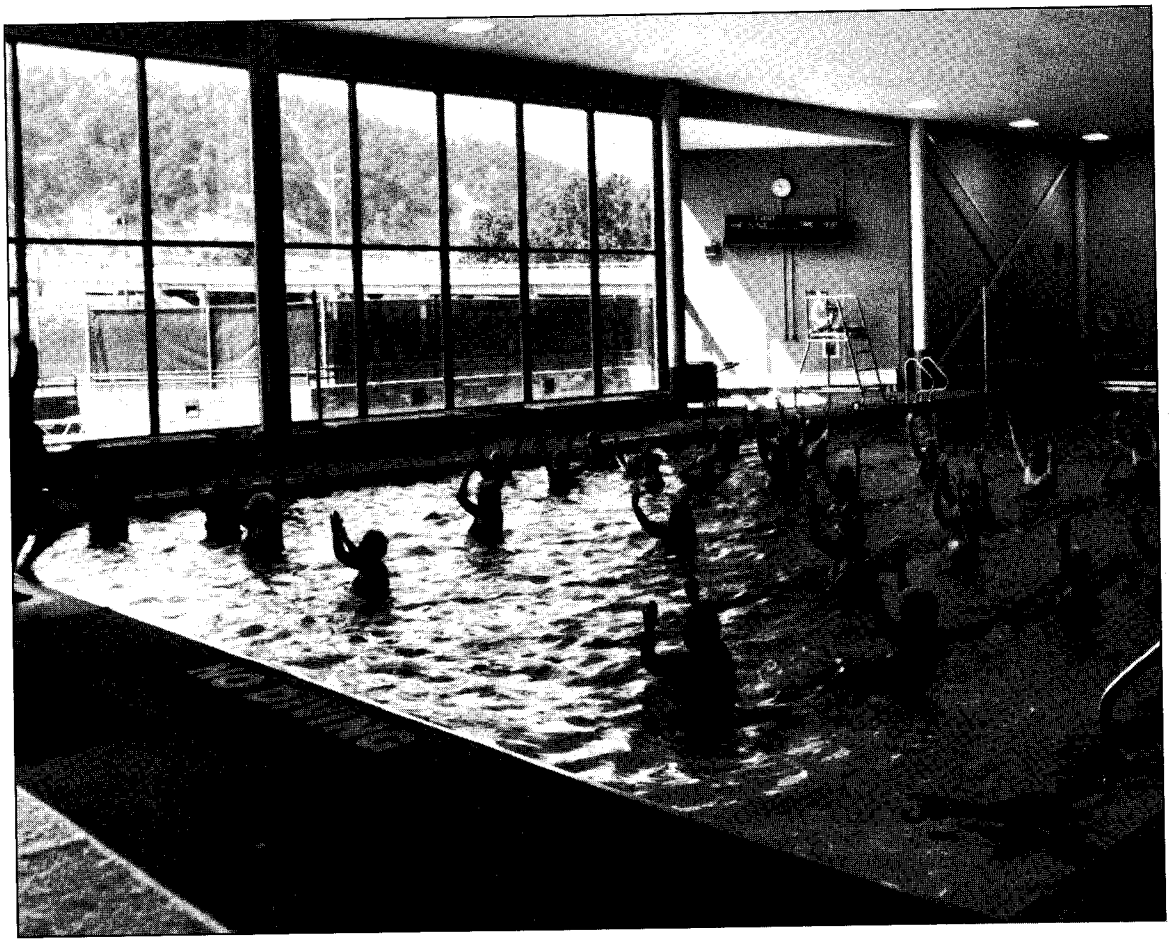
Transient students are strongly advised to consult with the appropriate counselor or advisor at the home college or university as to the appropriate coursework to be taken at Shawnee State and how that coursework will transfer to the home campus of the transient student.

If, as a transient student, you decide to seek a degree at Shawnee State University, you become a "transfer student" and are bound to all requirements for a degree-seeking transfer student, including whatever requirements existed for the major to be pursued at Shawnee State at the time of your initial enrollment.

Senior Citizens

Shawnee State University admits senior citizens (60 years of age or older) for courses, on an audit, space-available basis. Although formal application and registration are required, no tuition fees are charged. Lab fees are charged when applicable. Senior citizens who wish to take courses for credit are charged the usual tuition and fees.

There is also a special, no cost, fitness program for seniors. Applications may be obtained at the James A. Rhodes Athletic Center.



Academically Advanced High School Students

Juniors and Seniors

The Postsecondary Enrollment Options Program offers academically talented high school juniors and seniors the opportunity to take, in a college setting, courses which enhance coursework available at their high schools and which are clearly at the collegiate level.

Because the courses taken under this option are at the collegiate level, it should be expected that these courses are more demanding and completed at a faster pace than those taken in high school. They generally require more out-of-class preparation than high school classes. You and your parents should also consider the emotional and social maturity necessary to study in an adult environment in which most students are in their late teens/early twenties and assess your ability to accept independence and responsibility for your academic performance.

Eligibility

To be eligible for the Postsecondary Enrollment Options Program, you must:

- Be a resident of the state of Ohio.
- Have completed at least the sophomore year of high school and be of junior status, as defined by the school district.
- Be commuting from your permanent residence and attending a high school within commuting distance.
- Have unscheduled time available in your high school day (not counting lunch period). S.B. 140 allows only as many college courses as you have free periods in your high school day.
- Provide evidence of a high school GPA of 3.0 on a 4.0 scale. (The 3.0 GPA is not required for summer quarter attendance by high school students.)
- Take a placement test and place at a collegiate level in reading, English, and mathematics (i.e., 100 level or above).
- Maintain a cumulative GPA of 2.0 (C average) for coursework at Shawnee State, and a 3.0 cumulative GPA (including transferred Shawnee State coursework) at your high school.
- Submit the application for admission, current application fee, official high school transcript, and copy of the completed acknowledgement form from the high school to the Office of Admission by the May 15 deadline. Placement testing must also be completed by this deadline.

Under this program, qualified students have two options:

Option A (college credit only)

- You must take placement tests and place at collegiate levels.

- You/your parents/your guardian pay for tuition, fees, books, and materials.

Option B (high school and college credit)

- You must take placement tests and place at collegiate levels.
- You should seek counseling from high school personnel as to which college courses will meet graduation requirements at your school.
- Tuition, fees, books, and materials are paid for by the state, based on an established formula. **Note:** If you withdraw prior to the end of the quarter, any and all fees become the responsibility of you and your parent(s) or guardian(s).
- Successfully completed courses under Option B receive appropriate high school credit as determined by your school district. The college credits earned at Shawnee State University as a high school student may be applied toward a Shawnee State degree or transferred to another university according to the transfer policies of the receiving institution.
- Courses may be taken under Option B during fall, winter, and spring quarters only. However, you may take courses during all four quarters, including summer, under Option A.

Special Note: Any Ohio high school junior or senior who wishes to attend Shawnee State University while enrolled in high school must do so under the Postsecondary Enrollment Options Program and meet all requirements of that program. Those who choose to pay tuition do so under Option A.

Application

You must complete the PSEO application for admission and submit it, with the current, nonrefundable application fee, to your high school counselor. The counselor should then send, to the Office of Admission, the application, fee, and a copy of the acknowledgement form used by the high school when advising students and parents of the advantages, risks, and responsibilities involved in participation in the program. The acknowledgement form must bear the signatures of the applicant, parent(s), and high school official. To participate in the Postsecondary Enrollment Options Program at any time during

your junior or senior academic year, you must meet all requirements and apply by the May 15 deadline in the previous academic year. Students are not admitted after the May 15 deadline.

- The counselor must attach a current high school transcript to the completed application and acknowledgement form and forward them, with the application fee, to the Office of Admission. **A current transcript is required for each quarter of enrollment.** The acknowledgement form need be submitted only once, at the time of application.
- Deadlines for updated transcript and verification forms are:

Fall Quarter	June 15[1]
Winter Quarter	November 15
Spring Quarter	March 15

Registration

- A required day of orientation/registration is held in August, at which time advisors will help you with course selection and registration, which is on a space-available basis. Classes are subject to cancellation.
- Students admitted to this program are permitted to register for most courses numbered at the 100 or 200 level, provided necessary prerequisites are met. Courses required for

[1] Only the transcript for the academic year is due on this date. **All other required materials are due on May 15.**

high school graduation (English, American History, and Government) may not be taken under the PSEO Program.

- You may take a maximum of 12 quarter hours per quarter (minimum full-time), provided you have a sufficient number of free periods per day at your high school, not counting lunch period. A provision of S.B. 140 requires one free period per day at the high school for each college class taken.
- You must attempt the courses as regularly graded courses. No grading options except A-F are available to students enrolled in this program.

Program Continuation

Students participating in the Postsecondary Enrollment Options Program are required to maintain a cumulative grade point average (GPA) of at least 2.0 for all college courses completed. Students whose cumulative GPA falls below 2.0 are not permitted to continue in the Postsecondary Enrollment Options Program. Further, you must remain in academic and disciplinary "good standing" at the University and your local high school to remain eligible for this program. **Note:** Shawnee State University will honor any disciplinary action taken by the high school affecting a student in the Postsecondary Enrollment Options Program.

Acceptance, Notification, and Reporting

- In compliance with the law, ten days after completion of the application process, the following individuals are notified regarding admission status: the student, the student's parents (or guardian), the high school counselor, the district superintendent, and the state superintendent.
- You are notified immediately of your enrollment.

Validation of Credit

- Grades are reported to you and/or your parent(s) or guardian as appropriate.
- For students who have chosen to use courses to complete high school requirements, the University will supply an official transcript of grades to the student's high school principal/counselor.

Freshmen and Sophomores

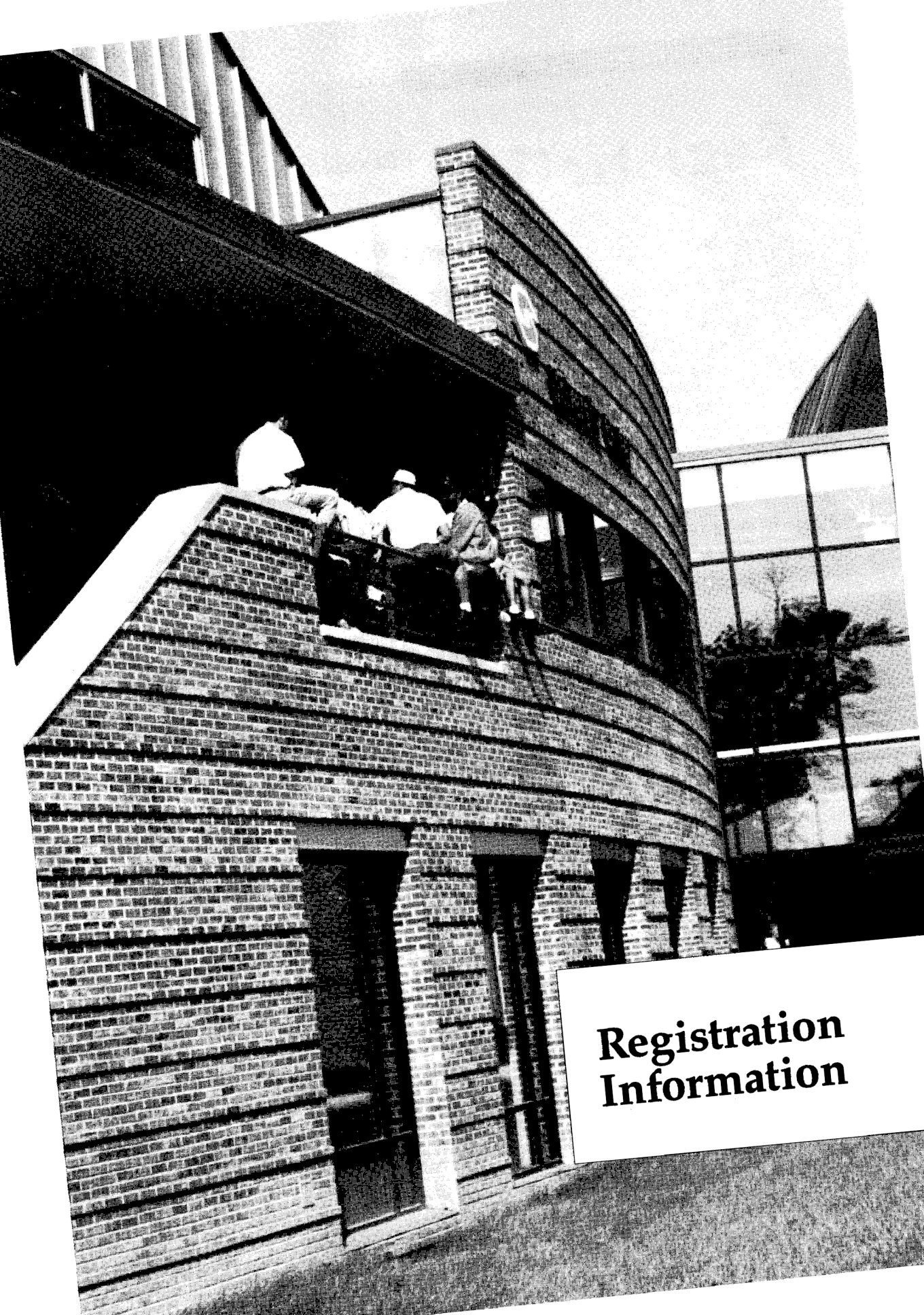
Freshmen and sophomore students in high school may enroll under the following requirements:

- Courses are to be taken for college credit only.
- Tuition, books, and fees are the responsibility of the student/parent(s)/guardian.
- You may attend only one course per quarter.
- You must show evidence of a 3.0 (A=4.0) grade point average (GPA) in your local high school.[1] (The 3.0 GPA is not required for summer quarter attendance by high school students.)
- You must apply for admission, submitting the high school application for admission and the non-refundable application fee, and provide a written recommendation by your high school counselor or principal along with written permission from your parent(s)/guardian.
- School and parent/guardian recommendation and permission forms must be submitted each quarter of enrollment.
- Your course schedule must be approved by the Office of Admission or the Registrar.

Campus Tours

The Office of Admission, located in the University Center, offers group tours of campus, Monday through Friday, at 10:00 a.m. and 2:00 p.m., and Saturday, at 11:00 a.m. and 3:00 p.m. For an individual campus tour and personal appointment, please contact the Office of Admission at (614) 355-2221 to schedule a time that's convenient for you.

[1] The Office of Continuing Education may offer special programming which is exempt from the 3.0 GPA requirement.



Registration Information

Registration

New students for fall quarter must register for their initial quarter during the New Student Orientation held each July. (See "Orientation," beginning on page 33.)

Continuing or returning students may register for subsequent quarters during advance registration, early registration, and late registration. (Dates and times are found in the Academic Calendar, beginning on page 12.)

"Preferential registration" is available during the advance registration period for currently enrolled sophomores in associate degree programs and seniors in bachelor degree programs. Only the above students may submit registration forms during the preferential registration time period (see the quarterly course schedule for applicable dates).

Improper Registration

Admission or registration may be canceled by the director of admission and retention or the registrar in cases of improper registration or when false or incomplete information is provided on the application for admission, registration forms, or other official documents. In such cases, you will be notified in writing as to the action that was taken and the reasons for such action.

Selective Service Registration

Ohio law requires male students between the ages of 18 and 26 to be registered with the Selective Service System, unless they are on active duty with the armed forces of the United States (other than the National Guard or reserves) or legally excluded, to be eligible for state educational assistance programs. Residents who are not registered or have not indicated they do not need to register by the first day of the quarter are required by Ohio law to pay the out-of-state tuition. You can register with Selective Service in the year you become 18, and you must complete registration by 30 days after your 18th birthday. Selective Service registration can be accomplished in a few minutes at any U.S. Post Office. If you wish to indicate exempt status, you can request materials to do so by contacting the Office of the Registrar.

Residency Information

A nonresident surcharge is assessed to any student who does not qualify as a resident for subsidy and tuition surcharge purposes, in addition to other university fees. You are treated as a resident of Ohio and are assessed in-state fees if:

- You are dependent upon at least one parent or legal guardian who has been an Ohio resident for the 12 months preceding your enrollment.
- You have been a resident of Ohio for the 12 months preceding your enrollment and during this time you have not received financial support from outside the state.
- You are the dependent child of a parent or legal guardian, or the spouse of a person, who, as of the first day of your enrollment, has accepted full-time employment and established a domicile in Ohio for other reasons than gaining the benefit of favorable tuition rates.

You may also qualify if you are self-supporting while in Ohio pursuing a part-time course of study (conditional residents), are stationed in Ohio while on active duty in the military or have been an Ohio resident while involved in active duty military service prior to enrollment, have worked as a migrant in Ohio, or have been requested to be out of the country by your employer. If you qualify under one of these conditions, your dependents may qualify as well.

Proof of residency may be presented in a Request for Resident Classification to the Office of the Registrar. This form and all documentation must be submitted by the following deadline dates in order to be effective for the desired quarter:

- May 1 for summer quarter
- August 1 for fall quarter
- November 1 for winter quarter
- February 1 for spring quarter

Retroactive residency determinations cannot be made for tuition surcharge purposes.

For information on residency, conditional residency, Selective Service requirements, or to receive a Request for Resident Classification, write or visit the Office of the Registrar.

Orientation

Student orientation is required of every degree-seeking student entering Shawnee State University. The orientation process includes assessment in mathematics, English, and reading with subsequent placement into the appropriate initial courses in mathematics and English. No student may register for a mathematics or English class without having completed this assessment.

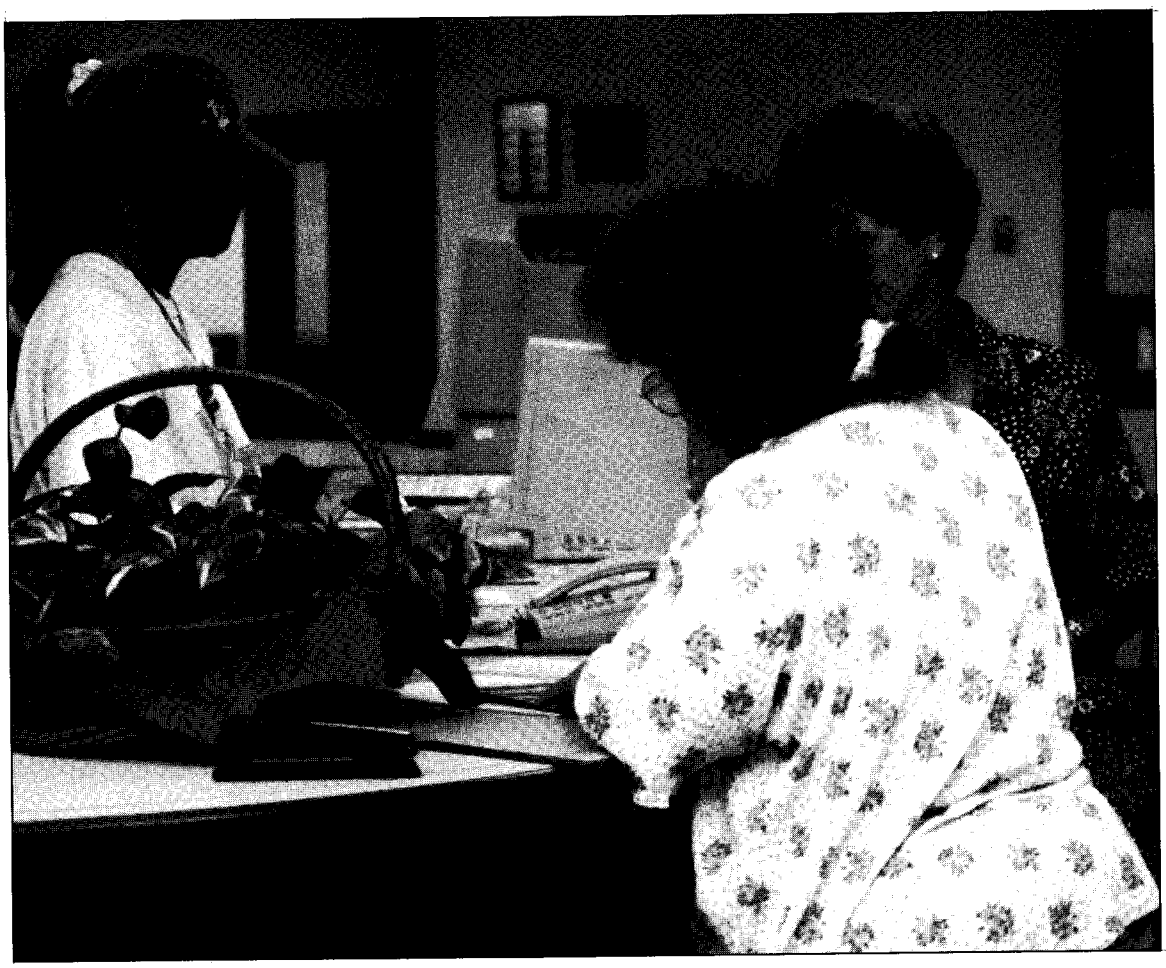
During orientation, you are also advised as to your initial quarter classes, registered for those classes, given a tour of the campus, and provided with information concerning services available and academic rules and regulations.

Student orientation is scheduled well in advance of each quarter, with additional dates to accommodate late registrants. For more information, please contact the Office of the Registrar.

Student Academic Assessment Services

All first-time, entering, degree-seeking students must participate in the University's academic assessment and placement program prior to registering for English and mathematics courses. If you are entering the University with credits from other colleges or universities, you must participate in the English and mathematics placement testing process if you lack transferable English or mathematics credits.

If you enter Shawnee State University with a mathematics subject ACT score of 22 or higher, or the SAT equivalent, you will be permitted to register for MATH 110S and/or MATH 130 and/or MATH 150 without taking any mathematics placement test.



If you meet these qualifications and wish to register in a mathematics class at a level higher than MATH 130, you must take the Advanced Placement Test. For information about this option, contact the Department of Mathematics.

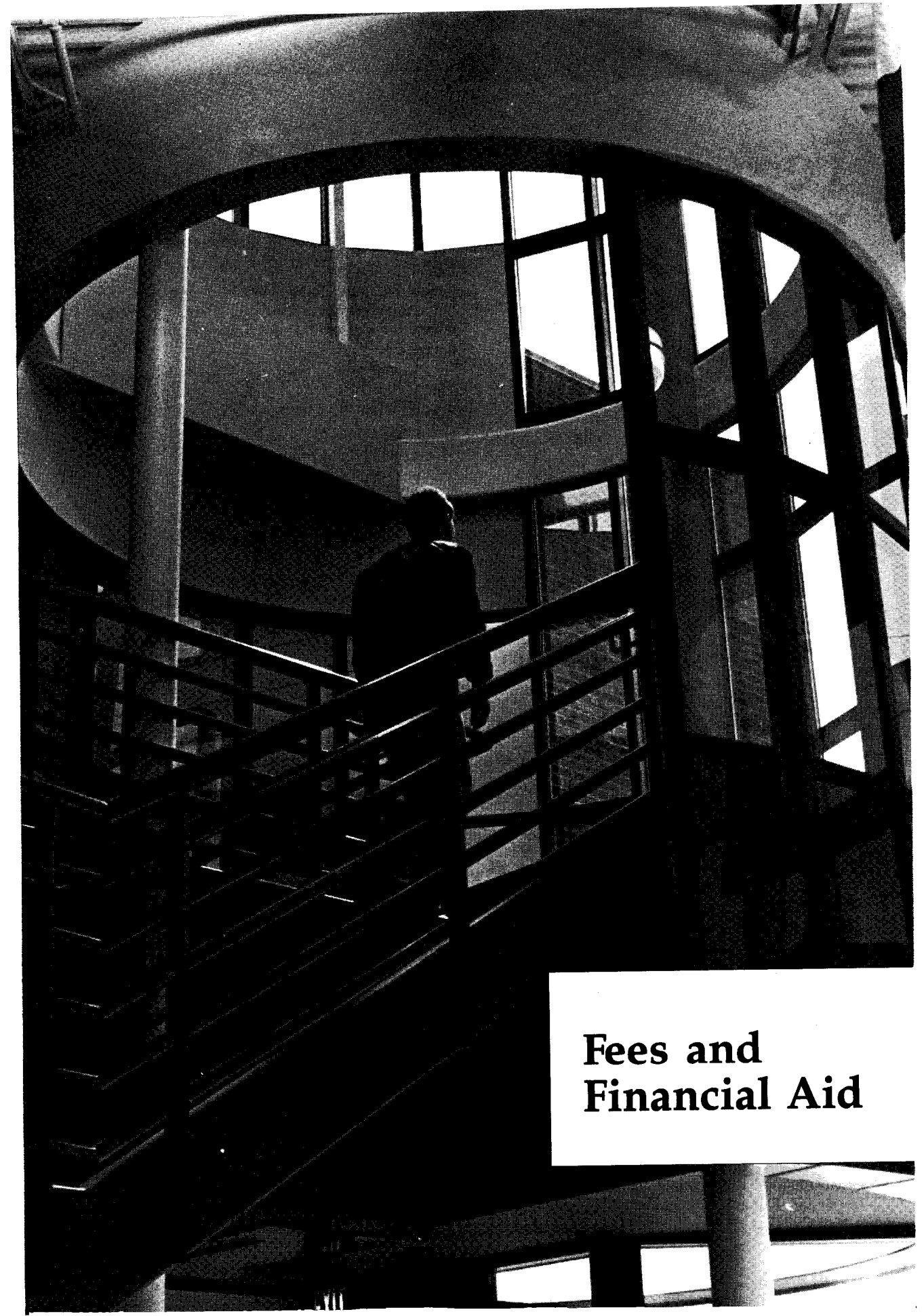
If you are entering Shawnee State with an English subject ACT score of 22 or higher, or the SAT equivalent, you are permitted to register for ENGL 111S without taking any English placement test.

The academic assessment program directs you into the university curriculum and ensures that you register for courses that match your level of academic preparedness for college-level coursework. If your placement is not determined by the above criteria, placement testing is mandatory. Placement is determined by test scores and other factors, which are determined by the appropriate division and may include ACT scores and high school background information.

Please contact the Learning Center at (614) 355-2392 for more information about the English and mathematics placement tests. Refer to the mathematics and arts and humanities sections of this catalog for specific information about ACT scores and placement.

Student Advising and Referral Services (STARS)

Student Advising and Referral Services (STARS) is designed to offer advising and referral services to first-year students. STARS also facilitates ongoing retention efforts which allow for University-wide participation of faculty, administration, and staff. The coordinator and five faculty affiliates provide advising for course sequencing and career goals. STARS also provides advising for students who are considering withdrawal, who wish to reenroll, who desire academic improvement plans, and for any other issues that may be affecting successful completion of educational goals. The student-organized and operated Partnerships for Students is housed in the STARS office and provides activities for students to grow academically, socially, and personally. Students interested in joining Partnerships should contact the STARS office, located on the first floor of the Commons Building. Please call 355-2594 for more information.



Fees and Financial Aid

Fees and Expenses

Registration fees are payable at the Bursar's Office prior to the opening of classes and in accordance with instructions issued with your quarterly bill. For students registering during late registration, fees are assessed as part of the registration process and are due at that time. If you make changes in your class schedule which result in an increase in your fees, it is your responsibility to go to the Bursar's Office to get a revised bill. **No additional bills will be mailed to you as a result of dropping and adding classes.**

The Bursar's Office, currently located on the first floor of the Business Annex, will move to the first floor of the University Center during summer quarter 1995. This move places it near the Offices of Admission, the Registrar, and Financial Aid and should make it easier for you to—in one place—take care of the "business" of going to college.

Fees may be paid by cash, check, money order, Visa, or MasterCard. It is important that you retain all fee receipts. Payment of fees owed is a prerequisite to official enrollment, and you should have sufficient funds (cash and/or financial aid) to cover expenses.

Student Load

Students scheduled for 12-18 credit hours are considered full-time students. Students scheduled for fewer than 12 credit hours are considered part-time students. The permission of the registrar is required for you to schedule over 18 hours of credit. Please refer to the fee schedule for the rate per credit hour.

Certain students are restricted from carrying a course load greater than twelve hours. These students include first-time entering freshmen placed into two or more developmental education courses and any student placed on academic probation for a second consecutive quarter. A student affected by this policy may appeal to the director of developmental education. In special cases, when this policy would jeopardize a student's participation in a degree program, a department chairperson may also request to waive the twelve-hour limit.

Quarterly Tuition

The student fees listed here are subject to change. Shawnee State University reserves the right to make, without prior notice, any fee adjustments that may become necessary.

> **Special Note:** All out-of-state/in-region students enrolled in health science programs pay the out-of-state fee rather than the out-of-state/in-region fee.

Full-Time Students *(12-18 hours)*

Instructional Fee

In-State	$ 784.00
Out-of-State/In-Region (Mason, Lewis, Boyd, and Greenup Counties, Kentucky and Cabel and Wayne Counties, West Virginia)	1,047.00
Out-of-State	1,456.00

General Fee

All Students	137.00

Technology Fee

All Students	17.00

Part-Time Students

Instructional Fee *(per credit hour, up to 11 and above 18)*

In-State	$ 66.00
Out-of-State/In-Region (Mason, Lewis, Boyd, and Greenup Counties, Kentucky and Cabel and Wayne Counties, West Virginia)	88.00
Out-of-State	122.00

General Fee *(per credit hour, up to 11 and above 18)*

All Students	12.00

Technology Fee *(per credit hour, up to 8 and above 18)*

All Students	2.00

Miscellaneous Student Fees

Application	$ 30.00
Late Payment (max. $75.00) (per Budget Payment Plan policy)	35.00
Late Installment Fee	20.00
Budget Payment Plan	15.00
Bad Check Fee	25.00
Transcript	3.00
Transcript, Immediate Action	10.00
Graduation	50.00
Graduation Reapplication Fee	5.00
Credit by Exam	40.00
Credit by Arrangement (fee per cr. hour)	84.00
Change Orders (fee per change, max. $16.00)	4.00
Credentials Evaluation	50.00

Miscellaneous Student Fees
(cont'd.)

International Student Orientation		$200.00
Health Science Fee (per cr. hr., max. $77.00)		7.00
Education Field Fee		125.00
Parking Fee, Reserved Lot	month	10.00
	year	120.00
Parking Fee, General	month	5.00
	quarter	15.00
	year	60.00
Lab Fees		see section below

Housing Fees

Double Room	annual pmnt.	$2,500.00
	quarterly pmnt. ($875.00 per)	2,625.00
	budget plan (9 payments @ $300.00)	2,700.00
Private Room (if available)	annual pmnt.	3,000.00
	quarterly pmnt. ($1,066.67 per)	3,200.00
	budget plan (9 payments @ $377.78)	3,400.00
Board	17 meals per week	1,130.00

Lab Fees

A current schedule of lab fees is available in the Office of the Registrar. Those fees which exist at the time of this catalog's printing are included with their respective course description, beginning on page 165.

Parking Fee

The University is expected to initiate both a parking fee and a parking system in 1995-96. The proceeds from the parking fee will be used to improve and manage parking facilities on campus.

Budget Payment Plan

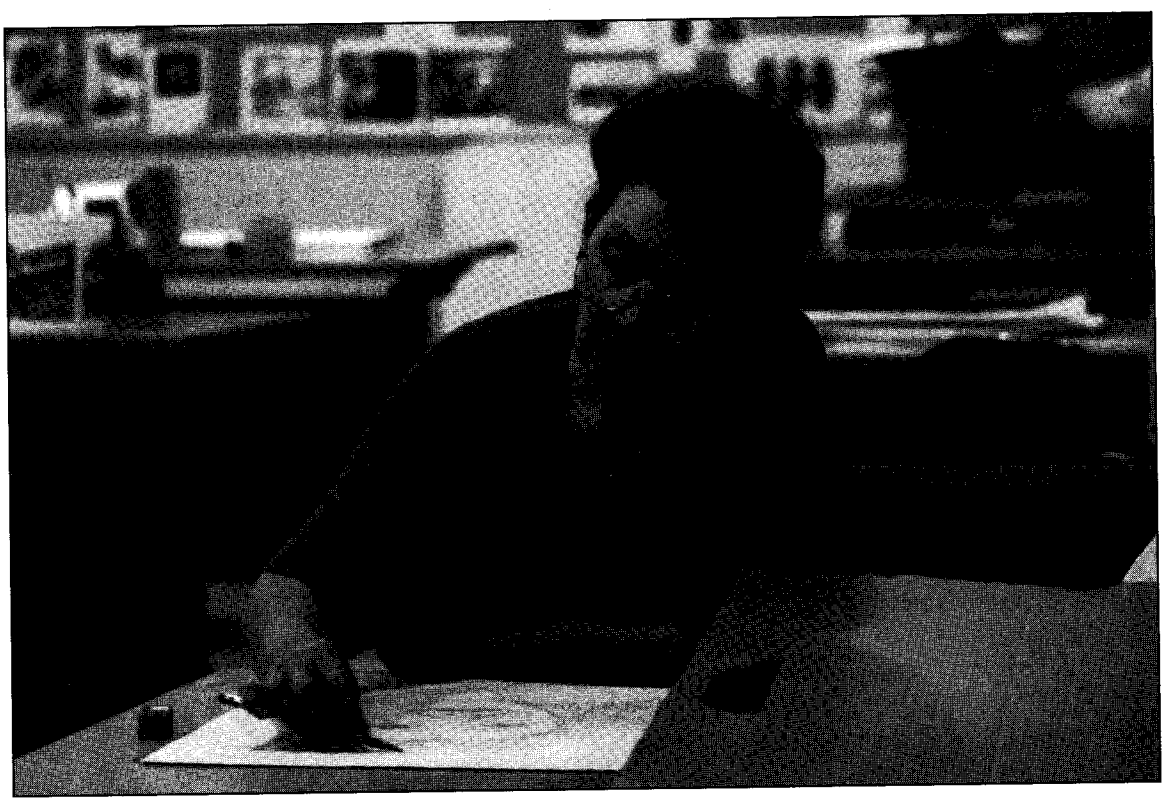
Shawnee State University provides a Budget Payment Plan that can help you with the payment of tuition, books, and certain fees.

Information about the Budget Payment Plan is available in the Bursar's Office.

Bad Check Policy

Payment of fees owed is a prerequisite to official enrollment, and you should have sufficient funds (cash and/or financial aid) to cover these expenses.

A check returned for insufficient funds is a federal offense and constitutes nonpayment of



your obligation to Shawnee State University. Therefore, any student who has a check returned for insufficient funds shall be subject to all related fees, and, until the same is cleared, the student shall be considered in noncompliance with institutional policy and may be administratively dismissed.

Any student administratively dismissed due to a bad check has no recourse for readmission for the current quarter.

Student Insurance

Shawnee State University makes available to all students the benefit of a comprehensive health insurance policy. Full-time students enrolled fall quarter are billed for this insurance for the academic year. If you are covered by other health insurance and you do not want to participate in the student health insurance plan, you should complete the Insurance Waiver Form included with your fall quarter bill and return it promptly to the Bursar's Office. You may also pick up a Student Insurance Program Brochure at the Bursar's Office. Questions concerning student health insurance should be referred to the Bursar's Office.

Refund of Fees

Continuing students dropping hours by change order through the 14th day of the quarter, when such changes result in a reduction of fees, are entitled to receive the reduction. Changes made after the 14th day of the quarter result in no refund.

Students who officially withdraw from Shawnee State receive a refund, if due, based upon the following schedule. If you do not officially withdraw, you are not eligible for any refund and fees assessed are due and payable.

Time of Withdrawal

Regular Term

Through first day of class ..... 100% of Tuition
2 to 14 calendar days ..... 80% of Instr. Fee
Over 14 calendar days ..... No refund

Five-Week Summer Session

Through first day of class ..... 100% of Tuition
2 to 5 calendar days ..... 60% of Instr. Fee
Over 5 calendar days ..... No refund

Please Note: The five-week summer session refund schedule applies to students registered only in a five-week session. If you take classes from both a full summer (ten-week) quarter and a five-week session, refunds are issued under the regular term policy. Questions concerning the above information should be referred to the Bursar's Office.

Please Note: Refunds involving Federal Title IV financial aid funds are handled in accordance with federally mandated policies and procedures.

Late Payment Policy

A late payment fee is assessed when you fail to make payment in accordance with the due dates established by the Bursar's Office. Such fees are assessed in accordance with the fee schedule approved by the University's Board of Trustees.

Miscellaneous Fees

Application Fee

A $30 nonrefundable application fee must accompany all admission applications.

Transcript Fee

The University will produce an official transcript upon written request from the student at a cost of $3 per copy. Unofficial transcripts, copies of schedules, etc. are available at a charge of $1 per copy. Same day requests for transcripts are processed at a cost of $10 to the student.

Change Order Fee

A fee of $4 is assessed for each course change (add/drop) processed, up to a maximum of $16 per quarter.

Graduation Fee

A $50 graduation fee is required. You are not billed for this fee. It is your responsibility to pay this when you submit your petition to graduate. Your eligibility to graduate is determined by the registrar after you petition for graduation.

Financial Aid

An extensive financial aid program is available to help you meet some of the expenses of a college education. The financial aid program is administered by the Financial Aid Office and includes four categories: scholarships, grants, loans, and employment.

Application Procedure

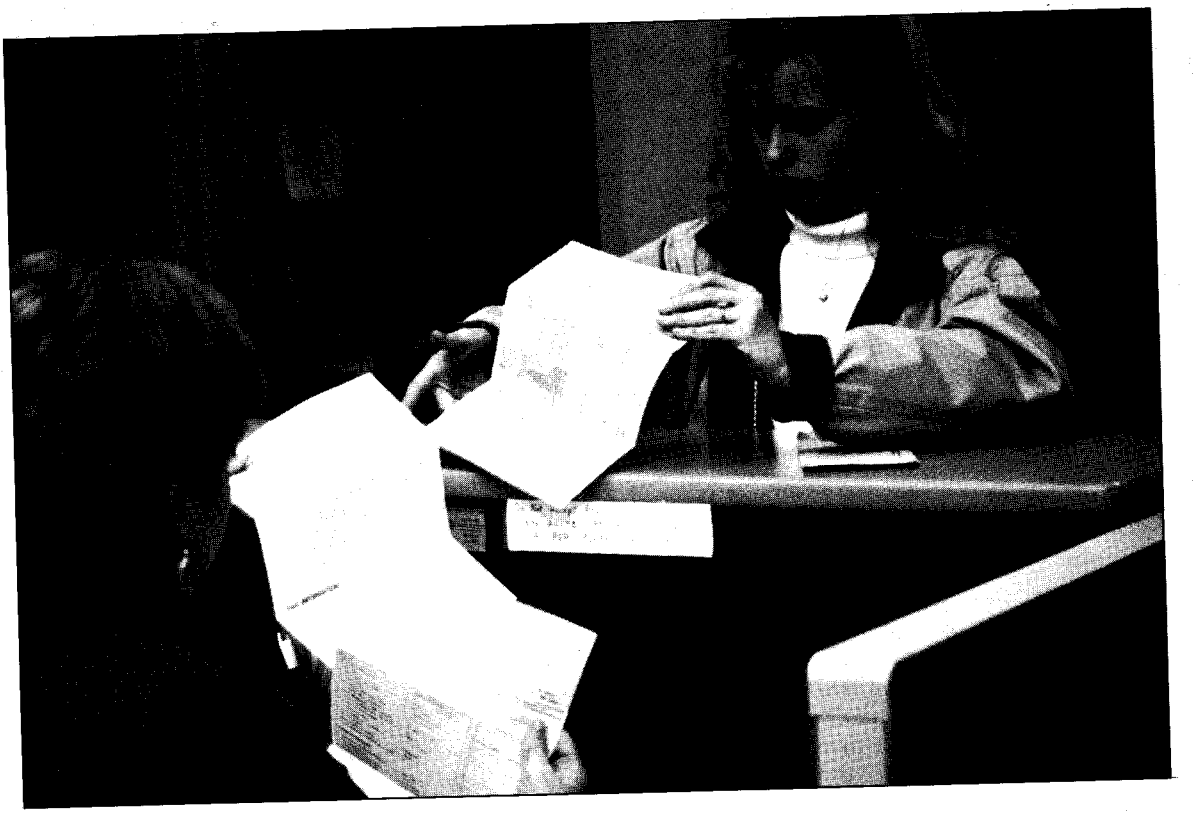
To apply for need-based assistance at Shawnee State University, you must complete and submit the Free Application for Federal Student Aid (FAFSA) form to the federal processor. Need-based aid consists of the Pell Grant, the Supplemental Educational Opportunity Grant, College Work Study, and Stafford Student Loan. Forms may be obtained from your high school counselor or the Financial Aid Office at Shawnee State. **All transfer students must** submit a financial aid transcript from each school previously attended. **Financial Aid Deadline: Your financial aid file must be complete 10 working days prior to the start of any quarter in which the aid is to be used.**

Federal regulations and institutional policies are subject to change without prior notice, but the Financial Aid Office attempts to keep you updated through various media on campus and written notices. Therefore, it is very important that you update your permanent and local addresses with the Office of the Registrar as necessary. Failure to notify the University of address and name changes can seriously delay your award and can be very costly to you.

Determining Need

The Financial Aid Office uses the Free Application for Federal Student Aid form to establish what portion of your costs can be contributed by you or your parents (dependent students only), and need is determined as follows:

Cost of Education (Budget)
(–) Expected Family Contribution
(=) Financial Need



Notification of Award

After your FAFSA needs analysis and other documents have been received and reviewed for accuracy (verified if applicable), you are notified in writing of any award for which you are eligible. If you are denied scholarships or grants, you are encouraged to continue in the process to be considered for supplemental forms of assistance such as loans or employment.

Award Disbursements

You must be officially enrolled through the Office of the Registrar to receive any type of financial assistance, and all verification requirements for the FAFSA must be complete before financial aid can be disbursed. Disbursement dates and procedures vary depending on the type of assistance. Generally, financial aid awards are credited toward your account each quarter. When your financial aid award is greater than your university charges, you are issued a refund, in the form of an overage check, approximately five weeks after the quarter starts.

Scholarships

The Financial Aid Office administers a number of special scholarships for students who demonstrate a high degree of academic ability or special talent. Please contact the Financial Aid Office if you are interested in applying for a scholarship.

Grants

■ **Federal Pell Grant.** The Pell Grant is an entitlement program from the federal government. This means that all undergraduate aid applicants who establish eligibility receive funds based on their eligibility index, enrollment status, and the cost of education. The Pell Grant serves as a foundation for all other aid which is awarded. You may apply for the Pell Grant by completing the FAFSA as soon as applications are available in early January.

■ **Federal Supplemental Educational Opportunity Grant (SEOG).** The SEOG is a federal grant awarded to undergraduate students on the basis of exceptional financial need beyond the Pell Grant. These funds are limited to the amount allocated to the University by the U.S. Department of Education. Therefore, the most needy students receive an award on a first-come, first-serve basis. Application for this grant is made by completing the FAFSA.

■ **Ohio Instructional Grant (OIG).** The OIG is a state-funded grant made available to eligible Ohio residents for meeting the cost of education. All Ohio residents who complete the FAFSA will be considered. Students awarded this grant must carry at least 12 credit hours per quarter.

Please Note: Under the OIG program, you must be enrolled in an eligible associate or bachelor degree program. Some remedial courses (listed as "099" in this catalog) do not count toward the 12 credit hour requirement. Contact the Financial Aid Office for further clarification.

Student Loans

■ **Federal Subsidized Stafford Student Loan (Formerly GSL).** The Subsidized Stafford Loan is a federal loan for undergraduate students enrolled at least half-time in an eligible institution. **You must complete the FAFSA before making application for this loan.** Eligibility is based on financial need and is calculated as follows:

Cost of Education (Budget)
(−) Financial Aid Awarded
(−) Expected Family Contribution
(=) Total Available for Stafford Loan

The Federal Subsidized Stafford Loan program is limited to $2,625 for the freshman year, $3,500 for the sophomore year, and $5,500 per year for the junior and senior years. Under this loan program, payment and interest don't begin until 6 months after you have graduated or you are attending less than half-time (6 hours). Interest rates are capped at 8.25%. Loan checks are made copayable to the University and student in three disbursements from your lender.

■ **Federal Unsubsidized Stafford Loan.** The Federal Unsubsidized Stafford Loan is an additional loan available to dependent or independent students. You are required to apply for the Subsidized Stafford Loan before making application for this loan.

■ **Federal Parent Loan for Undergraduate Students (PLUS).** The Federal PLUS Loan is a supplemental loan for parents of dependent undergraduate students. The borrower must be

the natural or adoptive parent; be a U.S. citizen, U.S. national, or eligible non-citizen; and not be in default on a student loan.

The Federal PLUS Loan must be used for educational expenses at the school the student is or will be attending. Repayment begins in 60 days at a predetermined interest rate (lower than prime) each academic year. The borrower is responsible for all interest from the day the loan is disbursed. Checks are sent in the same manner as described under the Federal Stafford Loan.

Please Note: Loan applications can be obtained from a participating lender for all the above named loan programs. First-year, first-time borrowers cannot receive Federal Stafford funds until successful completion of 30 days of their first quarter. If you withdraw from the University, you are not eligible for your next quarter's loan check and you must reapply if you wish to continue receiving student loan funds.

■ **Student Emergency Loan Fund.** The Bursar's Office makes available to students, on a limited basis, small, short-term loans for direct or related educational expenses.

Employment

■ **Federal College Work Study (FCWS).** The FCWS program is available to students who can demonstrate financial need through the completion of the FAFSA. All possible attempts are made to place FCWS students in positions which coincide with their career interests or academic majors.

You are paid the current minimum wage and, in most cases, work 10-20 hours per week. You are paid, based on the number of hours worked, every two weeks with the regular university payroll. Funding for FCWS is limited, therefore money is awarded on a first-come, first-served basis. Please check with the Financial Aid Office if you are interested in receiving information about FCWS.

■ **Student Employment.** Regular student employment is made available to all university students, regardless of financial need, on the basis of current openings. Please contact the Office of Counseling and Career Services for further details.

Veterans' Benefits

The programs at Shawnee State University are approved by the State Approving Agency for the education of veterans and their eligible dependents. For more information about V.A. benefits, please contact the Financial Aid Office.

Eligibility Requirements

All federal, state, and campus financial aid is based on full-time enrollment (12 credit hours). In some cases, you can receive reduced awards based on enrollment status (three-fourth time or half-time).

All Ohio residents are required to provide the appropriate documentation for proof of residence to the Office of the Registrar.

Students who receive Title IV financial aid (Pell, Stafford, SEOG, and CWS) must maintain satisfactory academic progress, as defined here, to remain eligible.

Satisfactory Academic Progress

For all federal aid recipients, there are three elements to the Satisfactory Academic Progress requirement that must be met. You must (1) earn a degree or certificate in the maximum time frame, (2) maintain minimum grade point average (G.P.A.) in relation to the number of hours attempted (see table 1), and (3) complete a minimum of 86% of the hours attempted based on enrollment status (full-time, three-quarter time, or half-time) (see table 2). Transfer credit (TC), credit by exam (KE), audit (AU), and courses taken for non-credit are not considered as credits for financial aid purposes.

Your academic records are reviewed each academic year to assure that you are maintaining satisfactory academic progress. Any student not in good standing at the end of any academic year is placed on standards of progress. Students who fail to meet any of the requirements for satisfactory academic progress are ineligible to receive Title IV funding until satisfactory standards have been met. You have the right to appeal this action by addressing your concerns in writing to the Financial Aid Office within 30 days of receiving official notice of such action. If the committee accepts your extenuating circumstances, you may be placed on probation.

Grades of incomplete and withdrawal are used for computation of hours attempted but not hours completed.

Table 1 *(Applied each quarter)*

Credit Hours Attempted	Accumulative Grade Average
21-40	.75 or below
41-55	1.00 or below
56-65	1.25 or below
66-75	1.50 or below
76-85	1.75 or below
86 and above	1.90 or below

Table 2 *(Applied annually)*

Full-time: (18 quarters or six academic years maximum time frame to complete program)

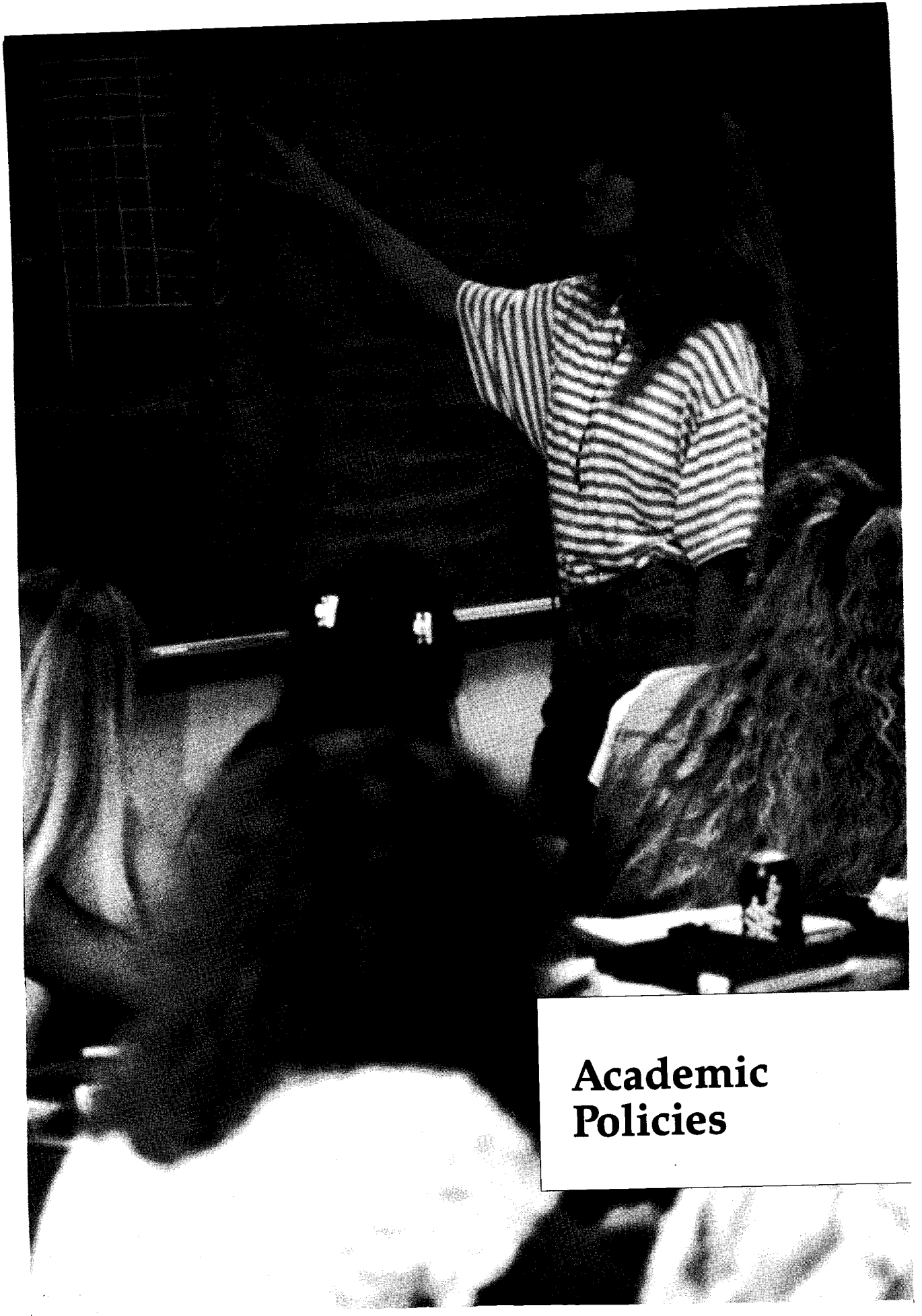
1st year, 31 cr. hrs. completed	4th year, 124 cr. hrs. completed
2nd year, 62 cr. hrs. completed	5th year, 155 cr. hrs. completed
3rd year, 93 cr. hrs. completed	6th year, 186 cr. hrs. completed

Three-quarter time: (24 quarters or eight academic years maximum time frame to complete program)

1st year, 23 cr. hrs. completed	5th year, 116 cr. hrs. completed
2nd year, 47 cr. hrs. completed	6th year, 140 cr. hrs. completed
3rd year, 70 cr. hrs. completed	7th year, 163 cr. hrs. completed
4th year, 93 cr. hrs. completed	8th year, 186 cr. hrs. completed

Half-time: (36 quarters or twelve academic years maximum time frame to complete program)

1st year, 16 cr. hrs. completed	7th yr., 109 cr. hrs. completed
2nd year, 31 cr. hrs. completed	8th yr., 124 cr. hrs. completed
3rd year, 47 cr. hrs. completed	9th yr., 140 cr. hrs. completed
4th year, 62 cr. hrs. completed	10th yr., 155 cr. hrs. completed
5th year, 78 cr. hrs. completed	11th yr., 171 cr. hrs. completed
6th year, 93 cr. hrs. completed	12th yr., 186 cr. hrs. completed



Academic Policies

Academic Programs and Policies

Academic Integrity

Students at Shawnee State University are required to do their own work on all tests and assignments. Any form of cheating may result in your being withdrawn from a particular course or courses, as well as possible dismissal from the University. (See *Student Handbook*.)

Grading/Awarding of Credit

Final grades are mailed at the end of each quarter by the Office of the Registrar. Grades will not be issued orally.

Grade	Description	Quality Points
A	Excellent	4.00
A–		3.67
B+		3.33
B	Good	3.00
B–		2.67
C+		2.33
C	Average	2.00
C–		1.67
D+		1.33
D	Poor	1.00
D–		0.67
F	Failing	0.00
TC	Transfer Credit	0.00
KE	Credit by Exam	0.00
NC	No Credit	0.00
WD	Withdrawal	0.00
I	Incomplete	0.00
P	Pass	0.00
AP	Advanced Placement	0.00
AU	Audit	0.00
NR	No Report	0.00

A grade of "F" receives no credit. Students making this grade must repeat the course if credit is to be received.

Class Ranking

Student class ranking is determined by your cumulative credit hours earned and your degree program (please note the chart below). Non-degree seeking students do not possess class rank.

Degree Program	Class Rank	Cumulative Hrs. Earned
Associate	Freshman	0 - 44
Associate	Sophomore	45 - no upper limit
Baccalaureate	Freshman	0 - 44
Baccalaureate	Sophomore	45 - 89
Baccalaureate	Junior	90 - 134
Baccalaureate	Senior	135 - no upper limit

Incomplete Grades

If you are unable to attend class for an extended period of time, you may contact the faculty member responsible for the class to request an incomplete grade. Incompletes must be converted to a grade 30 calendar days into the next quarter or they are recorded as "F's."

Administrative Hold (financial)

With the approval of the registrar, an administrative hold may be placed on the records or accounts of any student who fails to comply in a reasonable period of time with an obligation imposed under university rules or who has an overdue debt or fine. An administrative hold will cause certain services to be withheld, including, but not limited to: obtaining current

quarter grades, registering or enrolling, being certified as eligible to obtain a degree or certificate, receiving a transcript, borrowing books or equipment, or being certified to be eligible to participate in athletics.

The unit originating an administrative hold on your records or accounts will notify you in writing of the obligation that is overdue by providing another itemized bill or list of action requested, specifying when the administrative hold will become effective, whom you should contact for additional information, and how you should contact this person.

Any disputes concerning the legitimacy of the hold or its processing will be resolved by the registrar.

Dean's List/President's List

Full-time students (12 or more hours per quarter) who achieve a 3.5 to 3.99 grade point ratio are placed on the Dean's List for that quarter. Full-time students who achieve a 4.00 grade point ratio are placed on the President's List for that quarter.

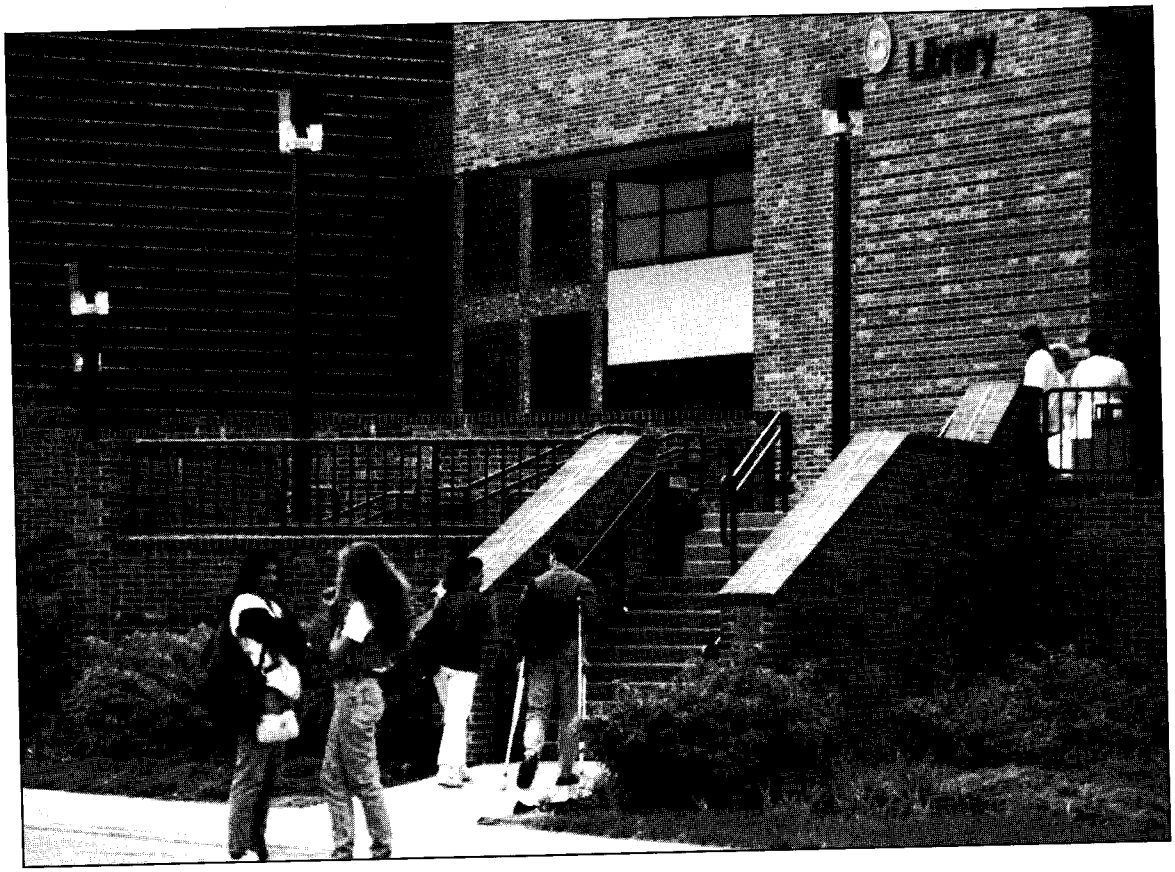
Pass/No-Credit Policy

The pass/no-credit option is designed to permit you to take a select number of courses for which no traditional letter grade (of "A" through "F") is recorded on your grade report and transcript. If you wish to take a course on a pass/no-credit basis, you must complete the proper forms at the registrar's office within the first 14 calendar days of a regular quarter or the first 7 calendar days of a 5-week term. Your decision to take a class on a pass/no-credit basis is **not** subject to change.

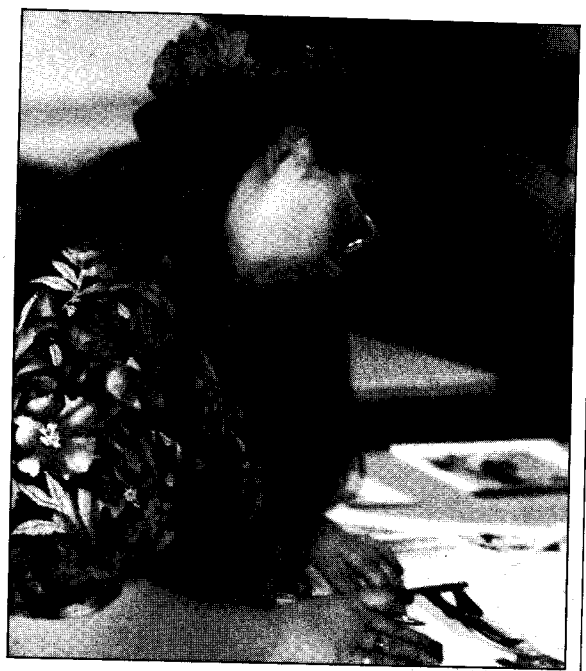
To be eligible for the pass/no-credit option, you must have earned a cumulative G.P.A. of 2.0 or better. First quarter freshmen are considered as having met the above requirement.

The pass/no-credit option is subject to the following restrictions:

- You may complete up to 8 quarter hours to be counted toward an associate degree or 16 quarter hours to be counted toward a baccalaureate degree under this option.
- You may take only one (1) course pass/no-credit per quarter.



- Applicability of courses taken pass/no-credit toward your major program of study is subject to departmental approval.
- To receive a grade of P (pass), you must earn a grade of C- or better in the course. If you do not receive a grade of C- or better, a grade of NC (no credit) is awarded.
- A grade will be turned in at the regular grade-processing time and will be converted to a P or NC on the transcript by the Office of the Registrar.



Credit by Examination

Students have the opportunity to earn credit for selected courses offered at Shawnee State University via proficiency examinations. If you have prior training, innate skills, extensive preparation, or experience, you may qualify to attempt the examination. You should first secure the advice of your advisor or program director as to its appropriateness for your program of study. Then, final approval must be obtained from the appropriate chairperson, program director, or dean. Please note that only selected courses are available "by examination."

A fee of $40 is charged for course credit by examination and **must** be submitted prior to attempting the examination. A "KE" symbol, indicating "credit by exam," is recorded on the academic transcript of those students who demonstrate proficiency by passing the exam. Credit earned by examination is not included in the calculation of your cumulative grade point ratio. You are not eligible to attempt a proficiency examination for a course in which you have been enrolled for 20 class days or more.

Credit hours awarded by examination do not apply toward the residency requirement for graduation.

College Level Examination Program (CLEP)

Students may be awarded credit for College Level Examinations taken under the College Entrance Examination Board. If you take the general examinations in English composition, mathematics, natural sciences, humanities, social sciences, and history and achieve the recommended scores of the Commission on Educational Credit and Credentials of the American Council on Education (ACE), you are given "KE" credit for the first sequential course in the above areas.

Many subject examinations may be used to earn "KE" credit for courses in the same subject areas, but you must achieve recommended ACE scores to receive credit.

Credit given through the College Level Examination Program does not apply toward the residency requirement for graduation.

Credit for Military Educational Experiences

Credit may be awarded for military educational experiences. *The Guide to the Evaluation of Educational Experiences in the Armed Forces,* published by the American Council on Education, is used to determine possible college credit eligibility. Credit awarded for military educational experiences does not apply toward the residency requirement for graduation. Please contact the Office of Transfer Placement for more information.

Prerequisites

Most learning beyond basic skills is dependent upon the mastery of some prior skill or subject content. As a result, many courses at the University require the satisfaction of prerequisites prior to course enrollment. Prerequisites may be met by successful completion of the prior courses listed or by placement, via testing, into the course.

The academic division/school may withdraw a student from a course for which prerequisites have not been satisfied.

Repeating Coursework

Courses may be repeated for credit if so identified in the course description located elsewhere in this catalog. Courses may also be repeated for other purposes (e.g., attempt to raise grade), but only the highest grade earned and the associated credit will be reflected in your GPA (grade point average). The lower course grade will be replaced by the symbol "R," indicating the course was repeated.

While most courses are eligible for repetition, the following transcript symbols cannot be removed by subsequent course repetition: WD, AP, P, KE, NC, AU, TC (please note Grading/ Awarding of Credit section on page 44 of this catalog).

Changing Grades

If you question a grade in a particular course, you must contact the faculty member responsible for that class.

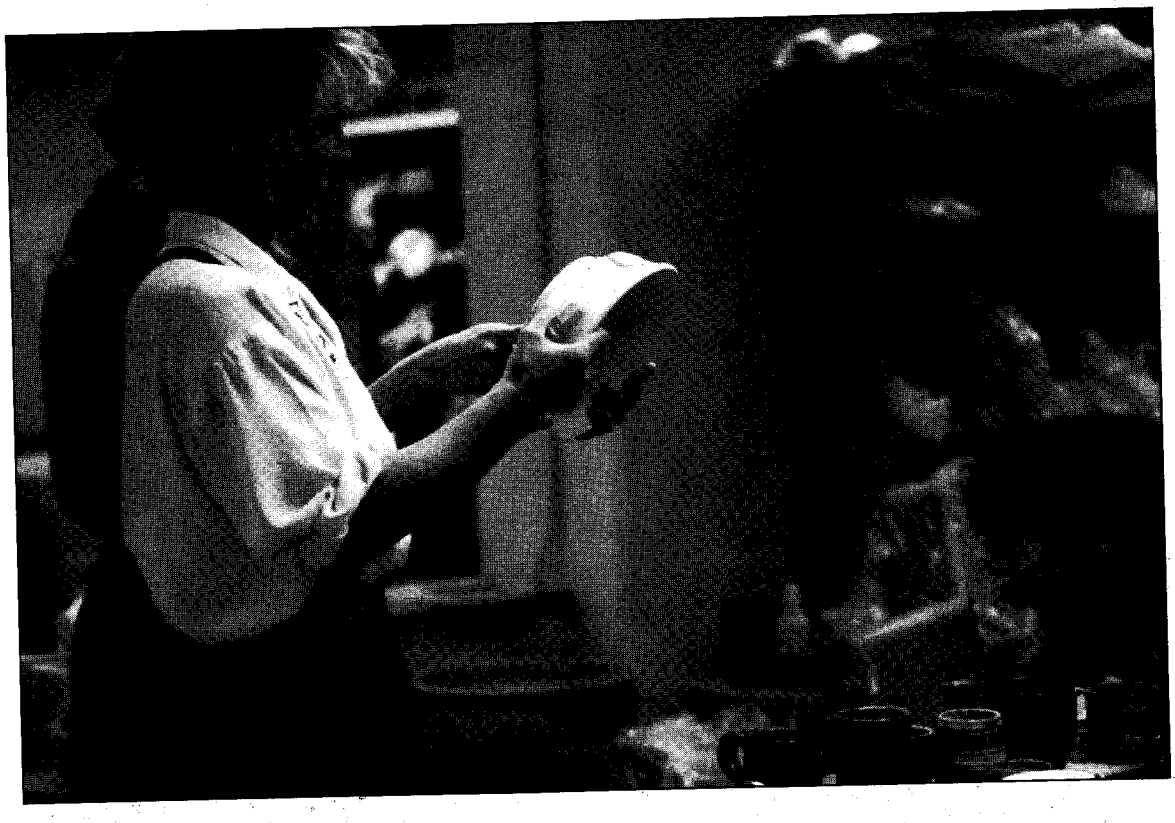
Grade Point Ratio

Quality points for a course are determined by multiplying the total credit hours by the numerical equivalent of the letter grade received in the course. The formula for calculating grade point ratio is:

$$\frac{\text{Total Quality Points}}{\text{Total Hours Attempted}} = \text{Grade Point Ratio}$$

Academic Probation

If you achieve a grade point average of 1.5 or less for any quarter, you are placed on academic probation for the following quarter provided your cumulative grade average does not fall below that required to remain enrolled. (See the following academic dismissal section.)



Academic Dismissal

Students are academically dismissed when their cumulative grade average falls below:

Credit Hrs. Attempted	21-40	41-55	56-65
Cumulative G.P.A.	0.75 or below	1.00 or below	1.25 or below

Credit Hrs. Attempted	66-75	76-85	86+
Cumulative G.P.A.	1.50 or below	1.75 or below	1.90 or below

Students academically dismissed are eligible to re-enroll after one quarter.

Academic dismissal may affect Title IV student financial aid funds. Please check the financial aid "Satisfactory Academic Progress" chart (on page 42 of this catalog) for further information.

Non-Credit (Audit)

You may elect to take a course for non-credit (audit) during the first 35 class days of a quarter (17 days of the 5-week summer sessions) by completing the proper forms in the Office of the Registrar.

Course Credit by Arrangement

Students have the opportunity to fulfill requirements for selected courses offered at Shawnee State University via independent study or specially arranged instruction. If you are interested in pursuing this educational option, you should first secure the advice of your faculty advisor as to its appropriateness for your program of study. You should then contact the appropriate dean, director, or chairperson. This individual, after consultation with appropriate faculty, makes a determination as to the feasibility of your request. You may earn up to 18 credit hours toward graduation in this manner, with all credit being considered resident credit, but you are limited to eight hours of credit by arrangement per quarter. Students enrolling in a course by arrangement have until the date grades are due the following quarter to have all work completed in the course.

Credit hours attempted/earned via this option do not count toward full-time student status. See the fee schedule for course by arrangement fees. All fees **must** be paid prior to the beginning of the course.

Honors Program

The Shawnee State University Honors Program is designed for students with exceptional academic and creative abilities. The program, besides providing recognition to the bright and highly motivated, gives talented students the opportunity to interact with their peers and faculty in a challenging and supportive environment. The Honors Program enriches student life in three ways:

■ **Honors Classes.** The Honors Program offers a small number of honors seminars, colloquia, sections of standard classes, and "directed readings" courses on the main campus. (With the consent of the instructor, these honors courses are also open to non-honors students.)

■ **Honors Advisement.** The Honors Program provides special, supplementary academic advisement on an *ex officio* basis. The advisement offers scheduling assistance and provides information on graduate and professional schools.

■ **Other Activities.** The Honors Program arranges, for its students, special activities that are both academic and social in nature.

Honors Program Admission Policy. Membership of the Shawnee State University Honors Program represents approximately the top three percent of the full-time student population. Selection is based on a multi-dimensional rating scale, including (but not limited to) accumulative grade point average and ACT/SAT scores.

Requirements for Honors Students. Honors students graduating with a 3.75 accumulative grade point average (or better) who have completed a minimum of 24 credit hours of honors courses (12 credit hours in the case of a two-year degree) graduate with a special "Honors Program Certification." This certification is indicated on your academic transcript.

Further information about the Honors Program may be obtained from the Office of the Provost, (614) 355-2472.

Internship Guidelines

Guidelines for internship have been established by faculty for those programs which require internship as part of their graduation requirements. If internship is a part of the program in which you are enrolled, you are urged to request a copy of the guidelines from your faculty advisor.

International Study Programs

The University encourages and promotes the development of intercultural and multicultural academic pursuits of all Shawnee State students. To give you an opportunity to broaden your foreign study experience, the University periodically sponsors international awareness and exchange programs, as well as travel and language study abroad.

Shawnee State also takes great pride in the international faculty who teach at the University. These faculty, and the students we welcome from other countries, share their international perspectives every day and enrich the lives of everyone in the Shawnee State academic community.

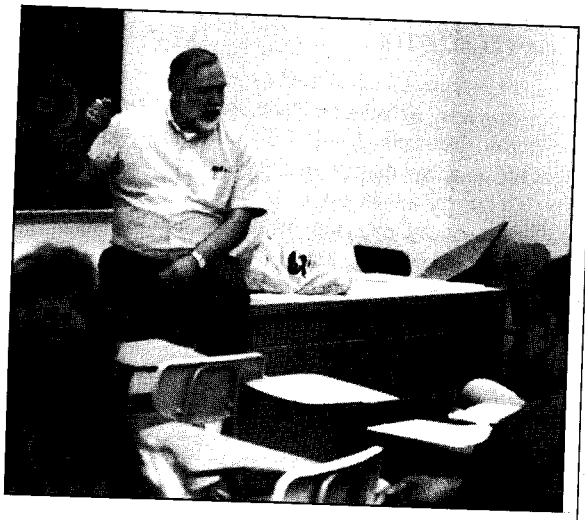
International programs at Shawnee State may take many forms: summer courses taught by university faculty, courses at foreign educational institutions, field studies, and, periodically, student exchange programs. The University annually sponsors an International Awareness Week and occasionally hosts Visiting Fulbright Scholars and lecturers. In order for you to benefit from a variety of international study options, Shawnee State University has also established a sister-institution agreement with Nizhny Novgorod State University in Russia, and others are being explored with universities in Japan, China, and England.

If you are interested in an international exchange opportunity, including the program with Nizhny Novgorod State University, you should plan early, consulting first with your faculty advisor and then with Dr. Hagop S. Pambookian, International Program Committee representative.

Study opportunities may also be available in cooperation with the city of Portsmouth, which is a sister city to Orizaba, Mexico, and Zittau, Germany.

Faculty Advising

Academic advising is provided to degree-seeking students by faculty advisors. The purpose of faculty advisement is to help you with your immediate academic concerns. Faculty members will meet with you by appointment, and each faculty member has available hours posted near his or her office.



Faculty Expectations and Responsibilities

Faculty expect regular and punctual attendance at all classes. Attendance policy for individual classes is made by the faculty member responsible for the class. Grades are also controlled by the faculty member responsible for the class.

In the event that a faculty member is not present at the normal time class begins, you are to remain in the classroom an additional 15 minutes. If the class meets once a week for 3 to 5 hours, you must remain in the classroom for 45 minutes. If the faculty member has not arrived or no special instructions have been received within that time, you may leave class without penalty.

All faculty members post office hours during which they are available to discuss individual problems relating to your academic progress. You are encouraged to take full advantage of your academic advisors. They want to see you succeed.

Visitors to Class

Students planning to bring a visitor to a class with them are asked to obtain the permission of the faculty member responsible for the class in advance of the visit.

Bringing Children To or Leaving Children At the University

Children are welcome at the University, with you, at any family event. However, please do not bring children to the University and leave them unattended while you are in class or at another university-related event. If you have a problem finding or paying a baby-sitter, please stop by the Office of Student Activities and pick up a copy of *A Day Care Center Resource Guide,* developed by the Student Senate for your information and assistance. In any case, the University cannot be responsible for children who are left unattended.

Adding a Class

You may add a class to your schedule during the first five class days of the quarter (five days of a five-week summer session) by completing a change order in the Office of the Registrar. A fee is assessed for each change.

Withdrawing from a Class

You may withdraw from a class through the 14th calendar day of the quarter by completing a change order form in the Office of the Registrar and paying the appropriate fees. During the first 14 calendar days, if class withdrawal affects fees, a refund is possible. Any withdrawal after the 14th calendar day results in a WD being placed on your academic record. Withdrawing from courses may affect Title IV student financial aid funds. Please read the Financial Aid Satisfactory Progress section on page 34 of this catalog.

You may withdraw from a class the 15th through 49th calendar days of the quarter by obtaining the signature of the instructor on a form obtained from the Office of the Registrar. Appropriate fees must be paid and the form returned to the Office of the Registrar.

In case of emergency, as determined by the Office of the Provost, you may withdraw from a class after the 49th calendar day, but no later than 5:00 p.m. on the final day of class, by obtaining permission from the Office of the Provost, paying appropriate fees, and completing appropriate forms. Faculty members are notified by the Office of the Provost of these emergency withdrawals.

Withdrawing from College

Students withdrawing from college when classes are in session must complete the proper forms in the Office of the Registrar. Grades for

scheduled classes are recorded as withdrawals (WD). See the fee schedule for our refund policy.

If you do not follow the withdrawal procedure, you are considered enrolled in the class and are graded accordingly.

Transcripts/Grade Reports

Each quarter you receive a grade report that includes grades achieved that quarter. Please contact the registrar within 30 days of receiving the grade report if you discover an error.

You may request transcripts from the Office of the Registrar. Requests for official transcripts must be in writing and addressed to the Office of the Registrar. The transcript fee is $3.

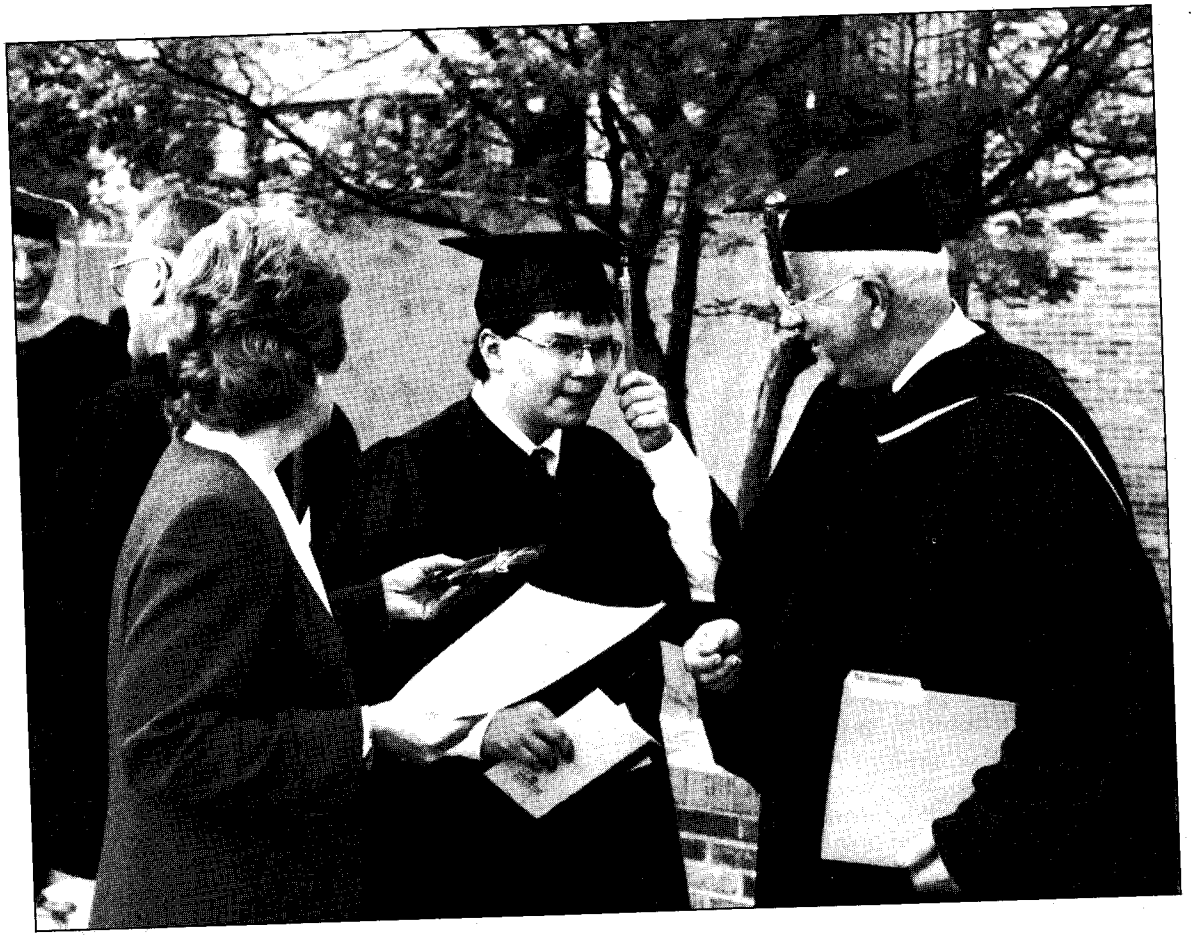
Graduation Requirements

In order to graduate, you must have successfully completed all course requirements and have achieved a 2.0 cumulative grade point ratio in all coursework *and* in your major field of study. Students having outstanding institutional bills or notes are not issued a degree. All students are required to earn a minimum 30 hours of credit for the associate degree and 45 hours for the baccalaureate at Shawnee State University in order to be eligible for graduation. You must petition to graduate by the deadline published in the calendar. Petitions are available in the Office of the Registrar.

Please Note: Students in health science majors must be in good standing in order to graduate.

Graduation with Honors

Students who achieve a cumulative grade point ratio of 3.25-3.49 prior to the quarter of graduation are graduated cum laude. Students who have achieved a cumulative grade point ratio of 3.50-3.74 prior to the quarter of graduation are graduated magna cum laude. Students who achieve a cumulative grade point ratio of 3.75 or above prior to the quarter of graduation are graduated summa cum laude.



Developmental Education

If you lack college-level academic skills in basic English, mathematics, or science, you may choose or be advised to take developmental courses in these areas. Furthermore, in instances where placement test outcomes indicate an explicit need for college preparatory coursework, you are required to take certain developmental courses before registering for some university courses.

Developmental courses provide underprepared students an opportunity to gain the skills and knowledge necessary to attempt college-level coursework. They are intended for students who have had no background in a subject (e.g., biology and physics), inadequate preparation in a subject (e.g., mathematics, writing, reading), or have been away from school and need review. Credit hours earned in developmental courses, excluding UNIV 101 and 102, cannot apply toward degree requirements.

The Department of Developmental Education offers the following courses. Their descriptions are found in the "Course Description" section of this catalog, beginning on page 164.

BIOL 099 Fundamental Biology
ENGL 095 Basic Writing 1: Mechanics
ENGL 097 Reading Development 1
ENGL 098 Reading Development 2
ENGL 099 Basic Writing 2: Parag. and Essays
MATH 099 Fundamental Mathematics
PHYS 099 Fundamental Physics
UNIV 101 Academic Development Skills
UNIV 102 Personal Development Skills

The Learning Center, which houses the Department of Developmental Education, is located in Massie Hall and is best described as a help center. Students usually seek the assistance of the Center's personnel, programs, and equipment when they need extra help preparing for class. The Center offers a variety of services to Shawnee State students.

One of the most popular Learning Center programs is the tutoring program. If you need help understanding course concepts or completing course assignments, you may request the assistance of a peer tutor, another student who has proven competent in a subject and has volunteered to help other students taking a course in the subject.

The Learning Center provides many types of instructional technology for use by individual students. These include typewriters, slide projectors, videotape recorder/players, audiotape recorder/players, and filmstrip projectors. Also very popular with Shawnee State students are the microcomputers and instructional software available in the Center. In fact, the Learning Center houses the University's largest open microcomputer laboratory.

Many of the University's learning assistance programs have their home in the Learning Center. These include the Department of Developmental Education, Student Academic Assessment Services, and Shawnee BASICS (Basic Adult Skills in a College Setting).

Library

The Shawnee State University Library, one of the newest and most technologically advanced facilities on campus, includes both library and media services. The Library is more than the building which houses books, magazines, journals, newspapers, government documents, audiovisual materials, and microfiche collections. It is also the place to find personalized reference and research assistance, individualized study areas and group study rooms, teleconferencing classrooms and a 350-seat lecture hall, media production facilities and audiovisual hardware, public access Macintosh and PC computer workstations with laser printing, and a Kurzweil Reader for the visually impaired.

Opened in 1991 but designed for the 21st century, the Shawnee State Library is a leader in the electronic revolution on campus. As a major access point to the information super-highway, the Library complements traditional

services with satellite downlinks, Internet connectivity, and electronic document delivery to foster more efficient information gathering and more rewarding learning experiences.

The Shawnee State University Library provides, via the local online public access catalog BEARTRACK, free and immediate interconnectivity with OhioLINK, the electronic network of state college and university libraries in Ohio. Using OhioLINK, you may request, at no cost, virtually any cataloged item from any state college or university in Ohio. It will be delivered within 72 hours to Shawnee State for checkout. You may also use the traditional interlibrary loan to request materials found in WorldCat, OCLC's international catalog which contains 31 million items.

To meet the needs of student researchers seeking magazine, newspaper, and journal articles, the Shawnee State University Library utilizes a local area CD-ROM network, OhioLINK, an Internet gopher, FirstSearch, EPIC, and Dialog to offer a diverse selection of electronic periodical indexes and research databases, often linked to article delivery services. Many electronic library services are accessible in computer labs across the campus and by modem and Internet in homes, schools, and businesses across the region.

Continuing Education

Shawnee State University is committed to serving the educational needs of learners of all ages. Through the Office of Continuing Education, the doors of educational opportunity are open to approximately 7,000 lifelong learners annually. An array of credit and non-credit instructional programs are geared to meet a wide range of interests, abilities, and objectives.

Continuing Education works with business, industry, social agencies, and organizations to develop quality programs to help individuals pursue career endeavors and satisfy professional training needs. Each year the interest of youth is broadened through sport and academic camps for the talented and gifted. In an effort to serve special interest groups, the Office of Continuing Education has actively pursued grants funding and developed programs for displaced workers, small business owners, economically disadvantaged youth, and senior citizens.

In addition, Continuing Education serves as the home for Emergency Care Educational Programs. For further information about course schedules or program development, contact the Office of Continuing Education.

Special Programs and Community Services

In addition to community service and enrichment classes for all ages, the Office of Continuing Education offers a multitude of residential and commuter experiences for specialized groups—from the academically advanced secondary school student to the elderly lifelong learner. For professionals, classes which meet Continuing Education Unit requirements are available.

Emergency Care Educational Programs (EMT/Paramedic)

The paramedic program prepares persons who can provide life support at the scene of any emergency, and it includes both classroom and hospital experience. In addition to performing functions of an EMT-A, under the revised code of Ohio, the paramedic is further certified to perform the following life support or intensive care techniques: cardiac monitoring, defibrillation, intubation, and administration of appropriate drugs and intravenous fluids. These functions are performed in conjunction with a cooperating licensed medical doctor, doctor of osteopathic medicine and surgery, or a physician advisory board.

Accreditation The EMT-A program has received full accreditation from the Ohio Department of Public Safety, Division of EMS, the organization responsible for certification of Ohio's EMT-A's (#052480).

The paramedic training program has received full accreditation by the Ohio Department of

Public Safety, Division of EMS, the organization responsible for accreditation of paramedic training (#5-3-005).

Levels of Training Offered *Emergency Medical Technician-Ambulance (EMT-A):* A 110-hour course of study which covers emergency treatment at the basic EMT level. Includes classroom, hospital, and emergency vehicle training. Qualifies you to take the Basic National Registry Exam. Ten credit hours. Ohio Accreditation No. 052480. EMTP 110.

Advanced Emergency Medical Technician-Ambulance [Epinephrine] (AEMT-AE): 112 hours of training in addition to that of the EMT-A. Includes classroom, laboratory, and hospital components. Instruction revolves around intravenous therapy, treatment of life-threatening allergic reactions, and use of adjuncts for airway control and shock treatment. Qualifies you to sit for the National Registry of EMT's intermediate level examination. EMTP 210, 211, and 212.

Emergency Medical Technician-Paramedic (EMT-P): Over 500 hours of training which encompasses the National Standard Paramedic Training Curriculum. Includes classroom, laboratory, hospital, and vehicle clinical instruction. Qualifies you to sit for the National Registry of EMT's paramedic level examination. Twenty-three credit hours. Ohio Accreditation No. 5-3-005. EMTP 210, 211, 212, 220, 230, 231, 232, 240, 241, and 242.

Entrance Requirements

- EMT-A:
  Minimum of eighteen years of age
  High school diploma or equivalent
  Current driver's license
  Complete physical examination
- AEMT-A:
  All EMT-A requirements
  Certified Ohio EMT-A
  Six month's experience as EMT-A
  EMS letter of recommendation
  No felony criminal record
  Conference with program director
- EMT-P:
  All EMT-A and AEMT-A requirements
  Successful completion of the National Registry of EMT's basic level exam
  General aptitude examination

Enrollment Information

- EMT-A:
  Offered fall, winter, spring, and summer quarters.
- AEMT-A:
  Fall Quarter. Recruitment occurs during summer quarter.
- EMT-Paramedic:
  Offered sequentially, beginning fall quarter and ending spring quarter. Recruitment occurs during summer quarter.

Related Course Offerings

EMTP 101 First Aid and CPR—This course is either the American Red Cross or National Safety Council First Aid course and the American Red Cross or American Heart Association CPR course. Two credit hours.

EMTP 102 Cardiopulmonary Resuscitation—The AHA or Red Cross CPR course. One credit hour.

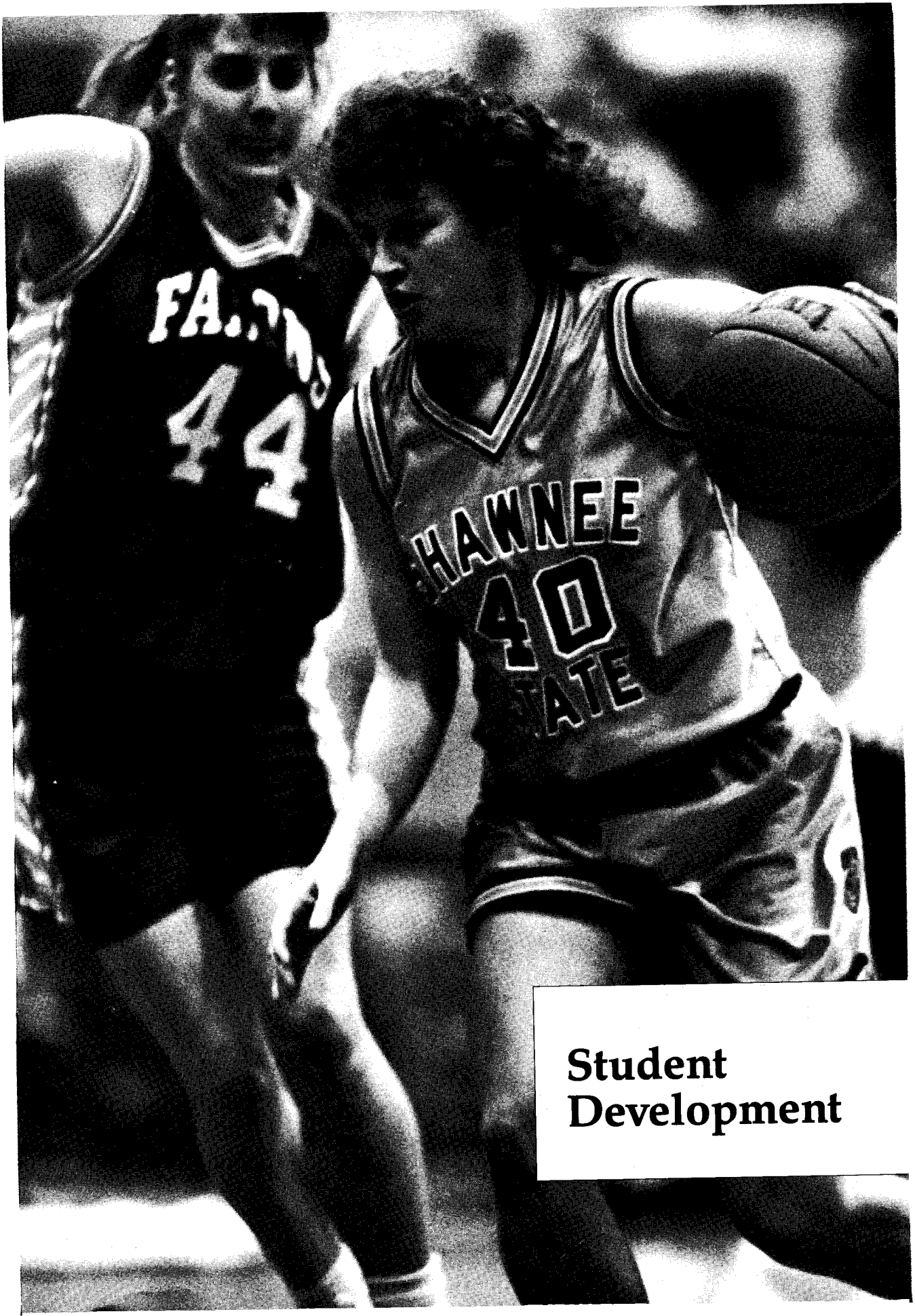
EMTP 215 Advanced EMT Defibrillation—This course qualifies the Ohio certified Advanced EMT-A to perform electrical defibrillation. Four credit hours. Offered fall quarter.

Small Business Development Center

The Shawnee State University Small Business Development Center is housed in the Office of Continuing Education. Working with area and regional services, it provides counseling and business assistance to business owners in Scioto County. The center offers easy access to clients who are interested in either expanding an existing business or starting a new one.

This center operates in cooperation with the United States Small Business Administration and the Ohio Department of Development. Staffed by experienced personnel, the SBDC provides counseling in the following areas:

- New business start-up/acquisition
- Business expansion
- Sources of credit and financing
- Increasing sales
- Marketing
- Advertising and sales promotion
- Selling to the government
- Bidding and estimating
- Exporting/international trade
- Recordkeeping and accounting
- Financial statements
- Business credit analysis
- Personnel
- Inventory control
- Purchasing
- Credit and collections



Student Development

Counseling

The University provides a variety of services through the different offices of Student Affairs. Admission, placement, financial aid, veteran's, educational, and vocational counseling are available to you free of charge.

Counseling and Assessment Center

The Counseling and Assessment Center offers programs which meet your personal and developmental needs and enhance your growth. Typically, services are provided to students who are experiencing short-term, situational, or crisis-oriented personal concerns which interfere with their academic progress or personal development. These services are provided through individual, group, and couple counseling, as well as specialized programs such as the biofeedback unit. Assessment and evaluation services are also available, as well as specialized, structured group programs. The Center also offers referral services to other professionals and agencies in the community. All services are confidential.

The Center is located on the first floor of the Commons Building and you are welcome to walk in or call the Center at (614) 355-2213. The Center is open Monday through Friday, 8:00 a.m. to 5:00 p.m., and evenings by appointment.

Career Services

Counseling provided through Career Services can help you deal with a number of career-related issues as well as help you select a major if you're undecided.

Staff maintain extensive contacts on and off campus which can help you secure employment, either while you're enrolled at the University or after graduation. They will help you develop job search, interviewing, resume, and cover letter writing skills which you can use as you seek employment. Career Services' annual Job Fair, held every February, grows larger every year. It gives you the opportunity to meet and interview with representatives from business, industry, educational, and health care organizations.

Career Services will also help you transfer to another four-year university or to graduate or professional school.

You are encouraged to take full advantage of these services, which are available to students, staff, and alumni of the University at no charge. The office is located on the first floor of the Commons Building and may be reached at 355-2213. The office is open Monday through Friday, 8:00 a.m. to 5:00 p.m., and selected evenings and other times by appointment.

International Student Services

The Department of Educational Needs Services offers a variety of supportive services to enhance the personal and intellectual opportunities of Shawnee State's international students. Special programs and activities are available to ease your transition into campus life, including social and cultural opportunities which expose all students to cultural diversity and contribute to their educational development. The office is located in the University Center, room 241, and more information can be obtained by calling 355-2276 or 355-2442.

Disability Services

Shawnee State provides special support to all disabled students. A full range of services and equipment is available, and an individual plan of support is developed for each disabled student, particularly those who are identified as learning disabled.

If you are physically challenged, you are encouraged to register with the Department of Educational Needs Services. Staff there are dedicated to helping make your college experience successful.

The brochure *Yes, You Can* provides a more complete description of services offered. You may obtain a copy by visiting the office, in room 241 of the University Center, or by calling 355-2456 or 355-2442.

Minority Affairs

A wide variety of culturally supportive services and programs enhance the personal and intellectual development of the minority student at Shawnee State University. Included are peer tutoring and mentoring programs, leadership training, community service, and social activities.

Information about minority scholarships, minority employment, minority sororities and fraternities, educational opportunities, and more is available by contacting the office, on the second floor of the University Center, room 241. The phone number is 355-2276 or 355-2442.

Women's Programming

G.R.O.W. (Generating Realistic Opportunities for Women) offers a wide variety of support services to the reentering female student. Included are individual and peer counseling, a college mom's and women's group, minicourses and lectures on issues of interest to women, leadership training, and community service. The uppermost goal of the program is to help women successfully complete their degree objectives by focusing on the unique concerns of women students. If you have an interest in women's programming, contact the office at 355-2370 or 355-2442. The office, located in room 241 of the University Center, welcomes visitors Monday through Friday, 8:00 a.m. to 5:00 p.m.

Student Advising and Referral Services (STARS)

Student Advising and Referral Services (STARS) provides counseling services for first-year students who have academic and/or personal issues that may be interfering with their learning experience. STARS is located in the Commons Building and has office hours Monday through Friday, 8:00 a.m. to 5:00 p.m., and evenings by appointment. Please call 355-2594 for more information.

The Connection

The JOBS Student Retention Program helps ADC and JOBS recipients become emotionally independent and academically successful students. JOBS counselors make every effort to help you overcome any barrier that stands between you and the completion of a college degree, whether that barrier is social, economic, or academic.

The program is divided into several parts. First, services are provided the quarter before you enroll at Shawnee State to help you prepare for a successful academic experience. Second, currently enrolled students can benefit from ongoing and individualized services, such as the purchase of texts and uniforms needed for a particular course or a summer school scholarship.

Please contact The Connection, located at 25 Union Street, for more information. The telephone number is 353-6400.

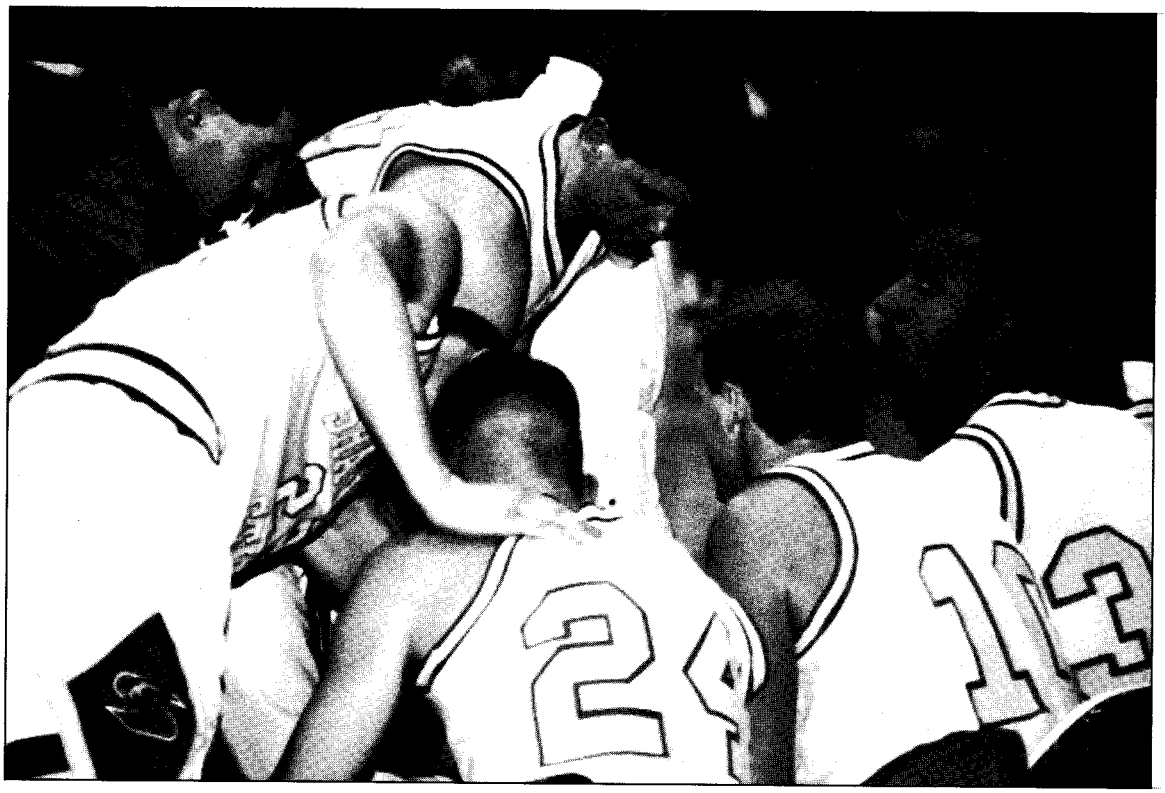
Student Support Services

Student Support Services, funded through a grant from the U.S. Department of Education, offers a variety of assistance to a limited number of qualified Shawnee State students. To qualify for the program, you must meet income guidelines, be a first generation college student, and have a documented physical or learning disability.

A short application form and a conference with program staff are required, but once you are accepted into the program, the following services are available:

- Academic Assistance: Advising (help with course planning and selection); review of basic grammar, writing, and study skills; peer tutoring
- Assessment: Career decision making
- Personal Assistance: Personal and career counseling
- Cultural Experiences

Student Support Services is located in the Trio Center on the first floor of the Business Annex, and the office is open Monday through Friday from 8:00 a.m. to 5:00 p.m. Evening appointments are also available if that is more convenient. Please call (614) 355-2444 for further information.



Athletics

Shawnee State University's philosophy holds that there is more to learning than academics. Besides attending classes, every student has the opportunity to participate in recreational or athletic activities, which at Shawnee State are intercollegiate, intramural, or individual in nature.

Intercollegiate Athletics

Intercollegiate athletics at Shawnee State University promotes the education and development of student athletes through athletic participation. The athletic department shares the University's commitment to high standards and embraces the concept of the student athlete. Educational development is the central focus of the department.

We believe that a learning experience isn't confined to the classroom or laboratory, but is a combination of your total college experience. That's why our athletic program is viewed as a cocurricular activity and, as such, is considered an educational experience. Students are involved in our athletic programs as student athletes, student assistant coaches, statisticians, trainers, managers, cheerleaders, and ushers. The goal of the Shawnee State Athletic Department is to insure that the intercollegiate athletic experience is one from which our students can learn and grow.

Athletic policies at Shawnee State conform to the National Association of Intercollegiate Athletics (NAIA). Presently, Shawnee State fields teams in men's and women's basketball; men's soccer, golf, and baseball; and women's volleyball, softball, and tennis. The University's intercollegiate athletic teams are affiliated with the Mid-Ohio Conference (MOC).

Intramural Sports

Competitive sports and recreational activities are a desirable part of your educational program. Through participation, you develop an appreciation of the worthy use of leisure time and a wholesome attitude toward physical activity.

The Intramural Department conducts activities of interest to the men and women of Shawnee State University. The department's goal is to provide an opportunity for every individual to participate in some activity of his or her own choosing. Intramural activities are organized on a team and individual basis so that everyone can participate. Ability is not the issue; the only requirement is a desire to participate.

Student Activities

Shawnee State University is dedicated to the principle that many valuable experiences should be provided for college students outside the academic area. The Office of Student Activities encourages you to share your ideas—and then, to help develop the programs that enrich the lives of Shawnee State's students. By becoming involved, you become a more knowledgeable citizen and thus are better able to participate in our democratic society.

Student activities are a good way for you to meet new friends, develop new interests and skills, and participate in valuable leadership experiences.

Many clubs and organizations are sponsored by the office, including the Student Senate, the Student Programming Board, Greek organizations, and the student newspaper. If you would like information about an existing club or organization or if you're interested in starting a new activity, please contact the director of student activities in the University Center's administrative office.

Student Life Transcript Program

The Student Life Transcript Program recognizes students for their involvement in activities while attending Shawnee State University.

Forms are available in the student activities office on which you may list all of your activities along with the signature of the advisor for the activity in which you were involved. This form is then used to establish a file which includes

all reported activities and is maintained in the Office of Student Activities. When you graduate, a certified listing of all activities is presented to you and is mailed to prospective employers or other educational institutions. You are encouraged to keep your activity file updated on a quarterly or yearly basis.

Identification Cards

Identification cards are issued to Shawnee State University students by the Office of the Registrar and are the means of identification necessary for using the Library and participating in student activities. You must present evidence of registration when you receive your I.D. card, and validation of the I.D. is required each quarter at registration.

Bookstore

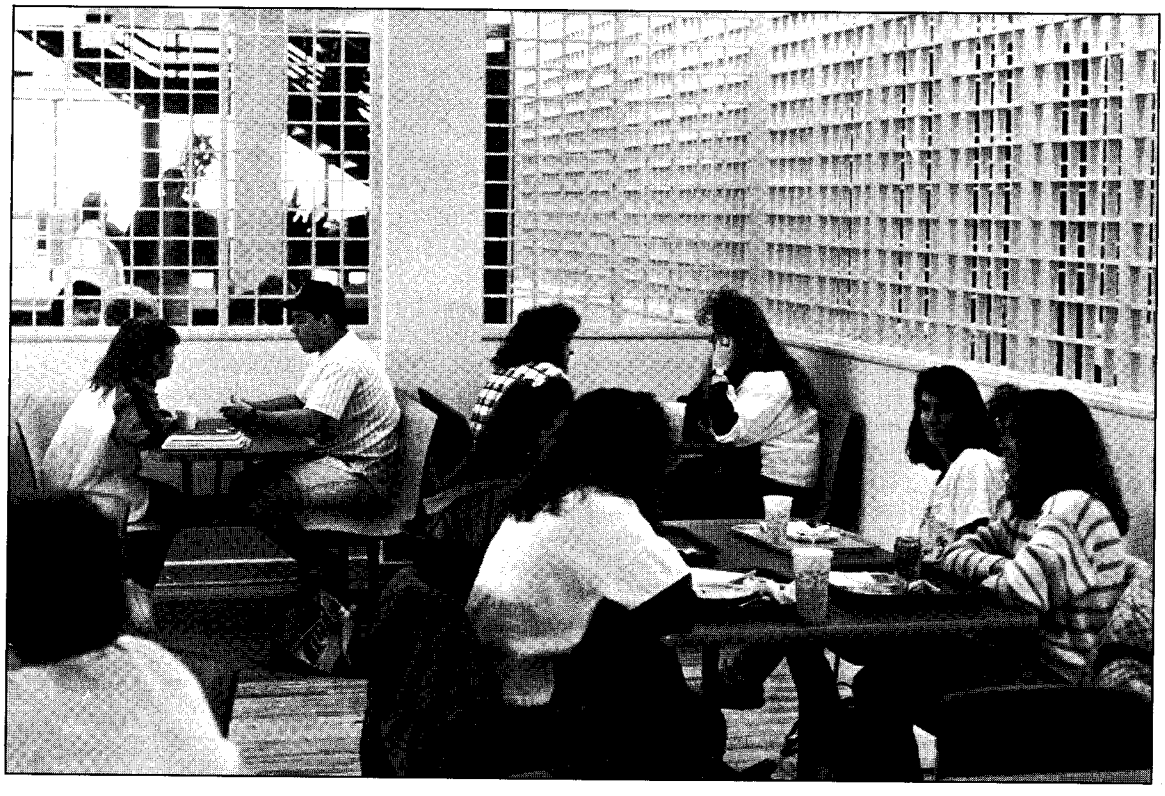
The Shawnee State University Bookstore is owned and operated by the University for the convenience of students, faculty, and staff. The main purpose of the Bookstore is to provide the textbooks and supplies necessary to complete required coursework. In addition, items such as calculators, computer supplies, swimming and racquetball equipment, art and drafting supplies, gift items, and a wide selection of imprinted campus wear are available.

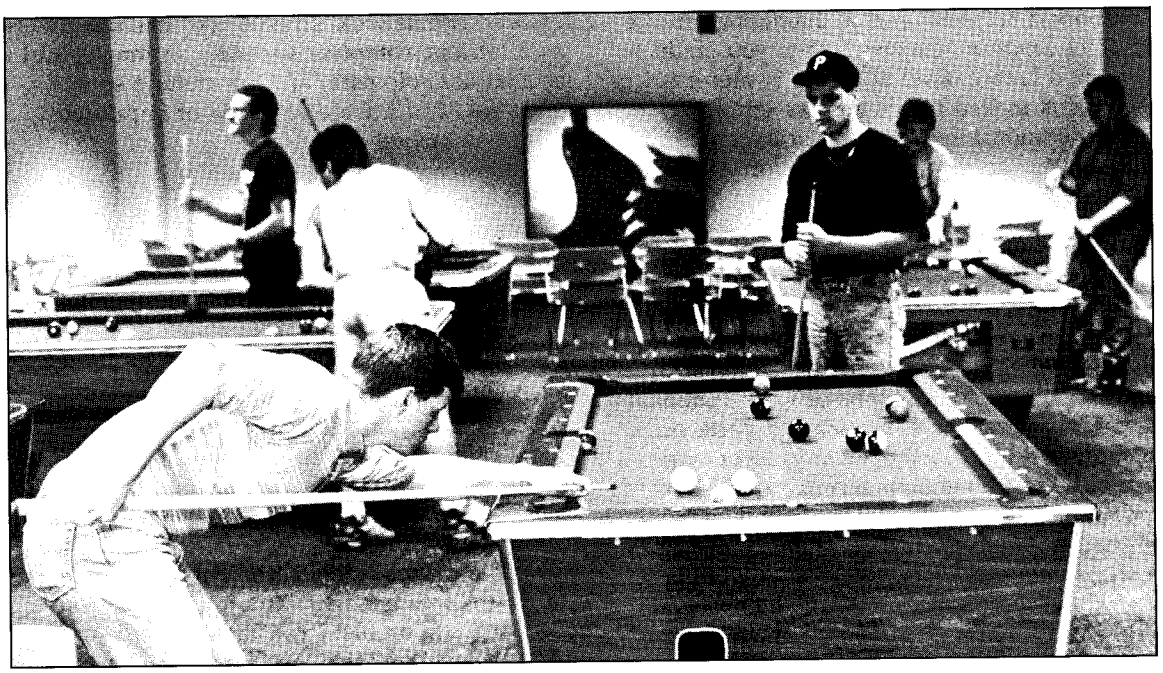
University Center

Shawnee State's University Center was dedicated in the spring of 1992 and is the hub of extracurricular activities at the University and a home away from home for our students. A variety of functions and services are provided at the center.

Staff at the **Information Desk** in the main lobby offer a list of campus activities, take I.D.'s, guide guests and students to their destinations, provide a campus phone and lists of campus clubs and organizations, and in general, assist you with any problem you may encounter.

Dining facilities for the University are located in the University Center. Breakfast, lunch, and dinner are served, as well as a wide variety of a la carte items. Both a main dining area and a snack bar are provided for the convenience of diners. The cafeteria is open





from 7:30 a.m. to 8:00 p.m., Monday through Thursday and 8:00 a.m. to 5:00 p.m. on Friday. Hours of operation on the weekend vary, depending upon demand. A banquet room/study room, located on the second floor, is used for workshops, conferences, meetings, and any activity where food is served.

Two **student lounges** are provided for your use, relaxing or studying. The Micklethwaite Lounge, on the first floor, is warmed by a copper-clad fireplace. The second floor lounge has a disklavier player piano and two TV rooms and is located near the Micklethwaite Banquet Hall and three conference rooms.

A **game room** on the first floor has Ping-Pong and pool tables, board games, cards, a 70" screen TV, video games, free film rentals, and athletic equipment which can be checked out by currently enrolled students.

Offices for the University Center director, building manager, bursar, Student Senate, Student Programming Board, and other clubs and organizations are on the first floor. The Department of Educational Needs Services and the Offices of the Registrar, Admission, Financial Aid, and Transfer Placement are located on the second floor.

The building also has an **Any Time Money Machine** and a **copier** for the convenience of our students and staff.

The University Center's **hours of operation** vary and are posted on the front door.

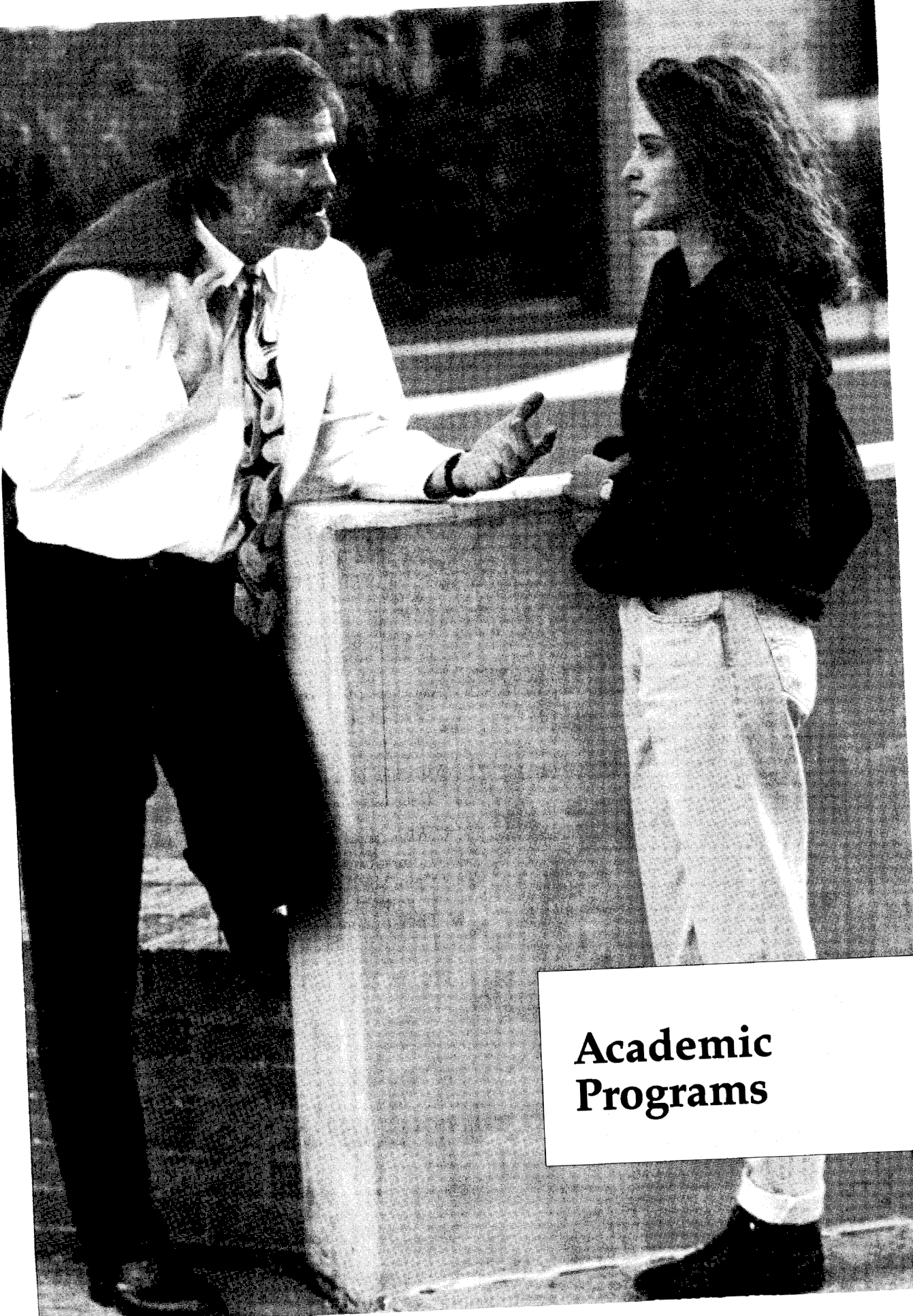
Housing

Shawnee State University is committed to the particular educational value that is provided by a residential campus community. The residential setting offers you an unparalleled opportunity to gain from the social interactions and other life experiences that characterize on-campus housing and dining.

Freshmen and sophomores who are single, under the age of 23, and live outside a 50-mile radius of the University are required to live in campus housing. In addition, freshmen and sophomores living in campus housing are required to participate in a meal plan.

Each town house-style dorm on the Shawnee State campus is designed to house eight students and includes fully furnished living areas. Each upper and lower level features two bedrooms, a bath, and a vanity; each bedroom is furnished wth beds, desks, and dressers. Our residential community offers you the comforts of home and the convenience of campus. You're just minutes away from the library, computer labs, classrooms, and recreational and sports facilities.

For further information, contact the Office of Student Housing, Shawnee State University, University Center, 940 Second Street, Portsmouth, Ohio 45662-4344. Our telephone numbers are (614) 354-4119 and 355-2217.



Academic Programs

Programs of Study

Bachelor of Arts

English/Humanities, General
English/Humanities, Elementary Education
History
Social Sciences
Social Sciences, Elementary Education
Social Sciences, Legal Assisting (2 + 2)

Bachelor of Fine Arts

Ceramics
Drawing
Painting
Studio Arts

Bachelor of Science

Biology
Biology, Pre-Medicine
Business Administration
Business Administration, Health Management
Business Administration, Legal Assisting (2 + 2)
Chemistry
Chemistry, Pre-Medicine
Computer Engineering Technology
Mathematical Sciences
Natural Science
Natural Science, Applied Mathematics
Natural Science, Applied Mathematics, Elementary Education
Natural Science, Biology
Natural Science, Biology, Elementary Education
Natural Science, Biology, Environmental Science
Natural Science, Chemistry
Natural Science, Chemistry, Elementary Education
Natural Science, Chemistry, Environmental Science
Occupational Therapy
Plastics Engineering Technology
Sports Studies, Athletic Training
Sports Studies, Sports Management

Associate of Applied Business

Accounting, Professional
Accounting, Management
Business Information Systems
Business Management, General

Associate of Applied Business (cont'd.)

Business Management, Focused
Legal Assisting
Office Administration Technology

Associate of Applied Science

Associate Degree Nursing
Computer Aided Drafting and Design
Dental Hygiene
Electromechanical Engineering Technology
Instrumentation and Control Engineering Technology
Medical Laboratory Technology
Occupational Therapy Assistant
Physical Therapist Assistant
Plastics Engineering Technology
Radiologic (X-ray) Technology
Respiratory Therapy

Associate of Arts

Arts/Humanities, General
Arts/Humanities, Art
Arts/Humanities, Communications
Arts/Humanities, English
Arts/Humanities, Music
Social Science

Associate of Science

Mathematics
Sciences

Associate of Individualized Studies

Interdisciplinary

Certificate

Computer Aided Drafting and Design (CADD)
Computer Technology
Emergency Medical Technology (EMT)
Environmental Science
Plastics Engineering Technology

Other degrees and programs are in various stages of development and may be available before the next catalog is published. If you'd like more information, please call:

College of Arts and Sciences • (614) 355-2554
College of Professional Studies • (614) 355-2225
Office of Admission • 1 (800) 259-2SSU

General Education Program

All students studying toward a baccalaureate degree at Shawnee State are required to complete the University's General Education Program (GEP). This group of courses gives you the opportunity to acquire the characteristics of an educated person—something quite distinct from the goals of other courses associated with the degree programs offered by Shawnee State. Most courses required for a specific degree program are meant to give you the ability to practice a profession and further your professional education. The goal of Shawnee State University, however, goes beyond professional education to preparing you to function effectively in the multiple roles demanded by contemporary life. In this respect, the General Education Program, supports the University's mission statement.

The GEP is a combination of required and elective courses, grouped in categories, each chosen for the contribution it makes to the skills or knowledge characteristic of university graduates.

Our Commitment to Your Success

Shawnee State's General Education Program is committed to:

- Providing you with an undergraduate education that includes competence in written communication, oral communication, scientific and quantitative reasoning, critical analysis, and logical thinking.
- Providing you with a breadth of *knowledge* that goes beyond education for a specific discipline or profession.
- Providing you with a breadth of *experience* that includes knowledge and understanding of multicultural factors.
- Ensuring that you have the ability to reflect carefully upon ethical issues and can enter into reasoned dialogue about these issues.
- Preparing you to become an independent and continuing learner.

As part of our commitment to your success, Shawnee State University has adopted the goal of integrating technological literacy, information literacy, and computer literacy into the courses included in the General Education Program.

Catalog Year and the GEP

Students entering Shawnee State for the first time or returning after an absence of at least four quarters or declaring a new major beginning with the 1995-96 academic year must complete the requirements of the General Education Program (GEP) as described here. Students continuing their degree program under catalogs prior to the 1995-96 academic year may *choose* the GEP described here if they wish. Continuing students who choose this General Education Program must petition at the Office of the Registrar before December 31, 1995.

General Education Program Requirements by Content Category

A more complete description of each category follows. Specific course descriptions are found in their own section of this catalog, beginning on page 164.

English Composition	12 Hours
Fine and Performing Arts	4 Hours
Quantitative Reasoning	4 Hours
Social Sciences	4 Hours
Natural Science	8 Hours
Ethics	4 Hours
Cultural Perspectives	8 Hours
Capstone	4 Hours
Total Hours Required	**48 Hours**

It should be noted that in cases where a single course meets both the General Education Program and requirements of the major, the total number of hours required for the GEP will be reduced by the number of related course hours. The minimum credit hours required for the baccalaureate degree shall not, however, be less than 186.

English Composition (12 Hours)

These courses provide an opportunity for you to develop as a writer. Their goal is for you to learn to write clearly, concisely, and creatively in a variety of formats.

☛ You are required to take *all three* of the following courses in English composition:

- ENGL 111S Discourse and Composition (4)
- ENGL 112S Composition and Research (4)
- ENGL 115S Composition and Literature (4)

Fine and Performing Arts (4 Hours)

You should leave the GEP with a greater appreciation of how the arts contribute to an enriched quality of life. Courses in this category include either an art history, art appreciation, music, or theatre component.

☛ You are required to *choose one course* from the following list:

- ARTH 101 Introduction to Art (4)
- ENGL 275 American Film History (4)
- MUSI 120 Intro. to Music Literature (4)
- MUSI 220 Music Literature (4)
- PHIL 300 Philosophy of Film (4)
- THAR 100 Introduction to Theatre (4)

Quantitative Reasoning (4 Hours)

This component of the General Education Program addresses the nature of mathematical thought and its impact on modern life. To fulfill the quantitative reasoning component of the GEP, each course contains active communication about mathematics (which includes reading and/or writing and/or speaking), exercises designed to stimulate critical thinking, the use of mathematical-related technology, and an emphasis on problem solving. In addition, each course stresses data and data analysis, demonstrates the application of mathematics to a variety of disciplines, and incorporates activity based learning.

☛ You are required to *choose one course* from the following list:

- MATH 110S Mathematics Core Course (4)
- MATH 131 College Algebra (4)
- MATH 150 Principles of Statistics (4)
- MATH 201 Calculus 1 (4)
- MATH 220 Discrete Mathematics (4)
- MATH 250 Statistics 1 (4)

Social Sciences (4 Hours)

This GEP component introduces you to the breadth and depth of the influence the social sciences have on contemporary life. Courses reflect an interdisciplinary or cross disciplinary approach with the expectation of increasing your awareness of the interconnectedness of the social sciences.

☛ You are required to *choose one course* from the following list:

- ANTH 250 Principles of Cultural Anthropology (4)
- ANTH 371 Islamic Religion, Culture, & Civil. (4)
- GEOG 130 Economic Geography (4)
- GOVT 350 National Policy Issues (4)
- GOVT 401 State of the World (4)
- HIST 371 Islamic Religion, Culture, & Civil. (4)
- HIST 410 Intellectual History 1 (4)
- HIST 411 Intellectual History 2 (4)
- SOCI 110S Found. of Social Science (4)
- SOCI 101 Introduction to Sociology (4)
- SOCI 312 Sociology of Religion (4)
- SOCI 410 Social Stratification (4)

Natural Science (8 Hours)

The natural science component of the General Education Program addresses scientific reasoning.

☛ You may *choose one of the following two options*:

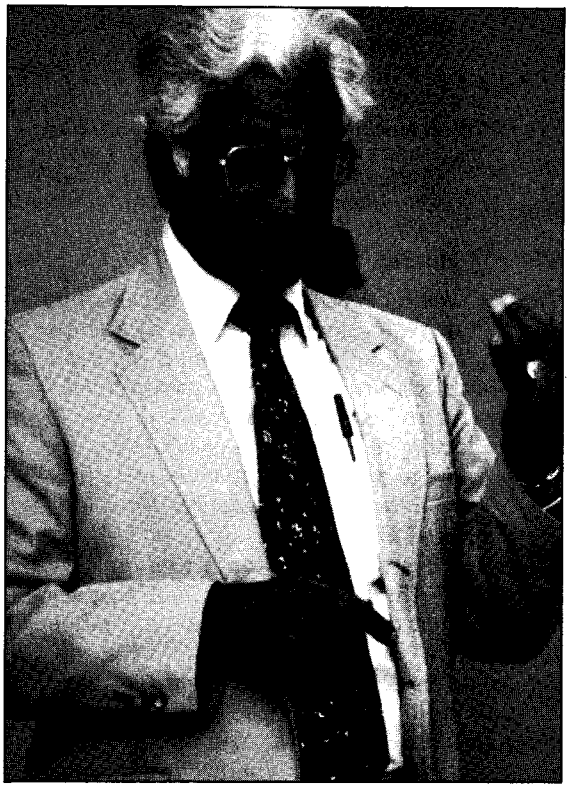
OPTION 1 NTSC 110S Natural Science (4) **AND** one additional natural science course (BIOL, CHEM, GEOL, NTSC, PHYS, PSCI) above 110 with a lab component.

OPTION 2 A minimum of 12 hours in natural science courses (BIOL, CHEM, GEOL, NTSC, PHYS, PSCI) above 110, which includes at least 4 hours of a laboratory component.

Ethics (4 Hours)

Ethics stresses reasoning about conclusions rather than views one might hold. Therefore, ethics courses examine a number of concepts and principles, and sometimes professional canons and codes of conduct, with a view to understanding more of what each means, becoming more aware of alternatives and critically assessing the foundations possible for these standpoints. This process is open-ended. An essential focus of this approach to moral reasoning is the development of your capacity to actively participate in dialogue with other moral views.

In an ethics course, you are evaluated first and foremost on how well you reason about moral issues. You are neither evaluated on the particular position you reach, nor whether it agrees with someone else's position, but on how well you



reason *about* an issue. In reasoning toward a conclusion, you are required to address possible counter arguments to your position. You are also expected to demonstrate an understanding of other selected positions, especially the reasoning behind these positions.

☛ *Choose one course* from the following list:

- BUMG 331 Business Ethics (4)
- PHIL 320S Ethics in Pub. and Priv. Life (4)
- PHIL 331 Business Ethics (4)
- PHIL 332 Biomedical Ethics (4)
- PHIL 334 Environmental Ethics (4)
- ROCI 485S Reflect. on Community Involvement (4)

Cultural Perspectives (8 Hours)

16 hours if Option 2 is selected

The goal of this GEP component is to help you understand aspects of western and non-western cultures and to appreciate the multicultural nature of modern society. Courses may vary as to discipline, content, and approach, but each instills some comprehension of the complex historical, cultural, or sociological contexts which inform contemporary experience.

☛ **Western Perspective:** *Select one of the following courses.*

- ENGL 225S Civilization and Literature 1 (4)
- ENGL 226S Civilization and Literature 2 (4)
- HIST 225S Civilization and Literature 1 (4)
- HIST 226S Civilization and Literature 2 (4)

☛ **Non-Western Perspective:** *Choose one of the following two options.*

OPTION 1

Select one of the following courses pertaining to a non-Western perspective.

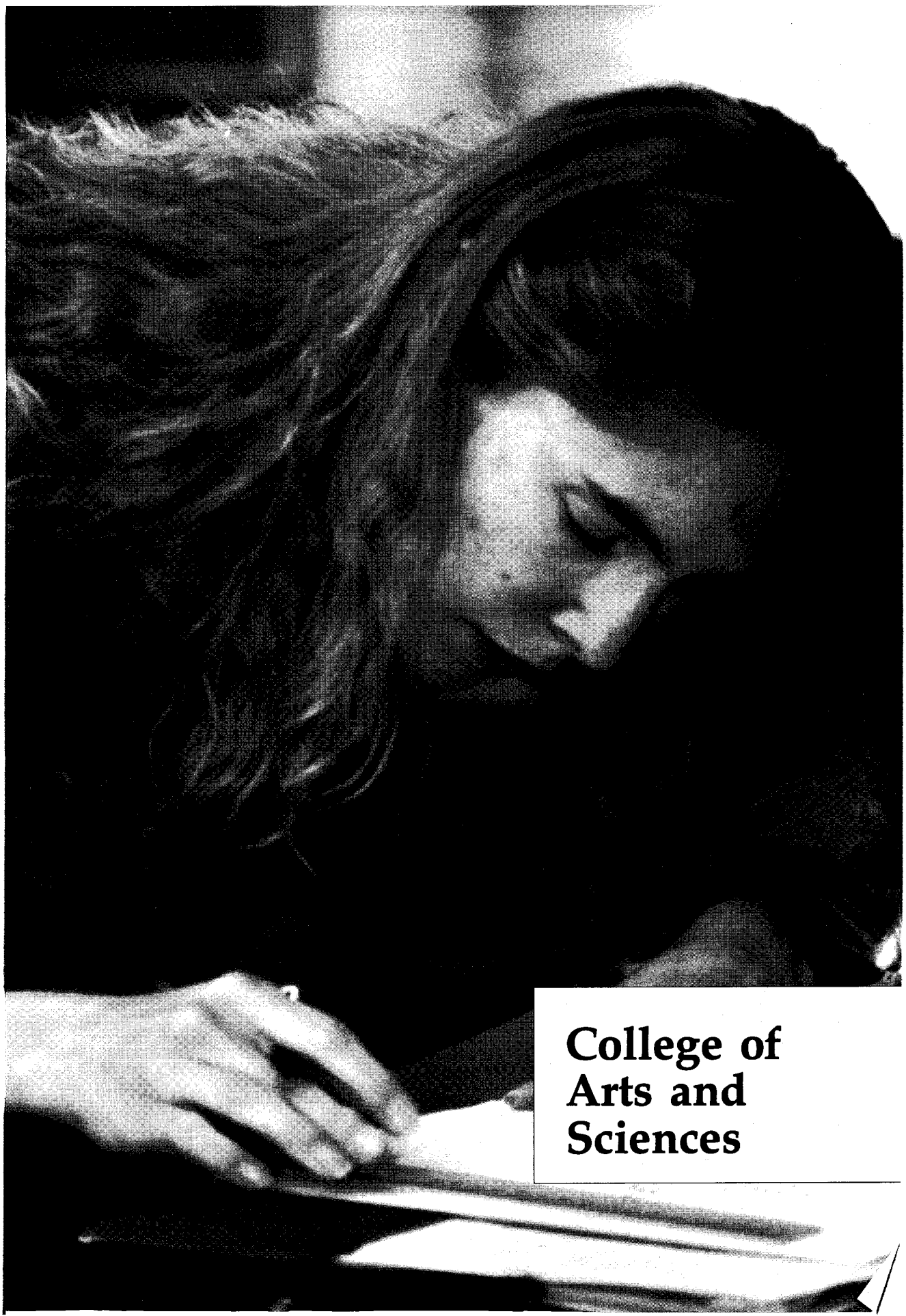
- ANTH 371 Islamic Religion, Culture, & Civil. (4)
- ARTH 366 Non-Western Survey (4)
- ENGL 227S Civilization and Literature 3 (4)
- HIST 227S Civilization and Literature 3 (4)
- HIST 260 East Asian History (4)
- HIST 330 History of Southern Africa (4)
- HIST 371 Islamic Religion, Culture, & Civil. (4)
- HIST 420 Middle East in Modern Times (4)
- GEOG 201 Cultural Geography (4)
- GEOG 351 Regional Geog. of the Middle East (4)
- GOVT 320 Third World Politics (4)
- GOVT 370 Global Politics (4)

OPTION 2

Complete a one-year sequence (12 sequenced credit hours) of foreign language.

Capstone (4 Hours)

☛ **Senior Seminar 490S** (cross-listed according to your major: BUBA, ENGL, ETCO, NTSC, or SOCI) comes late in your university experience and gives you the opportunity to write, speak, think, analyze, synthesize, and integrate. A central part of the seminar is the research and writing of a major paper and an oral presentation of your findings.



College of Arts and Sciences

College of Arts and Sciences

The overall mission of the College of Arts and Sciences is the liberal arts education and career preparation of Shawnee State students. Liberal arts education provides graduates with intellectual skills, substantive knowledge, and habits of the mind that promise rewarding careers and the more abundant life.

Courses provided by the College of Arts and Sciences contribute to your capability for abstract and systematic analysis and comprehension of the scientific method and encourage appreciation for and understanding of the varieties of artistic expression. These courses contribute to your flexibility, enabling you to see problems in a new light and to pursue alternative solutions. They also provide the communication and interpersonal skills essential for sharing these ideas in an increasingly collaborative and global workplace.

Liberal arts education at Shawnee State incorporates the teaching of these skills into a program that alerts you to the complexity of human history and diversity of cultures while exploring alternative approaches to contemporary social, economic, and political issues. Acknowledging the moral dimension of many of these questions, the liberal arts program explores ethical approaches and encourages you to develop a personal philosophy of life.

The University's commitment to liberal education begins with the College of Arts and Sciences' General Education Program, which emphasizes the importance of knowledge, values, and cultural enrichment. Building on the General Education Program, the College provides a spectrum of liberal arts degree programs in the arts and humanities, mathematics, the natural sciences, and the social sciences, including interdisciplinary programs and programs leading to teacher certification. These degree programs prepare you for a career or successful matriculation into a graduate or professional degree program.

Degrees Offered

Bachelor of Arts

English/Humanities, General
English/Humanities, Elementary Education
History
Social Sciences
Social Sciences, Elementary Education
Social Sciences, Legal Assisting (2 + 2)

Bachelor of Science

Biology
Biology, Pre-Medicine
Chemistry
Chemistry, Pre-Medicine
Mathematical Sciences
Natural Science
Natural Science, Applied Mathematics
Natural Science, Applied Mathematics, Elementary Education
Natural Science, Biology
Natural Science, Biology, Elementary Education
Natural Science, Biology, Environmental Science
Natural Science, Chemistry
Natural Science, Chemistry, Elementary Education
Natural Science, Chemistry, Environmental Science

Bachelor of Fine Arts

Ceramics
Drawing
Painting
Studio Arts

Associate of Arts

Arts/Humanities, Arts
Arts/Humanities, Communications
Arts/Humanities, English
Arts/Humanities, General
Arts/Humanities, Music
Social Science

Associate of Science

Mathematics
Sciences

Associate of Individualized Studies

Interdisciplinary

Faculty: A Commitment to Teaching, Scholarship/Research and Creative Activities, and Service

The College of Arts and Sciences' faculty are dedicated and talented individuals. Their graduate degrees are from the finest universities in the world, and they care deeply about your personal growth and academic success. The outstanding talent and achievements of our alumni are due, in large part, to the high quality of teaching of the faculty.

Quality teaching is the primary emphasis of the College, and its faculty are dedicated to extending the frontiers of knowledge. To enrich their teaching, faculty are contributing to the body of significant research and scholarly work and creative activities in their disciplines as well as providing service to the community, region, state, and nation.

Accelerated Bachelor's Degree Programs

Baccalaureate degrees offered by the College of Arts and Sciences are planned in such a way that you can complete all requirements by taking classes during a twelve-quarter period, spread over four academic years. However, the requirements of some baccalaureate degrees make it possible for you to earn your degree in a shorter period of time.

To earn a degree in three years, you need to take classes in the summer and/or take 18 or more hours each quarter, with the permission of your department chairperson or dean and the registrar. Careful planning of your course schedule is necessary. If you are interested in pursuing a three-year degree program, you should talk to your faculty advisor to make sure that this option is possible.

For more information about an accelerated bachelor's degree, contact the appropriate department chairperson or the dean.

Selecting and Declaring a Degree Major

You should consider a choice of major and career early in your degree program, if not before. You are encouraged to seek the advice of College of Arts and Sciences faculty and, also, staff in the Office of Counseling and Career Services. Your own interests, aptitudes, and professional/career goals should play a central role in selecting a degree major.

Double Major Guidelines

The completion of at least one major is required for a baccalaureate degree. The completion of a second major is an option which any College of Arts and Sciences student may elect. If you wish to pursue more than one major, you must consult with the appropriate department chairperson(s) or dean.

- The two majors must be in different subject matters.
- Each major must meet all the requirements set by the College of Arts and Sciences and the department offering the major.
- Each major must contain at least 45 hours not found in the other major.

Academic Advising

The College of Arts and Sciences is committed to quality academic advising, because it is essential to the ultimate success of our students. Once you have selected a major, you are advised by the teaching faculty of your department. The chairperson of your department will assign you an academic faculty advisor, ensuring that the department's academic advising system meets your individual needs and requirements as well as those of the department, the College, and the University. The dean of the College of Arts and Sciences facilitates answers to interdepartmental questions and exceptions and changes to related academic requirements.

Baccalaureate Degree Requirements

The College of Arts and Sciences awards its baccalaureate degrees to students who meet the following minimum requirements. Please see individual degree programs for any additional requirements.

- A minimum of 186 credit hours, including 48 credit hours in the General Education Program.

- A minimum 2.00 cumulative grade point average for all courses taken at Shawnee State University.
- Completion of at least 90 credit hours at the 200 level or above.
- Completion of at least 45 credit hours at Shawnee State University, of which 35 credit hours must be the upper division courses (300-400 level courses).
- A minimum of 60 credit hours in the major field of study.
- Petition for graduation in accordance with the rules prescribed by the University.

Minors

A minor is a field of study, within the baccalaureate degree, that may be taken to widen your area of interest or increase your career opportunities. Contact specific departments for information regarding minor offerings and minor field of study course requirements. Taking a minor is optional and not required.

Associate of Arts and Associate of Science Degrees

The College of Arts and Sciences offers several programs of study which lead to two-year associate degrees. The associate degree programs allow you to enter the job market immediately after you graduate or to transfer into certain baccalaureate degree programs. Specific requirements for each degree can be found in the related department's section of this catalog.

Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University gives you the option of formulating your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degrees offered at Shawnee State. This is especially true if you are interested in combining select courses in both academic as well as technical areas in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. If you would like more information about this degree, you should contact the registrar, a department chairperson, or college dean.

Preparation for Elementary Education Certification

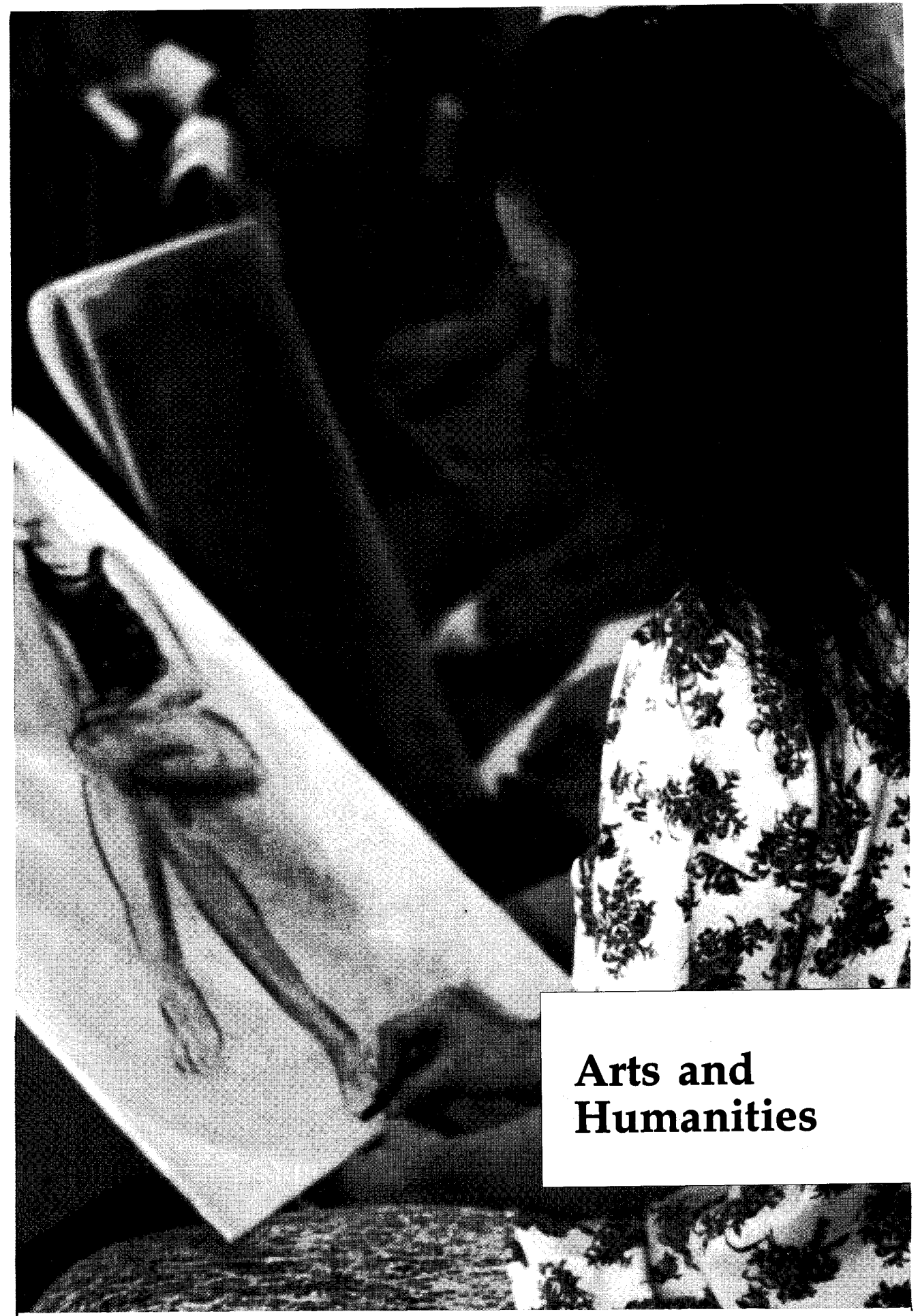
If you wish to become certified in elementary education, you must first choose a major in the College of Arts and Sciences. In addition to completing the related B.A. or B.S. degree requirements, you must complete the professional education requirements and other eligibility criteria for elementary education certification. You are responsible for working with a Center for Teacher Education faculty advisor on certification matters.

Course Scheduling and Offerings

The College of Arts and Sciences is committed to scheduling daytime classes, introductory and upper level, in a way that allows you to complete a degree program in a four-year period of time. All General Education Program courses are also offered during the evening hours on a rotating basis, throughout the academic year. As staffing permits, occasional upper division classes from the various arts and sciences disciplines are offered in the evenings. At this time, no arts and sciences degree program can be earned in the evenings over a five-year period. However, it may be possible to earn an associate of individualized studies degree in the evenings. Also, we are planning to offer a baccalaureate degree with a major in general studies that may be available through evening studies in the near future. You are encouraged to discuss specific course scheduling issues with your academic advisor or your department chairperson.

Pass/No-Credit Policy

Students in the College of Arts and Sciences are not permitted to take courses in their major on a pass/no-credit basis.



Arts and Humanities

Arts and Humanities

The Department of Arts and Humanities develops students who can think and read critically, write and speak clearly, and who understand the contributions literature, art, music, and philosophy can make to the quality of daily life. The Department believes that the skills of reading, writing, and thinking are the foundations upon which a successful college career is built, and, therefore, all areas within the Department accept as part of their charge the continuous development of writing and speaking skills. To this end, the Department is committed to providing opportunities for the integrated study of a variety of art forms as well as to infusing its academic programs with American, international, and multi-cultural perspectives.

Degrees in Arts and Humanities

Bachelor of Arts

English/Humanities, General
English/Humanities, Elementary Education Certification

Bachelor of Fine Arts

Ceramics
Drawing
Painting
Studio Arts

Associate of Arts

Arts/Humanities, Art
Arts/Humanities, Communications
Arts/Humanities, English
Arts/Humanities, General
Arts/Humanities, Music

Associate of Individualized Studies

Interdisciplinary

Bachelor Degrees

Bachelor of Arts with a Major in English/Humanities

The Department of Arts and Humanities offers a bachelor of arts degree with a major in English/humanities. This degree requires 68 credit hours of English/humanities courses: 44 hours from English, 20 hours from a variety of humanities offerings, and 4 hours of philosophy.

Students seeking certification in elementary education may want to select English/humanities as their major because a strong background in the language arts is essential for elementary school teachers. Other students may want to receive a degree without elementary certification. These students are required to complete 68 additional hours of electives. Careers in journalism, advertising, public relations, and many pre-professional programs, such as law, require excellent communication skills.

The Department strongly recommends that students who are not pursuing elementary certification focus on areas of specialization chosen from a variety of electives. For example, you may want to complete two or three years of foreign language or you may wish to concentrate in art, philosophy, additional English, social science, mathematics, natural science, or business. These areas of specialization should strengthen your chance for employment. In addition, the Department is in the process of developing some specific minors and concentrations which may be available before a new catalog is published. Check with your advisor as to the progress of these programs.

Important Note: Because of the need to avoid duplication of course requirements for elementary certification students and to plan an effective course of electives for those students not seeking elementary certification, the Department strongly recommends that you see an advisor each quarter.

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
English/Humanities Courses *(Includes 20-hour elective block, of which 4 hours must be above the 300 level.)*	68 Hours
Electives *(Note: At least 24 hours of these electives must be from 300 and 400 level courses. The Department strongly recommends that you take specialized courses in one or two areas. Foreign language is an excellent area of specialization for English/humanities majors.)*	70 Hours
Total Hours Required	**186 Hours**

English/Humanities Courses (68 Hours)

Area	Cr. Hrs.
Philosophy	4
Introduction to Literature (ENGL 200)	4
Linguistics (ENGL 360/LING 270, ENGL/LING 362 or 365, and ENGL 460)	8
Survey of Literature (ENGL 211, 212, 251, or 252)	8
Shakespeare (ENGL 301 or 302)	4
Theory and Practice in Composition (ENGL 315)	4
Literature Before 1800 (ENGL 311, 411, 421, and other suitable courses)	4
Literature After 1800 (ENGL 312, 321, 322, 441, 446, and other suitable courses)	4
American Literature (ENGL 273, 351, 371, 461, 471, and other suitable courses)	4
Literature as Social Perspective (ENGL 341, 342, 343, 344, 346, 349, 383, and other suitable courses)	4
Humanities Electives (Courses must be taken in at least two areas with four hours at the 300 level or higher)	20
Art History	
Music History	
Foreign Language	
Philosophy	
Linguistics (one additional course)	
Other suitable courses as added	

English/Humanities Major with Elementary Education Certification

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
English/Humanities Courses	56 Hours
Arts and Sciences Requirements *(NOTE: You may doublecount 15 hours toward your English/humanities major)*	37 Hours
Professional Education Require.	45 Hours
Total Hours Required	**186 Hours**

English/Humanities Courses (56 Hours)

Area	Cr. Hrs.
Philosophy	4
Introduction to Literature (ENGL 200)	4

Linguistics (ENGL 360/LING 270, ENGL/LING 362 or 365, or ENGL 460)	8
Survey of Literature (ENGL 211, 212, 251, or 252)	8
Shakespeare (ENGL 301 or 302)	4
Theory and Practice in Composition (ENGL 315)	4
Children's Literature (required for elementary education certification only)	4
Literature After 1800 (ENGL 312, 321, 322, 441, 446, and other suitable courses)	4
American Literature (ENGL 273, 351, 371, 461, 471, and other suitable courses)	4
Literature as Social Perspective (ENGL 341, 342, 343, 344, 346, 349, 383, and other suitable courses)	4
Humanities Electives (Courses must be taken in at least two areas with four hours at the 300 level or higher) Art History Music History Foreign Language Philosophy Linguistics (one additional course) Other suitable courses as added	8

Arts and Sciences Requirements (37 Hours)

Course No.	Course	Cr. Hrs.
ARTS 201	Art in the Elem. Curriculum 1	3
ARTS 202	Art in the Elem. Curriculum 2	3
MUSI 160	Fundamentals of Music	3
MUSI 161	Music for the Classroom Teacher	3
MATH 120	Elem. Topics in Mathematics 1	5
MATH 121	Elem. Topics in Mathematics 2	5
HPER 202	Personal and Community Health	4
HPER 270	Phys. Ed. for the Elem. Classroom	4
PSYC 375	Educational Psychology	4
SPCH 103	Public Speak. and Human Com.	3

Professional Education Requirements (45 Hours)

Course No.	Course	Cr. Hrs.
EDUC 110	Teacher as Inquir. Professional 1	2
EDUC 210	Teacher as Inquir. Professional 2	2
EDUC 220	Soc./Phys./Intell. Growth and Dev.	3
EDUC 230	Instruct. Media, Tech., and Comp.	2
EDUC 240	Found. and Compet. Epistem. 1	2
EDUC 310	Teacher as Inquir. Professional 3	3
EDUC 320	Interdisciplinary Teach. Meth. 1	7
EDUC 340	Found. and Compet. Epistem. 2	2
EDUC 420	Interdisciplinary Teach. Meth. 2	7
EDUC 450	Directed Teaching and Seminar	15

Note: As a general rule, no 300 or 400 level education courses will be transferred.

Bachelor of Fine Arts Programs

The newest offerings in the Department of Arts and Humanities are the bachelor of fine arts degrees. The curriculum, which leads to the professional credential in the areas of ceramics, drawing, painting, or the generalist studio arts degree, offers the student a thorough grounding in the arts. Professional portfolios developed through participation in the BFA program may well lead the successful candidate to opportunities in graphic communications, design, computer art, photography, gallery and museum work, corporate curation, ceramic studio work, self-employed studio art, print-making, or the opportunity to continue work elsewhere at the masters degree level (and college teaching credentials). The learning experience will be particularly enhanced with the opening of Shawnee State's new $17 million Center for the Arts, a state-of-the-art facility which will house, among the other arts, the BFA classes, beginning fall quarter 1995.

Special Note: Students in any arts and sciences bachelor's degree program must complete 60 credit hours at the 300 level or above. A minimum of 12 credit hours *in the emphasis* must be at the 300 level or above. A maximum of 9 credit hours of "special permission" topics classes may be counted toward the emphasis. An additional 4 credit hours of topics may count toward the studio elective.

Degree Requirements for the Bachelor of Fine Arts in Ceramics, Drawing, and Painting

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Art Core Requirements	44 Hours
Art Studio Electives	38 Hours
Art Specialization *(Choose either ceramics, drawing, or painting.)*	40 Hours
General Electives *(Students planning an entrepreneurial career in the arts should consider taking BUAC 201, BUMG 225, BUMG 310, and BUMK 310.)*	16 Hours
Total Hours Required	**186 Hours**

Degree Requirements for the Bachelor of Fine Arts in Studio Arts

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Art Core Requirements	44 Hours
Art Studio Electives	46 Hours
Studio Emphasis *(Choose either ceramics, drawing, or painting.)*	32 Hours
General Electives *(Students planning an entrepreneurial career in the arts should consider taking BUAC 201, BUMG 225, BUMG 310, and BUMK 310.)*	16 Hours
Total Hours Required	**186 Hours**

Art Core Requirements (44 Hours)

Course No.	Course	Cr. Hrs.
ARTH 261	Art History Survey 1	4
ARTH 262	Art History Survey 2	4
ARTH 263	Art History Survey 3	4
ARTH	Art History Electives (Choose from ARTH 101, 310, 331, 332, 360, 361, 364, or 366)	8
ARTS 101	Studio Foundations 1	4
ARTS 102	Studio Foundations 2	4
ARTS 103	Studio Foundations 3	4
ARTS 105	The Creative Process	4
ARTS 480	Senior Studio 1	4
ARTS 481	Senior Studio 2	4

Art Specialization (40 Hours)

Choose either a ceramics, drawing, or painting specialization.

CERAMICS

Course No.	Course	Cr. Hrs.
ARTS 231	Ceramics 1	4
ARTS 232	Ceramics 2	4
ARTS 233	Ceramics 3	4
ARTS 331	Intermediate Ceramics 1	4
ARTS 332	Intermediate Ceramics 2	4
ARTS 333	Intermediate Ceramics 3	4
ARTS 334	Raku Ceramics	4
ARTS 335	Porcelain Ceramics	4
ARTS 336	Glaze Theory & Practice	4
ARTS 338	Mold Making	4
ARTS 434	Advanced Raku	4
ARTS 435	Advanced Porcelain	4
ARTS 436	Adv. Glaze Theory & Practice	

DRAWING

Course No.	Course	Cr. Hrs.
ARTS 271	Life Drawing 1	4
ARTS 272	Life Drawing 2	4
ARTS 273	Life Drawing 3	4
ARTS 275	Drawing 1	4
ARTS 276	Drawing 2	4
ARTS 371	Intermediate Life Drawing 1	4
ARTS 372	Intermediate Life Drawing 2	4

ARTS 373	Intermediate Life Drawing 3	4
ARTS 375	Intermediate Drawing 1	4
ARTS 376	Intermediate Drawing 2	4
ARTS 475	Advanced Drawing 1	4
ARTS 476	Advanced Drawing 2	4

PAINTING

Course No.	Course	Cr. Hrs.
ARTS 221	Painting 1	4
ARTS 222	Painting 2	4
ARTS 223	Painting 3	4
ARTS 321	Intermediate Painting 1	4
ARTS 322	Intermediate Painting 2	4
ARTS 323	Intermediate Painting 3	4
ARTS 324	Watercolor 1	4
ARTS 325	Watercolor 2	4
ARTS 326	Watercolor 3	4
ARTS 327	Figure Painting 1	4
ARTS 328	Figure Painting 2	4
ARTS 329	Figure Painting 3	4
ARTS 421	Advanced Painting 1	4
ARTS 422	Advanced Painting 2	4
ARTS 423	Advanced Painting 3	4
ARTS 424	Advanced Watercolor 1	4
ARTS 425	Advanced Watercolor 2	4
ARTS 426	Advanced Watercolor 3	4
ARTS 427	Adv. Figure Painting 1	4
ARTS 428	Adv. Figure Painting 2	4
ARTS 429	Adv. Figure Painting 3	4

Associate Degrees

Associate of Arts Degree: Humanities Concentration

Shawnee State University offers an associate of arts degree for those students who wish to complete a two-year program of general education with an emphasis in the arts. The total number of hours needed to complete the degree is 90.

Curriculum

I. Core Requirements

A. Composition — 12 hours minimum

ENGL 111S Discourse and Composition (4); ENGL 112S Composition and Research (4); ENGL 115S Composition and Literature (4)

Students may take additional courses from the following (optional): ENGL 232 (3); ENGL 240 (3); ENGL 245 (3)

B. Mathematics — 4 hours minimum

MATH 110S Mathematics Core Course (4)

Students may choose additional mathematics courses from the following (optional): MATH 131 (4); MATH 132 (4); MATH 201 (4); MATH 202 (4); MATH 250 (4); MATH 255 (4)

C. Arts and Humanities — 16 hours minimum (choose from two areas)

ENGL/HIST 225S Civilization and Literature (4)

and two courses from the following: ARTH 261 (4); ARTH 262 (4); ENGL 200 (4); MUSI 220 (3); PHIL 101 (4)

and one course from the following: Art, English, Humanities, Journalism, Language, Music, Philosophy, or Theatre

Students may choose additional courses from the following (optional): ENGL 203 (4); ENGL 210 (4); ENGL 211 (4); ENGL 212 (4); MUSI 221 (3); MUSI 222 (3); MUSI 223 (3); PHIL 102 (4); PHIL 103 (4); PHIL 105 (4)

D. Social Science — 16 hours minimum (choose from two areas)

SOCI 110S Foundations of Social Science (4); HIST/ENGL 226S Civilization and Literature 2 (4); SOCI 101 Introduction to Sociology (4); or PSYC 101 Introduction to Psychology (4)

and one course from the following: ECON 101 (4); GEOG 125 (4); GOVT 101 (4); HIST 111 (4); HIST 112 (4); HIST 113 (4); PSYC 101 (4); SOCI 101 (4)

Students may choose additional courses from the following (optional): ANTH 101 (4); ANTH 250 (4); ECON 102 (4); GOVT 102 (4); GOVT 120 (4); GOVT 250 (4); HIST 201 (4); HIST 202 (4); HIST 203 (4); PSYC 151 (4); PSYC 273 (4); SOCI 201 (4); SOCI 205 (4)

E. Natural Sciences — 12 hours minimum

NTSC 110S Natural Science (4)

and 8 additional hours from the following: BIOL 151 (5) (3 lec./4 lab); CHEM 121 (4), CHEM 122 (4); CHEM 141 (4); CHEM 142 (4); CHEM 143 (4) (all CHEM - 3 lec./3 lab); PHYS 201 (4); PHYS 202 (4); PHYS 203 (4) (all PHYS - 3 lec./3 lab); GEOL 111 (4) (3 lec./2 lab)

Students may choose additional courses from the following (optional): BIOL 162 (5); BIOL 170 (4); BIOL 202 (5); BIOL 203 (6); CHEM 200 (4); CHEM 201 (4); GEOL 112 (4); PHYS 210 (4)

Note: Students cannot receive credit for both CHEM 121/122 and CHEM 141/142 series.

II. Concentration Area — 30 hours

A. Arts

Selected courses in an area of specialization chosen from the following list of humanities subject areas to complete the associate of arts degree.

Art	Humanities	Music
Comparative Arts	Journalism	Philosophy
English	Language	Theatre

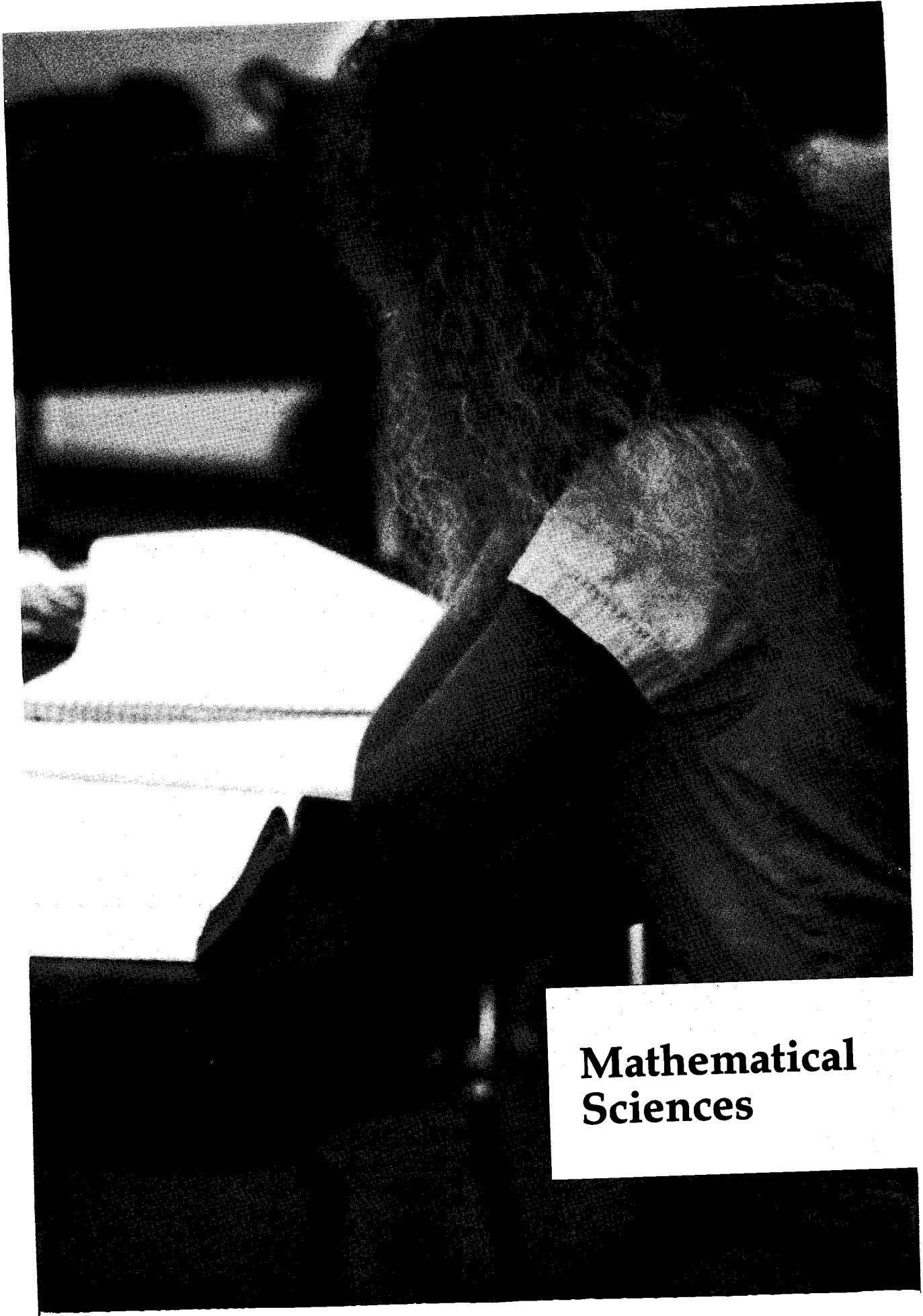
B. Social Sciences

Selected courses in an area of specialization chosen from the following list of subject areas to complete the associate of arts degree:

Anthropology	Government	Psychology
Economics	History	Sociology
Geography		

Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University allows you to formulate your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true if you are interested in combining a selection of courses which include both academic and technical offerings in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. Contact the registrar for more information about this degree.



Mathematical Sciences

Mathematics

The Department of Mathematics provides Shawnee State's general education student with an appreciation of, and experiences with, the role of mathematics in our society. The Department also develops additional mathematical skills for those students whose academic programs require it and provides educational experiences for students who wish to specialize in mathematics.

Each of the Department's baccalaureate programs requires a senior research project which allows you to work closely with a team of faculty to study a mathematical topic in depth. The senior research project is designed to be an integrative and capstone experience and results in the development of a senior paper and presentation.

Each of the programs is described here in more detail. If you are interested in a degree in mathematics, you are encouraged to contact the Department at (614) 355-2301 for additional information. Mathematics faculty look forward to showing you what Shawnee State has to offer.

Degrees in Mathematics

Bachelor of Science

Mathematical Sciences
Natural Sciences, Applied Mathematics Concentration
Natural Sciences, Applied Mathematics Concentration with Elementary Education Certification

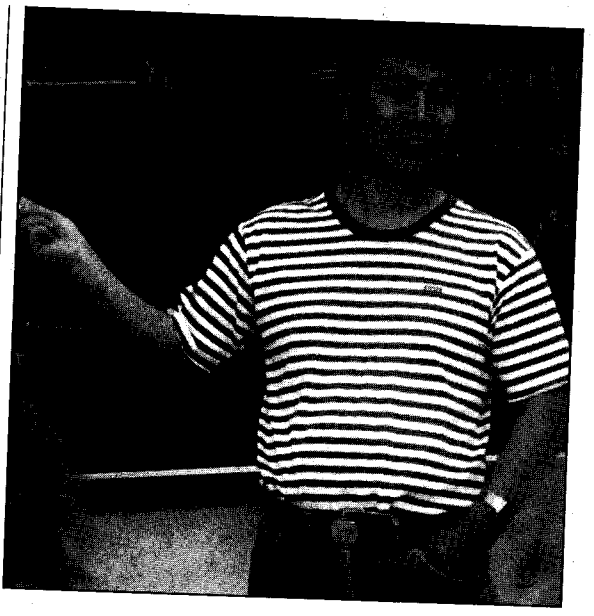
Minor in the Mathematical Sciences

Associate of Science

Mathematics Concentration

Associate of Individualized Studies

Interdisciplinary



Bachelor Degrees

Bachelor of Science in Mathematical Sciences

This four-year program develops the analytical skills, knowledge base, and attitudes you need to use mathematics well and fosters your ability to learn mathematics and other technical material independently. Graduates of this program should be able to communicate technical concepts effectively and should have a solid understanding of the core subjects of undergraduate mathematics as well as some more specialized work at a more advanced level.

Possible career opportunities for students who successfully complete this program include teaching, actuarial science, statistics, operations research, computer science, law, business, and other fields where quantitative or analytic skills are of central importance.

The curriculum emphasizes the interdisciplinary nature of mathematics and its relationship to other disciplines as introduced by the required general education program. The learning experiences gained in the liberal arts and science courses are used as a foundation upon which the mathematical sciences build and expand, showing that mathematics is not isolated but is part of an overall knowledge base. Students who major in the mathematical sciences are encouraged to take extra coursework in a discipline

which makes extensive use of mathematics, such as engineering technology, economics, education, or business, thus furthering the University's goal of tying career oriented education to a liberal arts foundation.

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Mathematical Sciences Core[1]	45 Hours
Computer Science Elective	4 Hours
Upper Division Sequence	8 Hours
Mathematical Science Elective *(Must be numbered 300 or higher.)*	4 Hours
Connections Requirement	12 Hours
General Electives	65 Hours
Total Hours Required	**186 Hours**

Mathematical Sciences Core (45 Hours)

All students completing a major in the mathematical sciences are required to take the following courses.

Course No.	Course	Cr. Hrs.
MATH 201	Calculus 1	4
MATH 202	Calculus 2	4
MATH 203	Calculus 3	4
MATH 204	Calculus 4	4
MATH 220	Discrete Mathematics	4
MATH 230	Linear Algebra	5
MATH 250	Statistics 1	4
MATH 301	Ordinary Differential Equations *OR*	4
MATH 430	Numerical Analysis	
MATH 360	Introduction to Probability	4
MATH 440	Mathematical Models	4
MATH 496	Senior Research Project 1	1
MATH 497	Senior Research Project 2	3

Computer Science Elective (4 Hours)

All students completing a major in the mathematical sciences are required to complete one of the following:

Course No.	Course	Cr. Hrs.
BUIS 201	C Language	4
BUIS 206	Fortran 77	4
BUIS 207	Pascal Language	4

Upper Division Sequence (8 Hours)

All students completing a major in the mathematical sciences are required to complete one of the following sequences of upper division courses:

Course No.	Course	Cr. Hrs.
MATH 410	Modern Algebra 1 *AND*	4
MATH 411	Modern Algebra 2 *OR*	4
MATH 335	Intermediate Analysis *AND*	4
MATH 460	Real Analysis	4

Connections Requirement (12 Hours)

An important component of our program is assuring that all students gain exposure to how the mathematical sciences are used. The Department encourages you to take extra course-work in a particular area, such as education, economics, business, computer science, engineering technology, or advanced specialized topics in the mathematical sciences. You are strongly encouraged to complete all of the courses in at least one of the strands. Some of the strands were designed to be comparable to minors.

Business Strand

BUAC 201	Financial Accounting Principles
BUAC 203	Managerial Accounting
BUMG 235	Personnel Management
BULW 270	The Legal Environment of Business
BUFI 345	Managerial Finance
BUMG 310	Management Principles
BUMG 355	Quantitative Methods in Business
BUMG 385	Production/Operations Management
BUMK 310	Marketing Principles

Computer Science Strand

ETEC 102	Structured Programming
ETEC 103	Data Structures
ETEC 211	Assembly Language Programming 1
ETEC 212	Assembly Language Programming 2
ETEC 275	Systems Programming
ETEC 280	Programming Languages
ETEC 371	Operating Systems 1
ETEC 372	Operating Systems 2
ETEC 373	Advanced Operating Systems
ETEC 408	Algorithms and Problem Solving
ETEC 477	Concurrency

Economics Strand

ECON 101	Principles of Macroeconomics
ECON 102	Principles of Microeconomics
ECON 301	Intermediate Microeconomics
ECON 302	Intermediate Macroeconomics
ECON 310	Money and Banking *(cross-listed as BUFI 310)*
ECON 332	Managerial Econ. *(cross-listed as BUMG 332)*

Physics Strand

PHYS 211	Calculus-Based Physics 1
PHYS 212	Calculus-Based Physics 2
PHYS 213	Calculus-Based Physics 3

[1] If MATH 201, 220, or 250 is used to satisfy the General Education Program, 41 hours are required in the Mathematical Sciences Core and 69 hours are required in General Electives.

Graduate School Preparatory Strand

MATH 410 Modern Algebra 1 *AND*
MATH 411 Modern Algebra 2 *OR*
MATH 335 Intermediate Analysis *AND*
MATH 460 Real Analysis
(whichever of the above sequences is not being used to satisfy the upper division sequence requirement)
MATH 450 Complex Variables
MATH 480 General Topology

Secondary Mathematics Education Strand

MATH 300 History of Mathematics
MATH 320 Foundations of Geometry
MATH 405 Math. Enrich. for the Secondary Teacher
MATH 470 Secondary Mathematics Methods

Industrial Management and Statistical Process Control Strand

ETPL 400 Statistical Processes/Quality Control 1
ETPL 405 Statistical Processes/Quality Control 2
ETPL 410 Applied Statistical Experimentation
MATH 370 Operations Research 1
MATH 371 Operations Research 2
BUMG 355 Quantitative Methods in Business
BUMG 385 Production/Operations Management

Bachelor of Science in Natural Science

Shawnee State's bachelor of science in natural science degree program introduces you to a wide range of basic science disciplines and allows you to concentrate on one specific area. By selecting mathematics as the primary area of concentration, you may complete the requirements for the bachelor of science in natural science with a concentration in applied mathematics.

A number of career alternatives are available to students who complete this degree, including positions in government or industry that require quantitative competency, continued specialization in graduate school, and, when combined with elementary education certification, a career in elementary school teaching.

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Concentration Area 1[1] *Mathematics courses numbered higher than MATH 110S. In addition, coursework should include MATH 201, 202, and at least 12 hours at the 300-400 level*	32 Hours
Concentration Area 2 *Biology, chemistry, geology, or physics courses (select one area) numbered higher than 110*	16 Hours
Concentration Area 3 *Biology, chemistry, geology, or physics courses (selected from area other than Concentration Area 2) numbered higher than 110*	8 Hours
Senior Project in Mathematics *(MATH 496 and 497)*	4 Hours
Humanities/Social Science Electives *From at least two areas*	24 Hours
Mathematics Electives *Numbered higher than MATH 110S*	8 Hours
Computer Science Elective *Select appropriate computer science course in consultation with department advisor.*	4 Hours
General Electives	45 Hours
Total Hours Required	**189 Hours**

Note: A minimum of 35 hours must be at the 300 level or above.

Elementary Education Certification

You may prepare for elementary education certification and specialize in the teaching of elementary school mathematics by choosing the elementary education option within the bachelor of science in natural science with the applied mathematics concentration. *If you choose this option, you are urged to work closely with your mathematics advisor and with an advisor from the elementary education program.*

Degree Requirements

General Education Program[2] *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Concentration Area 1: *Mathematics courses numbered higher than MATH 110S. MATH 201 and MATH 305 are required. In addition, at least 9 hours must be numbered 300 or above.*	32 Hours
Concentration Area 2 *Biology, chemistry, geology, or physics courses numbered higher than 110.*	16 Hours
Concentration Area 3 *To be selected from one science area not chosen for Concentration Area 2. Courses must be numbered higher than 110.*	8 Hours
Senior Project in Mathematics *(MATH 496 and 497)*	4 Hours

[1] MATH 201 may not be used to satisfy both the General Education Program requirement and the Concentration Area 1 requirement.
[2] MATH 110S is the General Education Program requirement for the Elementary Education Certification Program.

Degree Requirements (cont'd.)

Computer Science Elective *(To be selected in consultation with department advisor.)*	4 Hours
Arts and Sciences Requirement *(Listed on page 76 of the current catalog or available from dean's office.)*	37 Hours
Professional Education Requirements *(Listed on page 76 of the current catalog or available from dean's office.)*	45 Hours
Total Hours Required	**194 Hours**

Minor

Minor in the Mathematical Sciences

The mathematical sciences minor fosters analytical, critical, and quantitative thinking and empowers you to function effectively in a technological society. The minor also strengthens mathematical skills and improves your ability to solve problems in subject areas that use mathematics as a tool.

Requirements

A minor in the mathematical sciences consists of at least 29 credit hours in mathematics courses numbered 200 or above. Seventeen of these hours are required; you should consult with the chair of the Department of Mathematics regarding a study plan for the remaining hours.

Mathematical Sciences Minor Core (17 Hours)

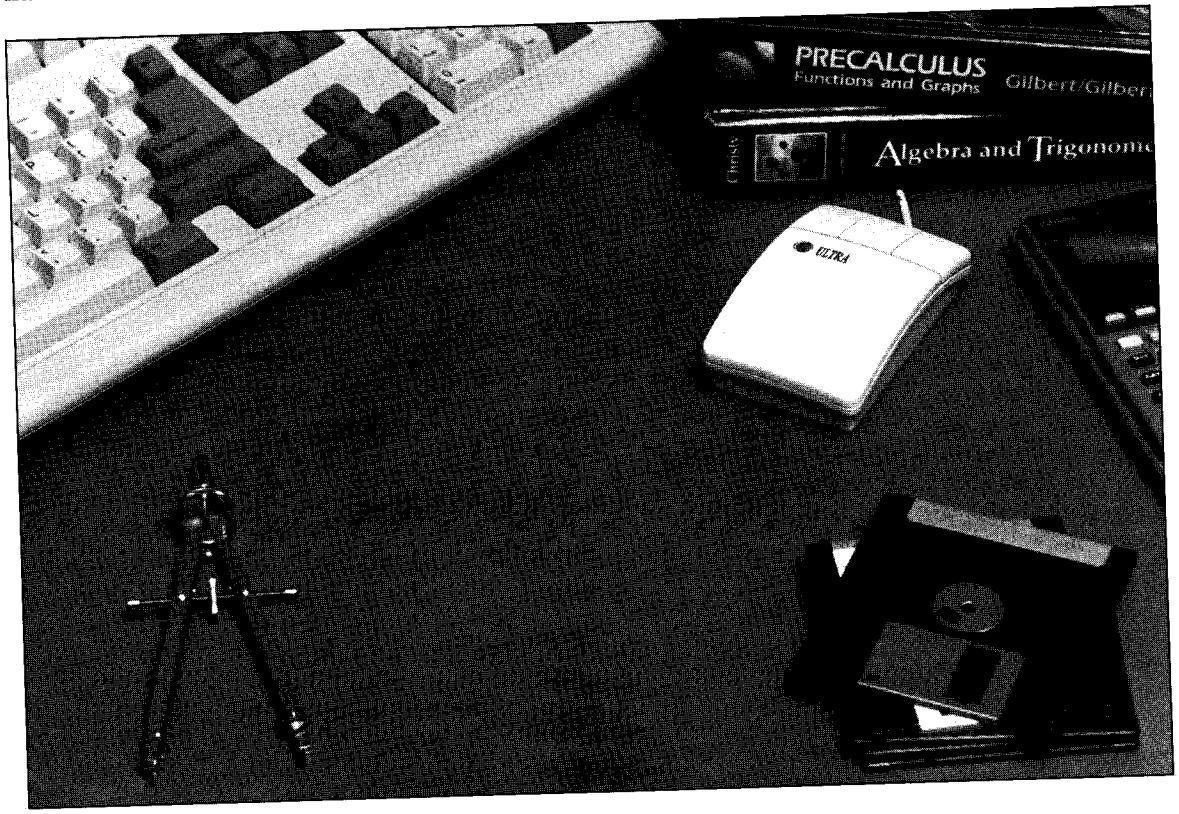
The following courses are required of all students completing a minor in the mathematical sciences:

Course No.	Course	Cr. Hrs.
MATH 201	Calculus 1	4
MATH 202	Calculus 2	4
MATH 203	Calculus 3	4
MATH 230	Linear Algebra	5

Sample Course Sequence for Mathematical Sciences Minor

This is what a mathematics sequence might look like for a student whose major is in business.

MATH 201	Calculus 1	4
MATH 202	Calculus 2	4
MATH 203	Calculus 3	4
MATH 230	Linear Algebra	5
MATH 250	Statistics 1	4
MATH 350	Statistics 2	4
MATH 440	Mathematical Models	4



This is what a mathematics sequence might look like for a student whose major is in engineering technologies.

MATH 201	Calculus 1	4
MATH 202	Calculus 2	4
MATH 203	Calculus 3	4
MATH 220	Discrete Mathematics	4
MATH 230	Linear Algebra	5
MATH 301	Differential Equations	4
MATH 440	Mathematical Models	4

Associate Degrees

The Department of Mathematics offers two associate degree programs, the associate of science and the associate of individualized studies.

The associate of science degree with a concentration in mathematics provides a firm foundation in college level mathematics and can be used in employment, in pursuing a bachelor's program in mathematics, or as preparation for other bachelor programs which require such a foundation.

If you have unique circumstances or goals, the associate of individualized studies provides an opportunity to tailor an educational program to meet your individual needs.

For additional information about the associate degree programs in mathematics, contact the Department of Mathematics.

Associate of Science Degree: Mathematics Concentration

Shawnee State University offers an associate of science degree for those students desiring two years of general education with an emphasis in mathematics and science. The total number of hours needed to complete the degree is 90.

Curriculum

I. Mathematics and Science Concentration Area — 30 hours minimum

A. Selected courses from Mathematics — 22 hours minimum must be numbered above 110.

B. Science — 8 hours minimum

Must be chosen from biology, chemistry, geology, or physics and must be numbered above 100.

II. General Education Requirement

A. Communications — 12 hours minimum

ENGL 111S Discourse and Composition (4);
ENGL 112S Composition and Research (4);
ENGL 115S Composition and Literature (4)

B. Mathematics — 8 hours minimum

Mathematics courses numbered 110 or above.

C. Arts/Humanities — 12 hours minimum

ENGL/HIST 225S **or** ENGL/HIST 226S Civilization and Literature

and eight additional hours chosen from two separate areas of arts and humanities. (Recommended courses: ARTH 101, ENGL 275, MUSI 120, MUSI 220, PHIL 300, THAR 100.)

D. Social Sciences — 12 hours minimum (Recommended courses: ANTH 250, ANTH/HIST 371, ARTH 366, ENGL/HIST 227S, GEOG 130, GEOG 201, GEOG 351, GOVT 320, GOVT 350, GOVT 370, GOVT 401, HIST 260, HIST 410, HIST 411, HIST 420, SOCI 101 or 110S, SOCI 312, SOCI 410 or a one-year sequence of a foreign language.)

E. Natural Sciences — 8 hours minimum

NTSC 110S Natural Science

and 12 additional hours in natural sciences

III. Electives — 8 hours minimum

Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University allows you to formulate your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true if you are interested in combining a selection of courses which include both academic as well as technical offerings in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. Contact the registrar if you would like more information concerning this degree.

New Degree Programs

The Department of Mathematics has submitted a proposal to offer a secondary education teaching certificate in mathematics. That program, along with other majors, minors, and concentrations in the mathematical sciences, may be available prior to the next edition of the Shawnee State University catalog. Please contact your advisor or the chairperson of the mathematics department for further information.

General Education Mathematics Requirements

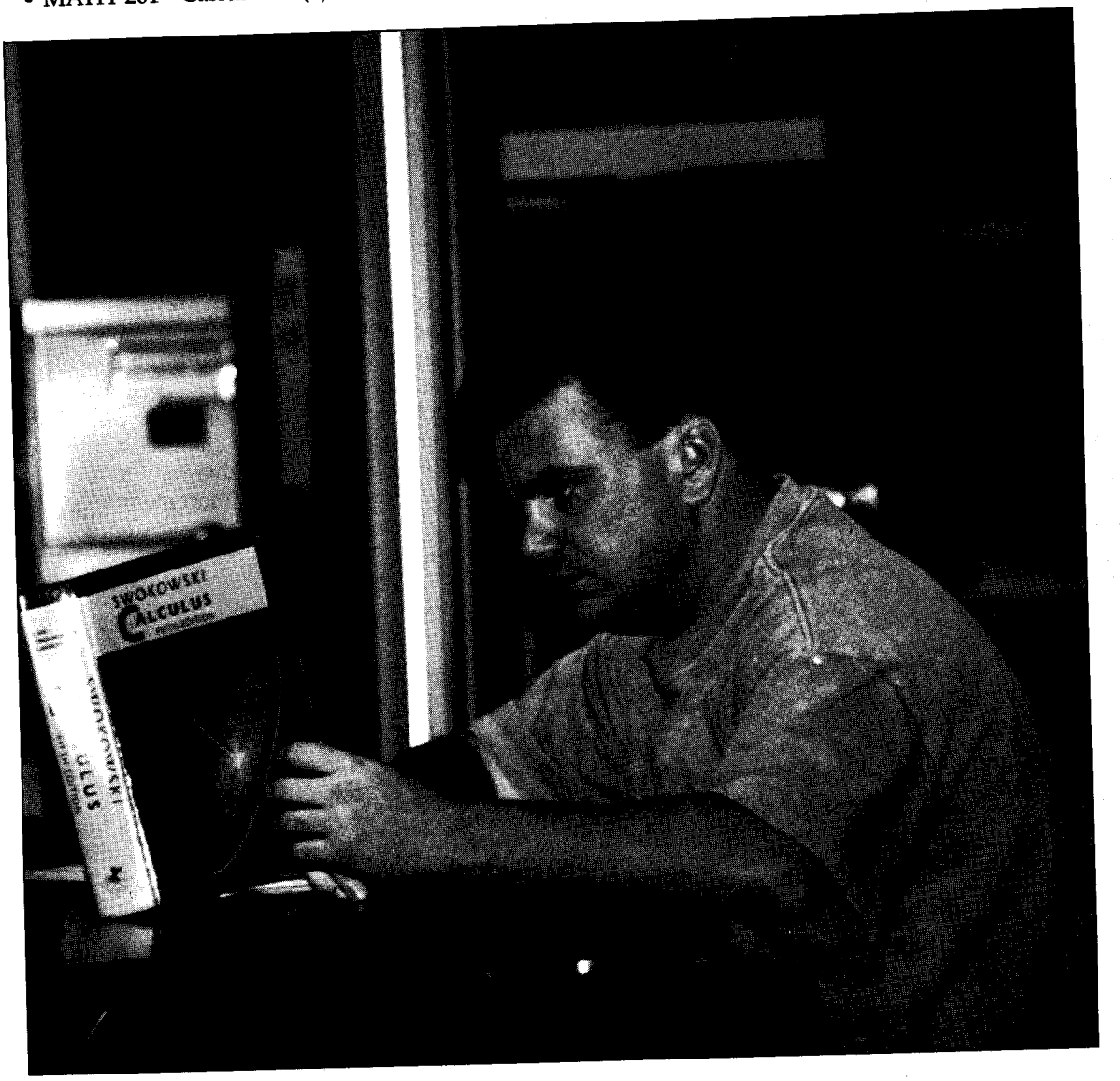
In general, you may satisfy the mathematics component (Quantitative Reasoning - 4 hours, see page 66) of the General Education Program by completing one of the following courses:

- MATH 110S Mathematics Core Course (4)
- MATH 131 College Algebra (4)
- MATH 150 Principles of Statistics (4)
- MATH 201 Calculus 1 (4)
- MATH 220 Discrete Mathematics (4)
- MATH 230 Statistics 1 (4)

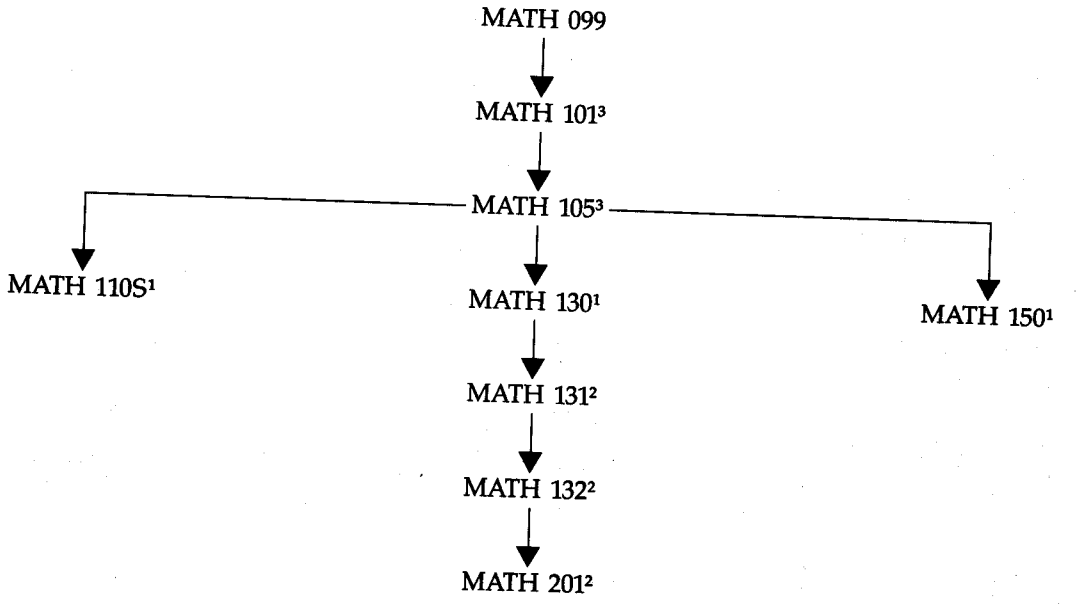
However, some academic programs may require a specific MATH course to satisfy the General Education Program requirements. You should check with your faculty advisor before registering for a MATH course to see if it is one appropriate to your program and that you have fulfilled the course prerequisite.

Entrance into Mathematics Courses

If you are a degree-seeking student you are required to take a mathematics placement test which, along with other factors, determines



Entry Points for Mathematics Courses



the mathematics class in which you will be placed. Other factors include your background, program of interest, and ACT mathematics score. Many of the mathematics courses are sequential, so it is important for you to master the material in one course before moving on to the next.

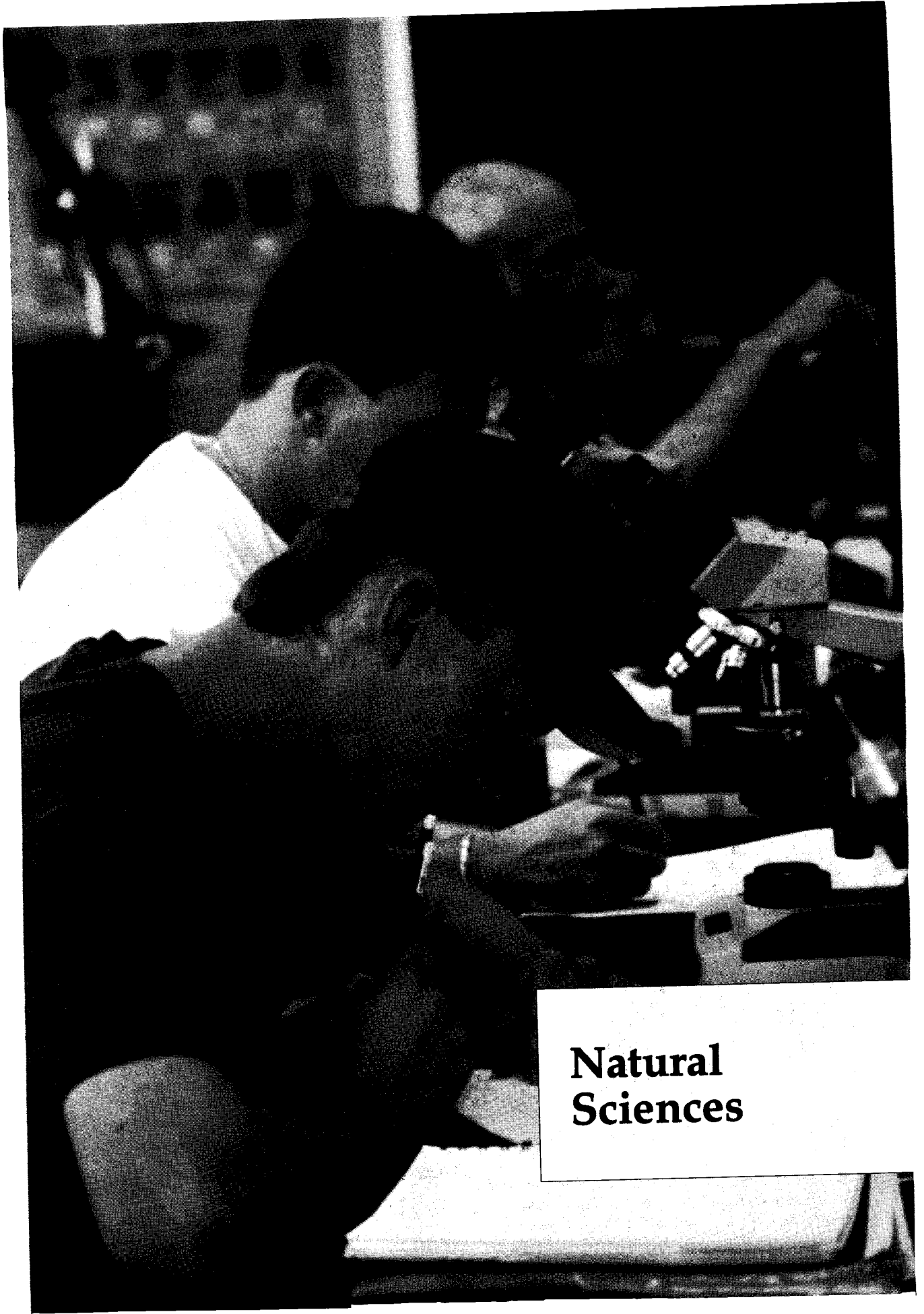
You may be exempted from taking the mathematics placement test if you have received transfer credit for an appropriate mathematics course or if you have an ACT **Mathematics subject** score of 22 or higher.

The diagram above shows entry points for a number of mathematics courses or course sequences. Be sure to check with your faculty advisor before attempting to register for a mathematics course. Questions about placement or the appropriate course(s) should be directed to the Department of Mathematics (355-2301). Inquiries concerning taking placement tests should be directed to the Learning Center (355-2392).

[1] Students with an ACT **Mathematics subject** score of 22 or higher may register in these courses without taking the basic Shawnee State University mathematics placement test.

[2] Entry into MATH 131, 132, or 201 is possible with satisfactory performance on the Shawnee State University advanced mathematics placement test. Contact the mathematics department or the Learning Center.

[3] Students who need a rapid review of elementary algebra and basic geometry should consider enrolling in MATH 106.



Natural Sciences

Natural Sciences

The Department of Natural Sciences prepares students to succeed in an increasingly complex and technological world. Our baccalaureate programs in biology, chemistry, and natural science are designed to provide a solid foundation in general science and mathematics. In addition, each program provides students with the opportunity to build depth of knowledge and experience in a specific science discipline. For more information on our science degree programs and careers, please contact the Department of Natural Sciences at (614) 355-2301.

Degrees in Natural Science

Bachelor of Science

- Biology
- Biology, Pre-Medicine
- Chemistry
- Chemistry, Pre-Medicine
- Natural Science, Biology
- Natural Science, Biology, Elementary Education
- Natural Science, Biology, Environmental Science
- Natural Science, Chemistry
- Natural Science, Chemistry, Elementary Education
- Natural Science, Chemistry, Environmental Science

Minors

- Biology
- Environmental Science

Associate of Science

Associate of Individualized Studies

- Interdisciplinary

Bachelor Degrees

■ **Special Note:** In addition to College of Arts and Sciences requirements, students must complete at least 16 credit hours in their major at Shawnee State.

Bachelor of Science in Biology

The bachelor of science degree in biology provides a broad intellectual foundation in the fundamentals of life science and is based on a philosophical commitment to relate modern life science to economic, environmental, and societal concerns. The degree requirements give you the opportunity to tailor your own program through a selection of courses in the fields of botany, zoology, ecology, systematics, and biomedical science. You may choose to concentrate in a specific field or become a broadly trained biologist by selecting a diversity of advanced courses. Our biology graduates are prepared for careers in business, industry, and government or for advanced degree programs in biological or biomedical fields.

Degree Requirements

General Education Program (48 Hours) *The General Education Program is composed of 48 credit hours of which 12 hours may be satisfied by the following chemistry, biology, and mathematics requirements. Those courses that will apply to the GEP include NTSC 110S, MATH 131, and one of the support sciences courses. Further information about the GEP is listed on page 66 of the current catalog or can be obtained from the dean's office.*	36 Hours
Biology Curriculum *(contains 30 hours of required courses)*	60 Hours
Mathematics and Support Sciences	40 Hours
General Electives	50 Hours
Minimum Hours Required	**186 Hours**

Biology Curriculum (60 Hours)
(Required courses listed, 30 hours)

Course No.	Course	Cr. Hrs.
BIOL 151	Principles of Biology	5
BIOL 202	Principles of Plant Biology	5
BIOL 203	Principles of Animal Biology	5
BIOL 330	Ecology	5
BIOL 340	Genetics	5
BIOL 432	Cell Biology	5

Biology Electives (30 Hours)

Within the 30 hours of required biology electives, you must complete a minimum of 20 hours numbered above the 300 level and 4 hours above the 400 level. Consult your faculty advisor when choosing biology electives.

Mathematics and Support Sciences (40 Hours)

MATH 130	Intermediate Algebra	4
MATH 131	College Algebra	4
MATH 150	Principles of Statistics *OR*	4
MATH 250	Statistics 1	

Mathematics and Support Sciences (cont'd.)

CHEM 141	General Chemistry 1	4
CHEM 142	General Chemistry 2	4
CHEM 143	General Chemistry 3	4
CHEM 200	Intro. to Organic Chemistry *OR*	4
CHEM 305	Organic Chemistry 1	
NTSC 110S	Natural Science	4
PHYS - - -	Physics Elective	4
	Computer Science Elective	4

Suggested Pre-Medicine Curriculum

If you are interested in pursuing a career in medicine or related fields, you should choose either a bachelor's degree in biology or chemistry. Pre-medicine students who choose a chemistry degree should follow the requirements prescribed under the bachelor of science degree in chemistry. For pre-medicine students who choose a biology degree, we suggest you take the following courses in the sequence shown below.

First Year — BIOL 151 Principles of Biology (5), BIOL 202 Principles of Plant Biology (5), BIOL 203 Principles of Animal Biology (5), and two mathematics courses based on placement testing.

Second Year — BIOL 310 Principles of Anatomy (5), BIOL 320 Principles of Physiology (5), BIOL 350 Microbiology (4), CHEM 141 General Chemistry 1 (4), CHEM 142 General Chemistry 2 (4), CHEM 143 General Chemistry 3 (4), and mathematics courses through MATH 202 Calculus 2 (4) and MATH 150 Principles of Statistics (4).

Third Year — BIOL 312 Sectional Anatomy (3), BIOL 314 Human Neuroanatomy (5), BIOL 330 Ecology (5), CHEM 305 Organic Chemistry 1 (4), CHEM 306 Organic Chemistry 2 (4), CHEM 307 Organic Chemistry 3 (4), PHYS 201 Physics 1 (4), PHYS 202 Physics 2 (4), PHYS 203 Physics 3 (4).

Fourth Year — BIOL 315 Histology (5), BIOL 340 Genetics (5), BIOL 410 Advanced Human Anatomy (5), BIOL 411 Biochemistry (4), BIOL 432 Cell Biology (5).

Bachelor of Science in Chemistry

The bachelor of science degree in chemistry is designed to prepare you for an entry level professional position in an industrial or government laboratory and for post-graduate chemistry programs. Shawnee State's curriculum has been designed using the standards of the American Chemical Society as guidelines. It provides a broad education in general, organic, inorganic, analytical, and physical chemistry, and includes specialized courses in environmental chemistry. If you graduate with a B.S. degree in chemistry, you are equipped with an understanding of how chemists synthesize new products as varied as pharmaceuticals and plastics; how they apply the scientific method and specific chemical knowledge to the detection and measurement of pollutants in the air, water, and soil; how chemistry contributes to our understanding of the material universe; and how knowledge of chemistry can contribute to the advancement of knowledge in any number of fields in which the properties of matter play a role.

Degree Requirements

General Education Program (48 Hours)	36 Hours
The General Education Program is composed of 48 credit hours of which 12 hours may be satisfied by the following chemistry, biology, and mathematics requirements. Those courses that will apply to the GEP include NTSC 110S, MATH 131, and one of the support sciences courses. Further information about the GEP is listed on page 66 of the current catalog or can be obtained from the dean's office.	
Chemistry Curriculum	68 Hours
Mathematics and Support Sciences	49 Hours
General Electives	33 Hours
Minimum Hours Required	**186 Hours**

Chemistry Curriculum (68 Hours)

Course No.	Course	Cr. Hrs.
CHEM 141	General Chemistry 1	4
CHEM 142	General Chemistry 2	4
CHEM 143	General Chemistry 3	4
CHEM 305	Organic Chemistry 1	4
CHEM 306	Organic Chemistry 2	4
CHEM 307	Organic Chemistry 3	4
CHEM 323	Quantitative Analysis	5
CHEM 325	Instr. Meth. of Analysis	5
CHEM 331	Intro. to Physical Chem.	4
CHEM 341	Intro. to Inorganic Chem.	4
CHEM 350	Lit. and Info. Retrieval	2
CHEM 421	Environmental Chemistry 1	4
CHEM 422	Environmental Chemistry 2	4
CHEM 432	Physical Chemistry 1	4
CHEM 433	Physical Chemistry 2	4
CHEM 441	Inorganic Chemistry	4
CHEM 495	Undergraduate Research	4

Mathematics and Support Sciences (49 Hours)

Course No.	Course	Cr. Hrs.
MATH 201	Calculus 1	4
MATH 202	Calculus 2	4
MATH 203	Calculus 3	4
MATH 204	Calculus 4	4
MATH 230	Linear Algebra	5
MATH 250	Statistics 1	4
MATH 301	Ordinary Diff. Equations	4
NTSC 110S	Natural Science	4
PHYS 211	Calculus Based Physics 1	4
PHYS 212	Calculus Based Physics 2	4
PHYS 213	Calculus Based Physics 3	4
	Computer Science Elective	4

General Electives (33 Hours)

Choose elective courses in any discipline. You should consider taking elective courses that form a coherent whole and that complement your chemistry courses. For example, courses in economics, marketing, and business may help the practicing chemist to relate his or her research to its social context. As a complement to environmental chemistry, you might consider elective courses in biology, geology, geography, and other disciplines that bear on environmental issues. The mathematics requirement of the chemistry degree program is rigorous; it begins with Calculus 1. Since you may not be ready for calculus when you enter the University, you may take college algebra and trigonometry/ analytical geometry during your first year and receive elective credit for these courses. It is recommended that you consult with your academic advisor about your choice of elective courses.

Bachelor of Science in Natural Science

Graduates who are well versed in science and mathematics are in demand in business, government, education, and industry. Evidence suggests that this demand will increase in the future as the world becomes more technologically sophisticated. In order to meet that demand, Shawnee State's bachelor of science in natural science has been designed to provide you with a foundation, well grounded in the sciences and mathematics, which allows for a variety of career options.

The degree program requires you to study in three different disciplines of science and/or mathematics, offering the kind of flexibility that prepares you for a career in the life, physical, or environmental sciences. In addition, the degree program offers a solid foundation for continuing your education in these fields or in the medical sciences. If you wish to teach school at the elementary level, requirements for certification can be completed concurrently with the degree program in natural science. You should discuss your options with your faculty advisor.

Degree Requirements

General Education Program (48 Hours) 36 Hours
The General Education Program is composed of 48 credit hours of which 12 hours may be satisfied by the following chemistry, biology, and mathematics requirements. Those courses that will apply to the GEP include NTSC 110S, MATH 131, and one of the support sciences courses. Further information about the GEP is listed on page 66 of the current catalog or can be obtained from the dean's office.

Concentration Area 1 *Biology or chemistry courses above 110 (and at least 12 hours above the 300 level), 32 hours. Senior Project, 4 hours* 36 Hours

Concentration Area 2 *Biology, chemistry, geology, mathematics, or physics courses numbered above 110* 16 Hours

Concentration Area 3 *Biology, chemistry, geology, mathematics, or physics courses numbered above 110* 8 Hours

NTSC 110S Natural Science 4 Hours

Humanities/Social Science Electives 24 Hours
Courses with prefixes (excluding GEP courses) — SOCI, GEOG, GOVT, PSYC, ECON, HIST, ANTH, HUMN, ENGL, PHIL, LING, SPCH, THAR, SPAN, ARTS, MUSI, JOUR, FREN

Mathematics Electives *MATH 130 or above; MATH 120, 121 (for elementary education students)* 8 Hours

Computer Science Elective 4 Hours

General Electives 50 Hours

Minimum Hours Required 186 Hours

EXAMPLE 1: *(actual program may vary)*
Bachelor of Science in Natural Science with Concentration in Chemistry

General Education Program (48 Hours) 36 Hours

Concentration 1 (in chemistry) 37 Hours
CHEM 141, 142, 143, 305, 306, 307, 323, 331, 485

Concentration 2 (in mathematics) 16 Hours
MATH 132, 201, 202, 203

Concentration 3 (in physics) 8 Hours
PHYS 211, 212

NTSC 110S 4 Hours

Human./Soc. Sc. Electives 24 Hours
Courses with prefixes (excluding GEP courses)—SOCI, GEOG, GOVT, PSYC, ECON, HIST, ANTH, HUMN, ENGL, PHIL, LING, SPCH, THAR, SPAN, ARTS, MUSI, JOUR, FREN. (You may take several courses in one of these disciplines.)

Mathematics Electives 8 Hours
MATH 130, 131

Computer Science Elective 4 Hours
BUIS 101 or BUAI 101

General Electives 50 Hours
CHEM 325, 341, 432, 433, PHYS 213 and other hours as needed. (General electives may be selected from a variety of disciplines; for example additional hours in biology, geology, computer science, or other disciplines may be appropriate.)

Elementary Education Certification

Students seeking a bachelor of science in natural science who wish to be certified in elementary education must also complete the requirements listed below. It is important to note that these requirements are not entirely in addition to the bachelor of science degree but rather meet certain electives, such as the mathematics requirement, humanities/social science electives, and general electives. Some additional hours are necessary to meet all of the requirements. You are urged to discuss the elementary education option with your primary advisor in the Department of Natural Sciences and your advisor in the Center for Teacher Education.

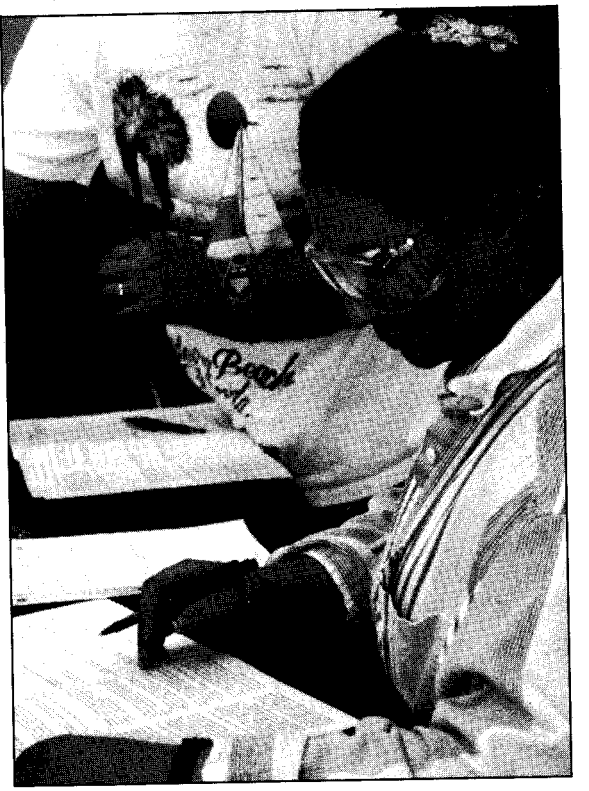
Degree Requirements

General Education Program (48 Hours) *The General Education Program is composed of 48 credit hours of which 12 hours may be satisfied by the following science and mathematics requirements. Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	36 Hours
Concentration Area 1 *Biology or chemistry courses (above 110 and at least 12 hours above the 300 level), 32 hours. Senior Project, 4 hours*	36 Hours
Concentration Area 2 *Biology, chemistry, geology, physics, or mathematics courses numbered above 110*	16 Hours
Concentration Area 3 *Biology, chemistry, geology, physics, or mathematics courses numbered above 110*	8 Hours
NTSC 110S	4 Hours
Computer Science Elective	4 Hours
Arts and Sciences Requirements *(Listed on page 76 of the current catalog or available from the dean's office.) Note: You may doublecount 10 hours toward your science major.*	37 Hours
Professional Education Require. *(Listed on page 76 of the current catalog or available from the dean's office.) Note: You may doublecount 10 hours toward your science major.)*	45 Hours
Minimum Hours Required	**186 Hours**

EXAMPLE 2: *(actual program may vary)*

Bachelor of Science in Natural Science with Concentration in Biology and Certification in Elementary Education

General Education Program (48 Hours)	36 Hours
Concentration 1 (in biology) *BIOL 151, 202, 203, 303, 307, 330, 340, 485*	39 Hours
Concentration 2 (in geology) *GEOL 111, 112, 201, 202*	16 Hours
Concentration 3 (in chemistry) *CHEM 121, 122*	8 Hours
NTSC 110S	4 Hours
Computer Science Elective *BUIS 101 or BUAI 101*	4 Hours
Arts and Sciences Requirements *ARTS 201, 202, HPER 202, 270, MUSI 160, 161, MATH 120, 121, PSYC 375, SPCH 103*	37 Hours
Professional Education Requirements *EDUC 110, 210, 220, 230, 240, 310, 320, 340, 420, 450*	45 Hours



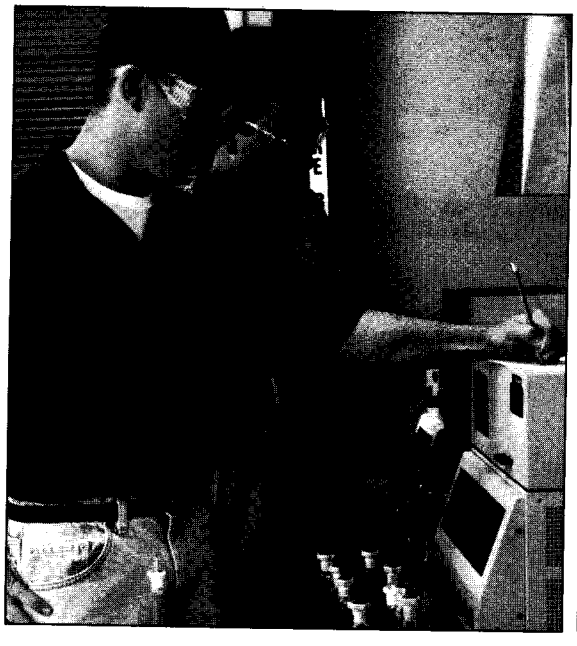
Certificate

Certificate in Environmental Science, BS Degree

A certificate in environmental science offers you the opportunity to focus your study on basic and environmental sciences if you are enrolled in the bachelor of science in natural science in chemistry or biology. The certificate requires a set of thirteen science and environmental courses; Concentration 1, in either biology or chemistry; and an environmentally related senior project. Many students who select this option also complete an internship to gain experience working in an environmentally related job.

Required Courses (54 Hours)

BIOL 151	Principles of Biology
BIOL 330	Ecology
CHEM 141	General Chemistry 1
CHEM 142	General Chemistry 2
CHEM 143	General Chemistry 3
CHEM 323	Quantitative Analysis *or*
CHEM 421	Environmental Chemistry 1
GEOG 311	Geography of Air Pollution
GEOL 112	Environmental Geology
GEOL 201	Physical Geology
MATH 201	Calculus 1
MATH 250	Statistics 1
NTSC 240	Intro. to Environmental Science
PHYS 203	Physics of Energy



EXAMPLE 3: *(actual program may vary)*

Bachelor of Science in Natural Science with Concentration in Biology and Certification in Environmental Science

General Education Program (48 Hours)	36 Hours
Concentration 1 (in biology) *BIOL 151, 202, 203, 330, 331, 350, 370, 485*	39 Hours
Concentration 2 (in chemistry) *CHEM 141, 142, 143, 323 or 421*	16 Hours
Concentration 3 (in geology) *GEOL 112, 201*	8 Hours
NTSC 110S	4 Hours
Mathematics Requirements *MATH 201, 250*	8 Hours
Computer Science Elective *BUIS 101 or BUAI 101*	4 Hours
Human./Soc. Sc. Electives *ECON 101, ENGL 121, PHIL 202, GEOG 311, 350, 404, GOVT 401*	27 Hours
General Electives *CHEM 305, 306, 307, 325, MATH 350, NTSC 240, PHYS 203 and other hours as needed. Consult your faculty advisor.*	50 Hours

For additional information about the environmental science certificate, write or call: Environmental Science Coordinator, Natural Science Department, (614) 355-2301.

Minors

Biology Minor

In addition to the major program in biology, the Department of Natural Sciences offers a minor in biology, which may be completed along with any of the University's baccalaureate programs.

Requirements for the biology minor consist of a minimum of 30 credit hours in biology and include:

BIOL 151, 202, and 203	15 Hours
BIOL 330 or 340 or 432	5 Hours
Biology Electives *(At least one course numbered above 300.)*	10 Hours

Environmental Science Minor

In response to national demands for the 'greening' of government, business, and industry, many job descriptions now request an educational background that includes environmentally related coursework. As you graduate and enter the workforce, the environmental science minor

can represent that *extra* educational experience that helps you obtain the job of your choice.

The minor in environmental science is designed for students in degree programs other than natural science in biology and chemistry. It offers you the opportunity to broaden your major course of study with an auxiliary focus in basic and environmental sciences. The minor requires six courses (23-28 credit hours) from at least three departments. Natural science students desiring an environmental emphasis should consider the certificate in environmental science.

Required Courses (16-17 Hours)

One course in biology *(BIOL 151 or another introductory course)*
One course in chemistry *(CHEM 121 or CHEM 141)*
NTSC 240 Introduction to Environmental Science
GEOL 112 Environmental Geology

Elective Courses (7-8 Hours)

Two additional courses from the following list:
BIOL 202 Principles of Plant Biology, BIOL 203 Principles of Animal Biology, BIOL 210 Taxonomy of Vascular Plants, BIOL 271 Field Ornithology, BIOL 272 Ohio's Natural Heritage, BIOL 302 Dendrology, BIOL 303 Spring Flora, BIOL 307 General Entomology, BIOL 330 Ecology, BIOL 331 Advanced Field Biology, BIOL 350 Microbiology, BIOL 365 Phycology, BIOL 370 Marine Biology, CHEM 122 Introduction to General Chemistry 2, CHEM 142 General Chemistry 2, CHEM 200 Introduction to Organic Chemistry, GEOG 311 Geography of Air Pollution, GEOL 201 Physical Geology, GEOL 202 Historical Geology, GOVT 401 State of the World, PHIL 202 Environmental Ethics

Associate Degrees

Associate of Science Degree: Natural Science Concentration

Shawnee State University offers an associate of science degree for those students desiring two years of general education with an emphasis in science and mathematics. The total number of hours needed to complete the degree is 90.

Curriculum

I. Science Concentration Area — 30 hours minimum

Selected courses in an area of specialization chosen from one of the following subject areas:

Biology
Physical Science (includes chemistry, geology, physics, and physical science)

II. General Education Requirement

A. Communications — 12 hours minimum

ENGL 111S Discourse and Composition (4);
ENGL 112S Composition and Research (4);
ENGL 115S Composition and Literature (4)

B. Mathematics — 8 hours minimum

Mathematics courses numbered 130 or above.

C. Arts/Humanities — 12 hours minimum

ENGL/HIST 225S **or** ENGL/HIST 226S Civilization and Literature

and eight additional hours chosen from two separate areas of arts and humanities. (Recommended Courses: ARTH 101, ENGL 275, MUSI 120, MUSI 220, PHIL 300, THAR 100.)

D. Social Sciences — 12 hours minimum
(Recommended Courses: ANTH 250, ANTH 371, ARTH 366, ENGL/HIST 227S, GEOG 130, GEOG 201, GEOG 351, GOVT 320, GOVT 350, GOVT 370, GOVT 401, HIST 260, HIST 410, HIST 411, HIST 420, SOCI 101 or 110S, SOCI 312, SOCI 410)

E. Natural Sciences — 16 hours minimum
NTSC 110S Natural Science
and 12 additional hours in natural sciences chosen from chemistry (3 lec. 3 lab), physics (3 lec. 3 lab), BIOL 151, GEOL 111

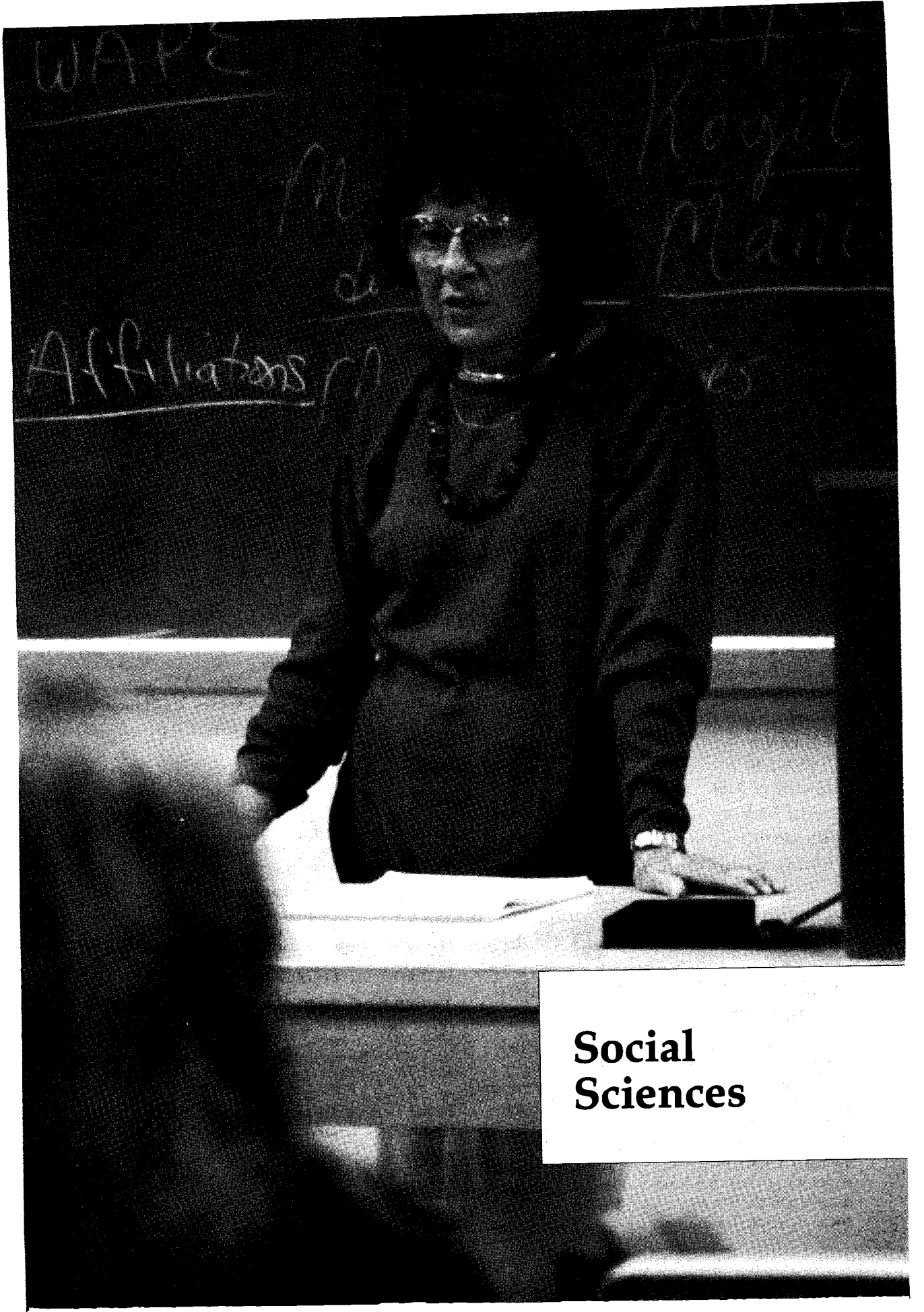
Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University allows you to formulate your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true if you are interested in combining a selection of courses that include both academic as well as technical offerings in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. Contact the registrar for more information about this degree.

New Degree Programs

Faculty in the Department of Natural Sciences are developing a new baccalaureate program in environmental science, which may be available prior to the next edition of the Shawnee State catalog. The degree is responsive to the increasing demand for environmentally educated professionals, and it will offer you the opportunity to more fully develop your education with an internship in local business or industry.

For more information about this degree or about other majors, minors, and concentrations being developed, contact your advisor or the chairperson of the natural science department.



Social Sciences

Social Sciences

The Department of Social Sciences provides general education students a sense of the importance of cultural influences, a sense of history within the scope of changing cultural themes, and a sense of their own worth as human beings. These understandings are refined through a sound curriculum in the behavioral sciences, which explains variations in human behavior based on theoretical models, instruction in research methods used by contemporary social scientists, and a special focus on interdisciplinary connections among topical social issues.

Degrees in Social Science

Bachelor of Arts

History
Social Sciences
Social Sciences, Elementary Education
Social Sciences, Legal Assisting (2+2)

Minors

Economics
Geography

Associate of Arts

Social Science

Associate of Individualized Studies

Interdisciplinary

Bachelor Degrees

Bachelor of Arts with a Major in History

The Department of Social Sciences' history program provides students with a general understanding of the development of American, western, and select non-western civilizations. Special attention is given to 20th century history, the problems of modernization, and the increasing connections between societies. In developing these understandings, you learn to draw upon the insights and techniques of cognate social science disciplines.

The program encourages you to develop your analytical capacities, research skills, and writing talents, which, in turn, stand you in good stead as you pursue a career in law, education, journalism, government service, or the private sector.

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
History Survey Courses	24 Hours
History Upper-Division Courses *(300-400 Level)*	24 Hours
Social Science Upper-Division Cognate Courses *(from following list)*	12 Hours
Elective Courses	78 Hours
Total Hours Required	**186 hours**

History Survey Courses (24 Hours)

The following courses must be completed with a minimum grade of "C."

HIST 111, 112, and 113 *(American Survey)*	12 Hrs.
HIST 201, 202, and 203 *(European Survey)*	12 Hrs.

History Upper-Division Courses (24 Hours)

A minimum grade of "C" must be achieved in any course used to fulfill this degree requirement.

Two U.S. history courses from:

Course No.	Course	Cr. Hrs.
HIST 301	Form. of the Nation, 1750-1815	4
HIST 305	From FDR to Reagan	4
HIST 320	Hist. of Amer. Foreign Relations	4
HIST 326	Economic History of the U.S.	4

Two upper-division European courses from:

HIST 310	Nazi Germany	4
HIST 325	History of Russia	4
HIST 401	History of Medicine	4
HIST 410	Intellectual History 1	4
HIST 411	Intellectual History 2	4

Two upper-division non-western courses from:

ANTH 340	Meso-Amer. Before Columbus	4
HIST 330	History of South Africa	4
HIST 371	Islamic Culture and Civilization	4
HIST 420	Middle East in Modern Times	4

Social Science Upper-Division Cognate Courses (12 Hours)

A minimum grade of "C" must be achieved in any course used to fulfill this degree requirement.

ANTH 360	Indians of North America	4
ECON 405	Economic Development	4
ECON 411	Comparative Economic Systems	4

Social Science Upper-Division Cognate Courses (cont'd.)

Course No.	Course	Cr. Hrs.
GEOG 310	Medical Geography	4
GEOG 350	Geography of North America	4
GEOG 351	Regional Geog. of the Mid. East	4
GOVT 310	American Foreign Policy	4
GOVT 320	Third World Politics	4
GOVT 330	Mass Media Politics	4
GOVT 340	European Politics	4
GOVT 350	National Public Policy	4
GOVT 401	State of the World	4
GOVT 420	International Political Economy	4
SOCI 312	Sociology of Religion	4
SOCI 330	Social Theory	4
SOCI 340	Sociology of Appalachia	4
SOCI 380	Sociological Methods	4

Elective Courses (78 Hours)

You are free to select courses from any of the University's offerings that you find useful. Faculty advisors are happy to offer suggestions on what areas of study might be particularly beneficial to you.

Bachelor of Arts with a Major in Social Science

The general social science major requires 36 hours of social science core courses. You must achieve a minimum grade of "C" in each required social science course in order to graduate.

Degree Requirements

General Education Program *Social science majors must take SOCI 110S to fulfill the GEP social science requirement. Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Social Science Core Courses	36 Hours
Upper Division Social Science Electives *(300-400 level)*	36 Hours
Elective Courses	66 Hours
Total Hours Required	**186 Hours**

Social Science Core Courses (36 Hours)

Course No.	Course	Cr. Hrs.
PSYC 101	Introduction to Psychology	4
SOCI 101	Introduction to Sociology	4
GOVT 250	Introduction to Political Science	4
ECON 101	Prin. of Macro. (or ECON 102)	4
ANTH 250	Prin. of Cult. Anth. (or GEOG 125 or GEOG 130 or GEOG 201)	4
HIST 111	American History (or HIST 112 or HIST 113)	4
HIST 201	Ancient or Eur. Hist. (or HIST 202 or HIST 203)	4
PSYC 273	Psych. of Human Adjustment	4
GOVT 401	State of the World	4

Elective Courses (66 Hours)

Although electives may be chosen from the broad spectrum of university courses, you may choose to take your electives within the social science department (anthropology, geography, history, political science, psychology, and sociology) and pursue a broad emphasis in social science. With this approach, you acquire a comprehensive background in the social sciences. It is suggested that you take 8 to 12 hours from each of the following areas:

- History
- Economics
- Geography
- Government
- Psychology
- Sociology/ Anthropology

Social Science Major with Elementary Education Certification

If you are majoring in social science and you wish to complete requirements toward certification in elementary education, you may choose a special program which was designed to meet your needs. In this curriculum, you take courses which cover subject matter traditionally taught as social studies in the elementary school. You must achieve a minimum grade of "C" in each required social science course in order to graduate.

Students choosing elementary education certification are urged to work closely with their social science advisor and with an advisor from the elementary education program.

Degree Requirements

General Education Program *Social science majors must take SOCI 110S to fulfill the GEP social science requirement. Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Social Science Requirements	60 Hours

Degree Requirements (cont'd.)

Arts and Sciences Requirements *Listed on page 76 of the current catalog or available from the dean's office.*	37 Hours
Professional Education Require. *Listed on page 76 of the current catalog or available from the dean's office.*	45 Hours
Total Hours Required	**190 Hours**

Social Science Requirements (60 Hours)

Course No.	Course	Cr. Hrs.
SOCI 101	Introduction to Sociology	4
PSYC 101	Introduction to Psychology	4
HIST 111	American History to 1828	4
HIST 112	American History, 1828-1900	4
HIST 113	American History Since 1900	4
PSYC 273	Psych. of Human Adjustment	4
HIST 201	Ancient History (or HIST 202 or HIST 203)	4
GEOG 125	World Geography (or GEOG 201 or GEOG 225)	4
ECON 101	Prin. of Macro. (or ECON 102)	4
GOVT 250	Intro. to Political Science	4
PSYC 310	Child Psych. (or PSYC 316)	4
SOCI 310	Gender Socialization	4
GOVT 401	State of the World	4
	Social Science Electives	8

Bachelor of Arts in Social Sciences

2+2 for Students Who Complete the Legal Assisting Program

This program is designed for students who have completed the associate degree in legal assisting at Shawnee State and who wish to pursue a baccalaureate degree as preparation for law school. All required courses in the legal assisting program (99 credit hours) count toward the baccalaureate requirements. To be awarded the bachelor degree, you must complete an additional 32 hours of General Education Program requirements, 28 hours of Social Science Core requirements, and 32 hours in social science at the 300-400 level. The entire program requires completion of 191 credit hours. You must achieve a minimum grade of "C" in each required social science course in order to graduate.

Degree Requirements

Completion of Legal Assist. Prog.	99 Hours
Additional General Ed. Program	36 Hours
Additional Soc. Sc. Core Courses	28 Hours
Upper Division Soc. Sc. Electives *(300-400 level)*	32 Hours
Total Hours Required	**195 Hours**

Legal Assisting Curriculum (99 Hours)

Includes certain courses that are part of either the General Education Program or the Social Science Core. (Refer to page 107 of the current catalog or contact the dean of the College of Professional Studies for more information).

Additional General Education Program (36 Hours)

This is the maximum number of hours. With doublecounting, the hours required may actually be less. Some General Education Program courses have already been taken within the legal assisting associate degree program. Please see your advisor to determine specifically what is required.

Additional Social Science Core (28 Hours)

Course No.	Course	Cr. Hrs.
SOCI 101	Introduction to Sociology	4
ECON 101	Prin. of Macro. (or ECON 102)	4
HIST 111	Amer. Hist. (or HIST 112 or 113)	4
HIST 201	Ancient or Eur. Hist. (or HIST 202 or 203)	4
PSYC 273	Psych. of Human Adjustment	4
GEOG 125	World Geography (or GEOG 130 or 201 or ANTH 250)	4
GOVT 401	State of the World	4

Upper Division Social Science Electives (32 Hours)

Select 32 credit hours of upper division social science electives (courses in anthropology, economics, geography, government, history, psychology, and/or sociology) in consultation with your faculty advisor.

Minors

Economics Minor

A minor in economics offers students enrolled in any of Shawnee State University's baccalaureate programs an opportunity to broaden their course of study with an auxiliary focus in economics. The minor requires you to complete 24 credit hours of economics, with a minimum grade of "C." No more than 12 of these hours may count toward your major(s), and since ECON 101 and 102 are prerequisites for all upper-level economics courses, these are required for the minor. Any four additional upper-level economics courses will satisfy the hours requirement.

Geography Minor

Students enrolled in a baccalaureate degree program in most arts and science and business majors may elect to complete a minor in geography. This may be an appropriate minor if you are interested in a career in marketing, tourism, environment, city planning, teaching, or the military.

The minor in geography requires the completion of 28 hours in geography. No grade below a C- will be permitted to count toward completion. Courses taken on a pass/no-credit basis may not be applied to the minor.

Requirements

The following three courses are required (12 hours):

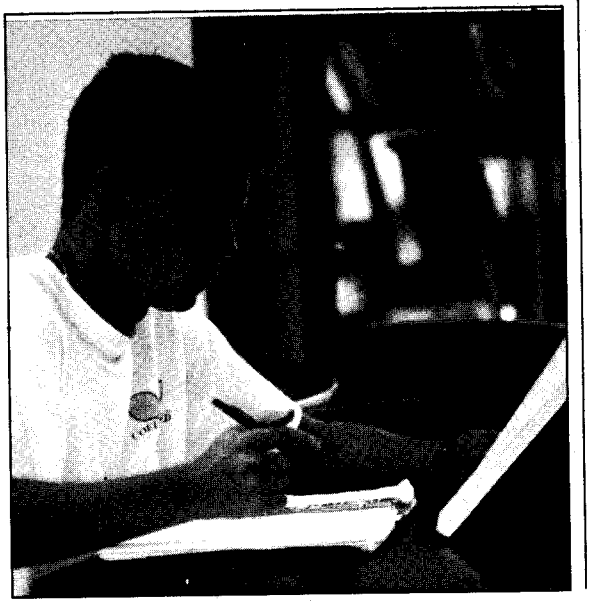
GEOG 125 World Geography
GEOG 201 Cultural Geography
GEOG 225 Physical Geography

Select one of the following (4 hours):

GEOG 130 Economic Geography
GEOG 230 Urban Geography
GEOG 242 Geography of Ohio

Select three of the following (12 hours):

GEOG 310 Medical Geography
GEOG 311 Air Pollution
GEOG 350 Regional Geography: North America
GEOG 351 Regional Geography: Middle East
GEOG 404 Transportation Geography and Mgt.
Other upper division geography courses as available.



Associate Degrees

Associate of Arts Degree: Social Science Concentration

Shawnee State University offers an associate of arts degree for those students who wish to complete a two-year program of general education with an emphasis in the social sciences. The total number of hours needed to complete the degree is 90. You must achieve a minimum grade of "C" in each required social science course in order to graduate.

Curriculum

I. Core Requirements

A. Composition — 12 hours minimum

ENGL 111S Discourse and Composition (4); ENGL 112S Composition and Research (4); ENGL 115S Composition and Literature (4)

Students may take additional courses from the following (optional): ENGL 232 (3); ENGL 240 (3); ENGL 245 (3)

B. Mathematics — 4 hours minimum

MATH 110S Mathematics Core Course (4)

Students may choose additional mathematics courses from the following (optional): MATH 131 (4); MATH 132 (4); MATH 201 (4); MATH 202 (4); MATH 250 (4); MATH 255 (4)

C. Arts and Humanities — 16 hours minimum (choose from two areas)

ENGL/HIST 225S Civilization and Literature (4)

and two courses from the following: ARTH 261 (4); ARTH 262 (4); ENGL 200 (4); MUSI 220 (3); PHIL 101 (4)

and one course from the following: Art, English, Humanities, Journalism, Language, Music, Philosophy, or Theatre

Students may choose additional courses from the following (optional): ENGL 203 (4); ENGL 210 (4); ENGL 211 (4); ENGL 212 (4); MUSI 221 (3); MUSI 222 (3); MUSI 223 (3); PHIL 102 (4); PHIL 103 (4); PHIL 105 (4)

D. Social Science — 16 hours minimum

SOCI 110S Foundations of Social Science (4) (required)

and 12 hours from two areas: HIST/ENGL 226S Civilization and Literature 2 (4); SOCI 101 Introduction to Sociology (4); or PSYC 101 Introduction to Psychology (4)

and one course from the following: ECON 101 (4); GEOG 125 (4); GOVT 101 (4); HIST 111 (4); HIST 112 (4); HIST 113 (4); PSYC 101 (4); SOCI 101 (4)

Students may choose additional courses from the following (optional): ANTH 101 (4); ANTH 250 (4); ECON 102 (4); GOVT 102 (4); GOVT 120 (4);

Curriculum (cont'd.)

GOVT 250 (4); HIST 201 (4); HIST 202 (4); HIST 203 (4); PSYC 151 (4); PSYC 273 (4); SOCI 201 (4); SOCI 205 (4)

E. Natural Sciences — 12 hours minimum

NTSC 110S Natural Science (4) and 8 additional hours in the natural sciences.

Students may choose additional courses from the following (optional): BIOL 162 (5); BIOL 170 (4); BIOL 202 (5); BIOL 203 (6); CHEM 200 (4); CHEM 201 (4); GEOL 112 (4); PHYS 210 (4)

Note: Students cannot receive credit for both CHEM 121/122 and CHEM 141/142 series.

II. Concentration Area — 30 hours

A. Arts

Selected courses in an area of specialization chosen from the following list of humanities subject areas to complete the associate of arts degree.

Art	Humanities	Music
Comparative Arts	Journalism	Philosophy
English	Language	Theatre

B. Social Sciences

Selected courses in an area of specialization chosen from the following list of subject areas to complete the associate of arts degree:

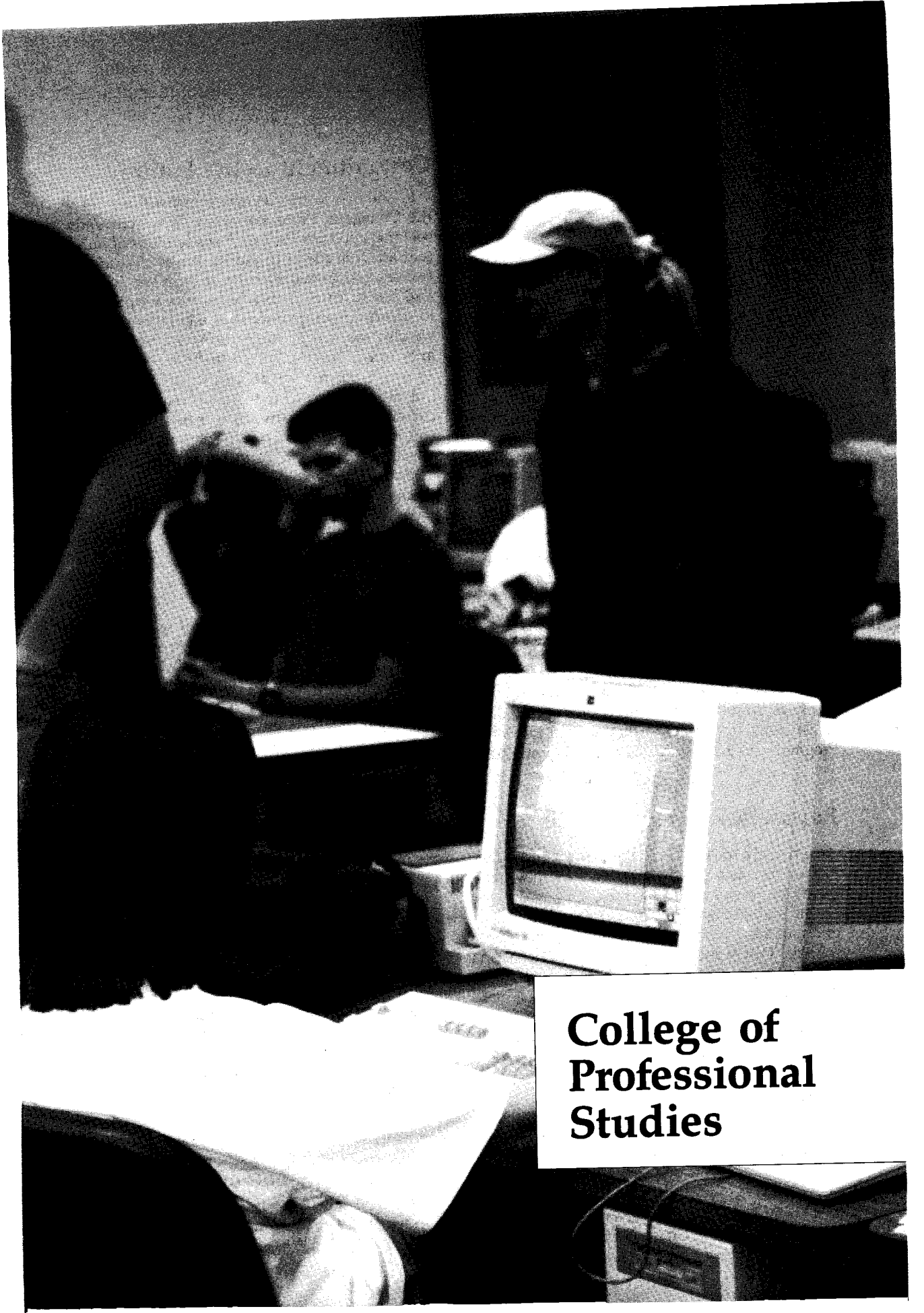
Anthropology	Government	Psychology
Economics	History	Sociology
Geography		

Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University allows you to formulate your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true if you are interested in combining a selection of courses that includes both academic as well as technical offerings in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. Contact the registrar for more information about this degree.

New Degree Programs

Faculty are developing programs which involve majors, minors, and concentrations in more specialized areas in the social sciences. These programs may be available prior to the next edition of the Shawnee State University catalog. Please contact your advisor or the chairperson of the social science department for further information.



College of Professional Studies

College of Professional Studies

The mission of the College of Professional Studies is to prepare you for a meaningful career in business, engineering technologies, or health sciences. We are also committed to providing the practical and theoretical background that enables your success in advanced educational programs.

Courses taught in professional studies combine hands-on learning experiences, based on guided professional practice. Many courses are conducted in on-campus laboratories that simulate the career or industrial settings in which you will work after graduation. Others, especially in the health sciences, are taught in off-campus, clinical settings, where you experience interactions with clients first hand.

Students in professional studies also take courses offered by the College of Arts and Sciences. Many of these are career oriented, while some—especially in the General Education Program—are required of all university graduates.

Reputation for Excellence

Employers of our graduates consistently give high marks and excellent reviews to Shawnee State's professional studies programs, and many of our students are now successfully pursuing graduate level work or have entered professional schools. Our students' performances on national and licensure exams are excellent; well above national averages. The College of Professional Studies jealously protects and continues to enhance this reputation for excellence.

Faculty

Faculty in professional studies are experienced and academically credentialed or certified by appropriate professional associations in their career fields. Moreover, our faculty are committed to your success in the college classroom and in your career beyond Shawnee State University.

Commitment to the Future

In addition to the degree programs listed below, the College of Professional Studies is currently seeking approval for other academic programs that address the educational needs of students and the employment needs of business, industry, and health care. Just as we survey employers to determine employment needs for the future, we also ask you to inform us of your educational and occupational goals so that we can become an active partner in the pursuit of those goals.

If the College of Professional Studies does not currently offer a degree that meets your needs, you may design, with the help of your academic advisor, an associate of individualized studies degree which includes two or more subject areas of interest to you.

We are proud of our graduates' success. Your participation and ideas contribute to our tradition of excellence.

Degrees Offered

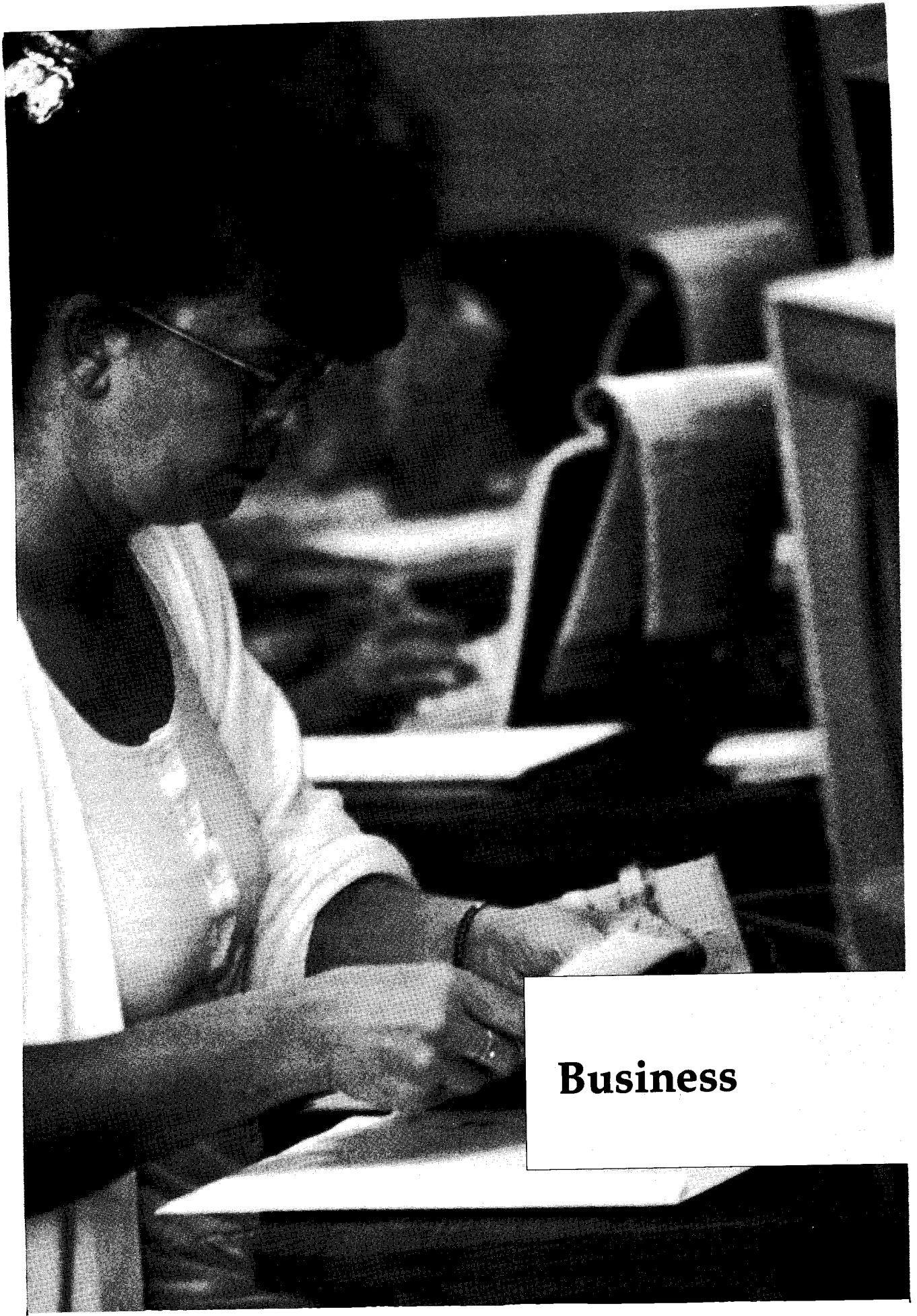
Bachelor of Science
- Business Administration
- Business Administration, Health Management
- Business Administration, Legal Assisting (2 + 2)
- Computer Engineering Technology
- Occupational Therapy
- Plastics Engineering Technology

Associate of Applied Business
- Accounting Technology
- Business Information Systems
- Business Management Technology
- Legal Assisting Technology
- Office Administration Technology

Associate of Applied Science
- Associate Degree Nursing
- Computer Aided Drafting and Design
- Dental Hygiene
- Electromechanical Engineering Technology
- Instrumentation and Control Engineering Tech.
- Medical Laboratory Technology
- Occupational Therapy Assistant
- Physical Therapist Assistant
- Plastics Engineering Technology
- Radiologic (X-ray) Technology
- Respiratory Therapy

Associate of Individualized Studies
- Interdisciplinary

Certificates
- Computer Aided Drafting and Design
- Computer Technology
- Plastics Engineering Technology



Business

Business

The Department of Business prepares Shawnee State students for productive and satisfying professional careers in business. The Department seeks to develop in students a continuing intellectual curiosity, an awareness of individual and cultural diversity, and a high degree of professional competence. The Department encourages an integrated general education in the arts and sciences, provides a body of knowledge common to all areas of business, and provides a systematic body of specialized knowledge and skills applicable to specific business disciplines.

To meet the diverse needs of students and businesses, the Department offers programs at the associate level, stressing applied entry-level skills, and at the baccalaureate level, stressing the broader theoretical concepts and leadership skills applicable to more complex organizational problems.

Degrees in Business

Bachelor of Science

Business Administration, General
Business Administration, Health Management
Business Administration, Legal Assisting (2+2)

Associate of Applied Business

Accounting, Professional
Accounting, Management
Business Information Systems
Business Management, General
Business Management, Focused
Legal Assisting
Office Administration Technology

Associate of Individualized Studies

Interdisciplinary

Bachelor Degrees

Special Notes for all Bachelor Degrees in Business Administration

Please read carefully. Consult your advisor if you do not fully understand.

- **Ethics Requirement, General Education Program** If you take BUMG 331 to meet your ethics requirement in the General Education Program, it cannot be counted as one of the 16 hours of upper division business electives.
- **Quantitative Reasoning Requirement, General Education Program** If you select MATH 131 or MATH 150 to fulfill your quantitative reasoning requirement in the General Education Program, you must meet the minimum degree requirement of 188 total credit hours.
- **Nonbusiness Electives** Two hours of nonbusiness courses may be in physical education (HPER).
- **Mathematics/English Sequence** Placement in beginning English and mathematics courses is determined by the mathematics and English placement tests. The minimum mathematics course in the business core is MATH 131. Any *nondevelopmental* mathematics courses (101 or higher) taken to meet the prerequisite for MATH 131 may be credited as nonbusiness electives toward the BSBA degree.

- **Transfer Credits** A maximum of 52 hours may be accepted as transfer credit to fulfill the credit hours required in the business core. Sixteen hours of upper division elective courses required for the general business concentration must be completed at Shawnee State University.
- **Special Topics in Business Courses (299, 399, and 499)** A formal review and a subsequent written approval by the business department review committee is mandatory before credit is given for any special topics course. This review committee is made up of one member from each of the instructional areas, and this approval applies to all students. You can accumulate a total of 12 credit hours in the business department using special topics courses. These courses apply for credit toward electives *only* and *not toward required courses or the 16 hours of upper division business electives.* Faculty members do not have to teach a special topics course; it is the faculty member's option.
- **Upper-Level/Lower-Level Course Credit** Any student having earned credit for an upper-level course cannot subsequently earn credit for a lower sequence course and apply it toward graduation. Example: If you earned credit for BUMG 310, you could not later take the lower-level courses and apply their credits toward graduation. This notice applies, but is not limited to BUFI 245 and 250, BUMG 101, 210, and 235.

Bachelor of Science in Business Administration with a Concentration in General Business

The four-year program in general business is designed to provide a broad understanding of business by focusing on all aspects of its dynamics. A broad-based general education precedes an extensive education in general business. Successfully completing this degree program gives you the necessary tools to enter a career in business or to pursue graduate study.

The general business program has both a core of business courses and nonbusiness courses. You choose, after consulting with your advisor, at least one upper division course in four of the prescribed elective areas: accounting, automated information systems, finance, management, and marketing. This gives you some flexibility in designing a program which meets your career goals.

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the business department chairperson's office.*	48 Hours
Business Core Courses	72 Hours
Upper Division Electives	16 Hours
Other Business Electives	20 Hours
Nonbusiness Electives	24 Hours
Business or Nonbusiness Electives	8 Hours
Total Hours Required	**188 Hours**

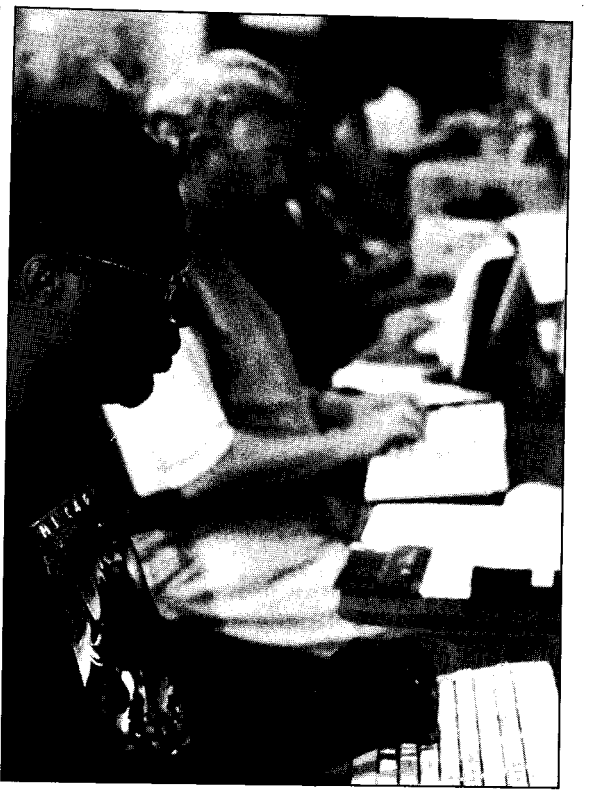
Business Core Courses (72 Hours)

Course No.	Course	Cr. Hrs.
BUAC 201	Financial Accounting Principles	4
BUAC 203	Managerial Accounting	4
BUAI 101	Intro. to Auto. Info. Systems	4
BUAI 103	Computer Applications	4
BUFI 345	Managerial Finance	4
BULW 270	Legal Environment of Business	4
BUMG 310	Management Principles	4
BUMG 330	Organizational Communication	4
BUMG 340	International Business	4
BUMG 355	Quantitative Methods in Bus.	4
BUMG 385	Production/Operations Mgt.	4
BUMG 410	Business Simulation *OR*	4
MATH 201	Calculus *(if grad. study is planned)*	
BUMG 485	Business Policy/Strategy	4
BUMK 310	Marketing Principles	4
ECON 101	Principles of Macroeconomics	4
ECON 102	Principles of Microeconomics	4
MATH 131	College Algebra	4
MATH 150	Principles of Statistics	4

Upper Division Electives (16 Hours)

Choose one 300-400 upper level course from any four of the following five areas for a total of 16 credit hours:

- BUAC Accounting
- BUAI Automated Information Systems
- BUFI Finance
- BUMG Management
- BUMK Marketing



Bachelor of Science in Business Administration with a Concentration in Health Management

The bachelor of science in business administration with a concentration in health management helps prepare you for a career in the health care industry. Graduates of the program find employment as health service managers with various organizations, including hospitals, clinics, health maintenance organizations, and nursing homes. In addition, the program provides excellent preparation for graduate study in business or health administration.

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Business Core Courses *See concentration in general business*	72 Hours
Health Management Concentration	36 Hours
Electives	32 Hours
Total Hours Required	**188 Hours**

Health Management Concentration (36 Hours)

BUAC 410	Health Care Acct./Admin.	4
BUHE 202	Personal and Community Health *(cross-listed as HPER 202)*	4
BUHE 310	Orien. to Health Care Systems *(cross-listed as AHNR 310)*	4
BUHE 311	Health Record Principles *(cross-listed as AHNR 311)*	4
BUHE 312	Health Care Personnel Mgt. *(cross-listed as AHNR 312)*	4
BUHE 410	Patient Care in Long-Term Health Care Facilities *(cross-listed as AHNR 410)*	4
BUHE 411	Administration in Long-Term Care Facilities *(cross-listed as AHNR 411)*	4
BUHE 420	Problems and Policies in Health Management *(cross-listed as AHNR 420) OR*	4
BUHE 451	Internship in Health Care Mgt. *(cross-listed as AHNR 451)* *Restricted to students with minimum of 60 hours in business core and 24 hours of health management concentration with a minimum GPA of 3.5 in those areas.*	
BUHE 430	Hlth. Care Fin. and Reimburse. *(cross-listed as AHNR 430)*	4

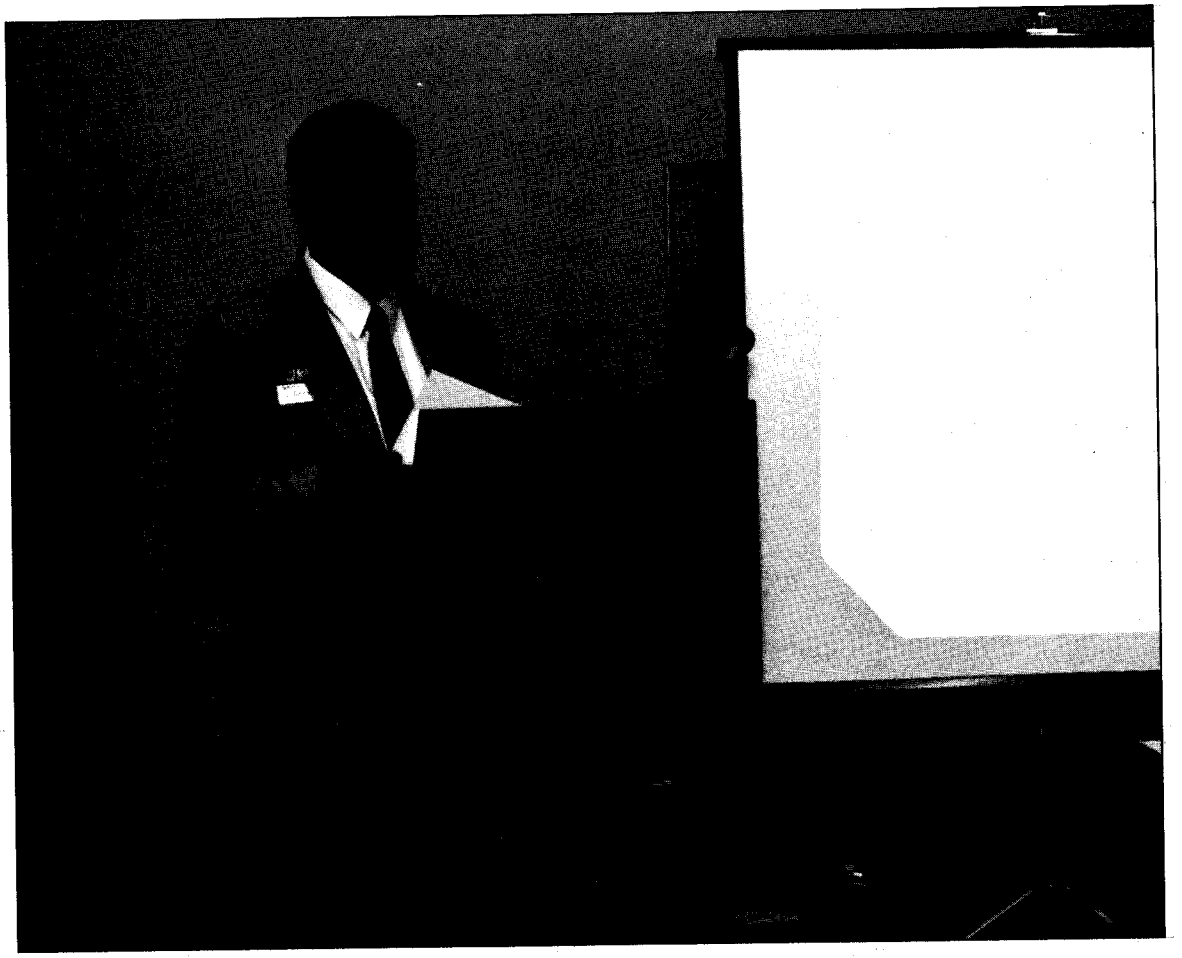
Electives (32 Hours)

At least 12 hours must be from the business department, health sciences department, or BUHE/HPER courses (BUHE/HPER 203, BUHE/HPER 360). Of the remaining elective hours, 2 hours may be from other HPER courses.

Bachelor of Science in Business Administration with a Concentration in Legal Assisting

2+2 for students who complete the Legal Assisting Technology Program

This program is designed for students who have completed the associate degree in legal assisting at Shawnee State and who wish to attend law school or to pursue a career in business. All required courses in the legal assisting program (99 hours) count toward the baccalaureate requirements. After transferring the legal assisting credits, the bachelor of



science student needs to complete 32 hours of the General Education Program requirements and 60 hours of the Business Core.

Degree Requirements

General Education Program *(32 hours needed after transfer of credits from associate degree program.) Further information is listed on page 66 of the current catalog or can be obtained from the business department chairperson's office.*	48 Hours
Business Core Courses *(60 hours needed after transfer of credits from associate degree program.)*	76 Hours
Legal Assisting Curriculum	67 Hours
Total Hours Required *(92 hours needed after transfer of credits from associate degree program)*	**191 Hours**

Business Core Courses (76 Hours)

"T" indicates that course is transferable from associate degree program.

Course No.	Course	Cr. Hrs.
BUAC 101	Accounting 1	T
BUAC 102	Accounting 2	T
BUAC 103	Accounting 3	4
BUAI 101	Intro. to Auto. Info. Systems *(BULA 264 = T)*	T
BUAI 103	Computer Applications	4
BUFI 345	Managerial Finance	4
BULW 270	Legal Environment of Business *(BULW 250 = T)*	T
BUMG 310	Management Principles	4
BUMG 330	Organizational Communication	4
BUMG 340	International Business	4
BUMG 355	Quantitative Methods in Bus.	4
BUMG 385	Production/Operations Mgt.	4
BUMG 410	Business Simulation *OR*	4
MATH 201	Calculus *(if grad. study planned)*	
BUMG 485	Business Policy/Strategy	4
BUMK 310	Marketing Principles	4
ECON 101	Principles of Macroeconomics	4
ECON 102	Principles of Microeconomics	4
MATH 131	College Algebra	4
MATH 150	Principles of Statistics	4

Legal Assisting Curriculum (67 Hours)

Course No.	Course	Cr. Hrs.
BULA 101	Introduction to Legal Assisting	T
BULA 212	Real Estate Law for Legal Asst.	T
BULA 251	Legal Research and Writing 1	T
BULA 252	Legal Research and Writing 2	T
BULA 261	Tort Law	T
BULA 262	Introduction to Civil Litigation	T
BULA 263	Intro. to Contracts and Restitu.	T
BULA 265	Family Law	T

Legal Assisting Curriculum (cont'd.)

Course No.	Course	Cr. Hrs.
BULA 266	Wills, Trusts, and Estates	T
BULA 267	Legal Assisting Practicum	T
BULA 269	Criminal Law/Criminal Proced.	T
BULA 270	Evidence	T
BULW 260	Business Law 2	T
ENGL 121	Technical Writing	T
GOVT 250	Intro. to Political Science	T
MATH	Mathematics Placement *(101 or above)*	T
PSYC 101	Introduction to Psychology	T

Associate Degrees

Associate Degree in Applied Business

Our associate degrees in applied business have two goals: to prepare you for the job market and to give you the necessary foundation to advance, if you choose, to the bachelor of science degree program.

There are five areas of study from which you may choose.

- Accounting Technology
- Business Information Systems
- Business Management Technology
- Legal Assisting Technology
- Office Administration Technology

Accounting Technology

The field of accounting offers many career opportunities in both the private and public sector.

■ **Management (Industrial) Accounting** The management accountant is trained to determine the financial consequences of management decisions. The reports and analyses of the management accountant are essential ingredients of most management decisions about finance, investments, and pricing policies. More than anyone else on the management team, the management accountant participates in virtually every phase of the business problem solving and decision making process. Because of the accountant's role in this process, he or she has many times advanced to a top management position within the company.

■ **Governmental Accounting** All organizations need accounting information, and government and other non-profit organizations are no exception. The federal government hires accountants in most of its agencies. Three prominent agencies are the Internal Revenue Service, the General Accounting Office, and the Defense Contract Audit Agency. State and local government units hire accountants in their tax divisions and in general accounting functions. Schools and hospitals are major users of accounting services. Many opportunities exist for those interested in governmental accounting.

■ **Public Accounting and the CPA** For the protection of the public, the CPA is expected to possess certain professional qualifications. The Uniform CPA Examination measures the technical competency, the exercise of good judgement, and the understanding of professional responsibility of each man or woman who chooses this career in accounting. The public accountant is a true independent professional person with the stature of a doctor or lawyer. In public accounting many opportunities exist for professional growth, whether you practice as a sole practitioner or as part of a larger firm.

Class Scheduling

Shawnee State offers its accounting courses in both day and evening sections.

Sample Schedule

Students planning to pursue a baccalaureate degree should contact an accounting advisor for course substitutions.

Course No.	Course	Cr. Hrs.
	FIRST QUARTER	
BUAC 101	Accounting 1	4
BUIS 101	Intro. to Comp. Info. Syst. *OR*	4
BUAI 101	Intro. to Auto. Info. Systems	
BUMG 101	Introduction to Business	4
ENGL 111S	Discourse and Composition	4
	Total	16
	SECOND QUARTER	
BUAC 102	Accounting 2	4
BUMG 210	Management Concepts	4
ECON 101	Principles of Macroeconomics	4
ENGL 112S	Composition and Research	4
MATH	*Eight hours total required, which must include MATH 125 or higher*	4
	Total	20
	THIRD QUARTER	
BUAC 103	Accounting 3	4
BUAC 110	Payroll Records/Accounting	4
ECON 102	Principles of Microeconomics	4
ENGL 115S	Composition and Literature	4
MATH	*Eight hours total required, which must include MATH 125 or higher*	4
	Total	20

SECOND YEAR CURRICULUM:
Accounting/Professional Emphasis

	FOURTH QUARTER	
BUAC 221	Cost Accounting 1	4
BUAC 231	Intermediate Accounting 1	4
BUFI 245	Principles of Finance	4
BULW 250	Business Law 1	4
BUMG	Elective *(must be 200 level or above)*	4
	Total	20
	FIFTH QUARTER	
BUAC 222	Cost Accounting 2	4
BUAC 232	Intermediate Accounting 2	4
BUAI/BUIS/ BUOA[1]	Elective	4
SOCI/PSYC	Elective	4
SPCH 103	Pub. Speak. and Human Com.	3
	Total	19
	SIXTH QUARTER	
BUAC 233	Intermediate Accounting 3	4
BUAC	Elective	4
BUMG 242	Business Communications	4
SOCI/PSYC	Elective	4
	Total	16

SECOND YEAR CURRICULUM:
Accounting/Management Emphasis

	FOURTH QUARTER	
BUAC 221	Cost Accounting 1	4
BUAC 231	Intermediate Accounting 1	4
BULW 250	Business Law 1	4
BUFI 245	Principles of Finance	4
BUMG	Elective *(must be 200 level or above)*	4
	Total	20
	FIFTH QUARTER	
BUAC 222	Cost Accounting 2	4
BUAI/BUIS/ BUOA[1]	Elective	4
BUMG	Elective *(must be 200 level or above)*	4
SOCI/PSYC	Elective	4
SPCH 103	Pub. Speak. and Hum. Com.	3
	Total	19
	SIXTH QUARTER	
BUAC	Elective	4
BUAC 215	Tax Accounting	4
BUMG 242	Business Communications	4
SOCI/PSYC	Elective	4
	Total	16

Business Management Technology with General or Focused Emphasis

Management is the ability and skill to develop a plan, to organize people and other resources, and to guide and motivate others to achieve some desired result. All organizations are trying to achieve some goal; therefore, all organizations need people with managerial knowledge and skills to help them accomplish their goals. For this reason, there are many diverse job opportunities available to people who possess management knowlege and skills.

Whether you're just entering the job market or returning to college to improve your job opportunities, the business management program includes courses that will help you gain the knowledge and skills you need to analyze an organization's problems and to develop, organize, communicate, and implement solutions to those problems. Much of this knowledge and many of these skills are universal—they apply to all kinds of organizations at many levels. When you complete the program you are equipped to begin your career in various entry-level supervisory, administrative, management trainee, or sales positions.

[1] Choose from: BUAI 103, BUAI 310, BUAI 320, BUIS 204, BUOA 215, BUOA 217, BUOA 221, or BUOA 222

Flexibility distinguishes the business management program from other two-year associate degree programs. It offers you the opportunity to choose a broad based course of study or a more focused specialization in one of three management related disciplines.

Degree Requirements

Nonbusiness Courses	23 Hours
Business Courses	52 Hours
General or Focused Emphasis	24 Hours
Total Hours Required	**99 Hours**

Nonbusiness Courses (23 Hours)

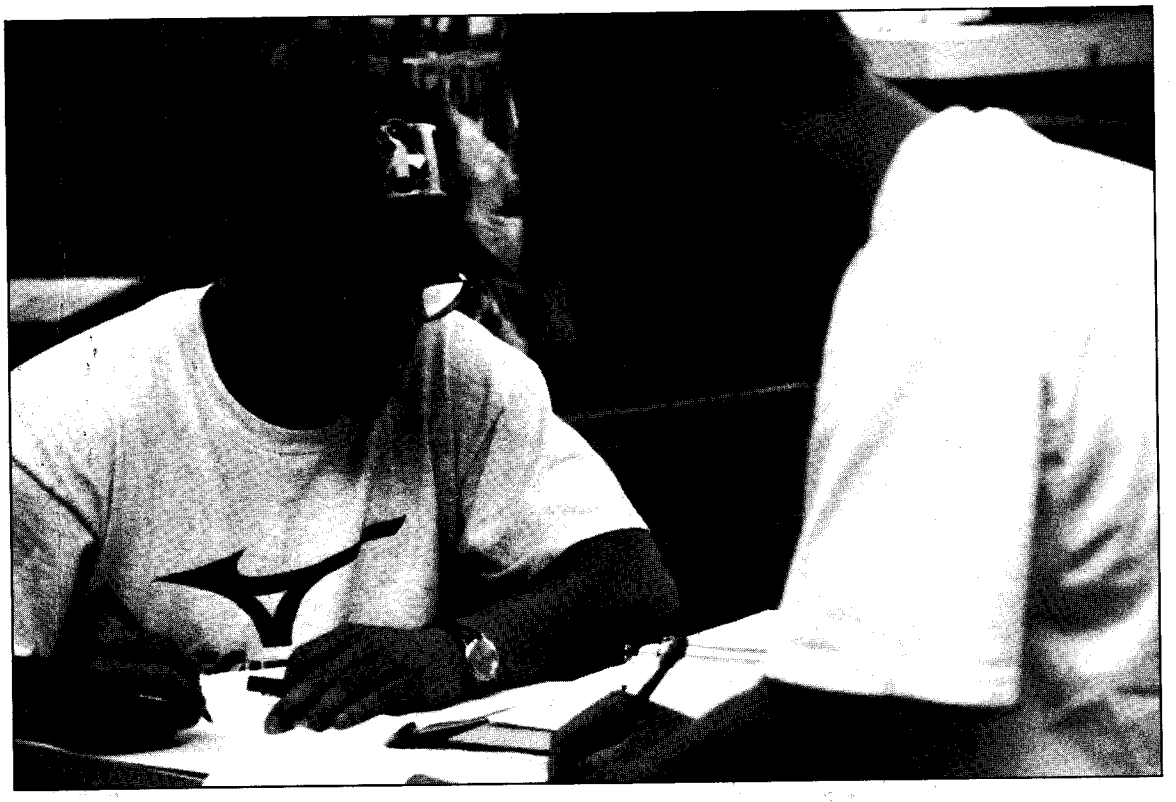
Course No.	Course	Cr. Hrs.
ENGL 111S	Discourse and Composition	4
ENGL 112S	Composition and Research	4
ENGL 115S	Composition and Literature	4
MATH 125	Business Mathematics *OR*	4
MATH	*(numbered higher than 125)*	
SOCI 110S	Found. of Social Science *OR*	4
SOCI 101	Introduction to Sociology	
SPCH 103	Pub. Speak. and Hum. Com.	3

Business Courses (52 Hours)

BUAC 101	Accounting 1 *AND*	4
BUAC 102	Accounting 2 *OR*	4
BUAC 201	Financial Acct. Principles *AND*	
BUAC 203	Managerial Accounting	
BUAI 101	Intro. to Auto. Info. Sys. *OR*	4
BUIS 101	Intro. to Comp. Info. Systems	
BUFI 245	Principles of Finance	4
BULW 250	Business Law 1	4
BULW 260	Business Law 2	4
BUMG 210	Management Concepts	4
BUMG 242	Business Communications	4
BUMG 285	Enterprise Mgt. and Strategy	4
BUMK 210	Marketing Concepts	4
BUOA 215	Lotus 1, 2, 3 *OR*	4
BUIS 204	Microcomputer Applications *OR*	
BUAI 103	Computer Applications *(for those transferring into BSBA program)*	
ECON 101	Principles of Macroeconomics	4
ECON 102	Principles of Microeconomics	4

General Emphasis (24 Hours)

In addition to the required business and nonbusiness courses shown above, the general emphasis requires you to take two courses in management, marketing, and finance for a total of 24 hours. This provides the kind of broad and flexible background that many of today's employers value in future employees. It's also a good choice for those who plan to manage the family business or for entrepreneurs who want to develop their own business.



If you choose a general emphasis, you will take two courses from each of the following three areas for a total of six courses:

Marketing *(choose 2)*

BUMK 235 Advertising
BUMK 220 Salesmanship
BUMK 225 Marketing Case Studies

Management *(choose 2)*

BUMG 225 Org. & Operation of Small Business
BUMG 235 Personnel Management
BUMG 240 Labor Relations

Finance *(choose 2)*

BUFI 205 Installment Credit
BUFI 240 Personal Finance
BUFI 250 Introduction to Investments

Focused Emphasis (24 Hours)

The focused emphasis allows you to achieve a degree of specialization by taking six courses for a total of 24 hours in one of three areas: management, marketing, or finance. This emphasis is a good choice if you have decided on a career or are currently employed in one of those areas.

If you choose a focused emphasis in marketing, management, or finance, you will take all of the courses shown below in your chosen emphasis.

Marketing

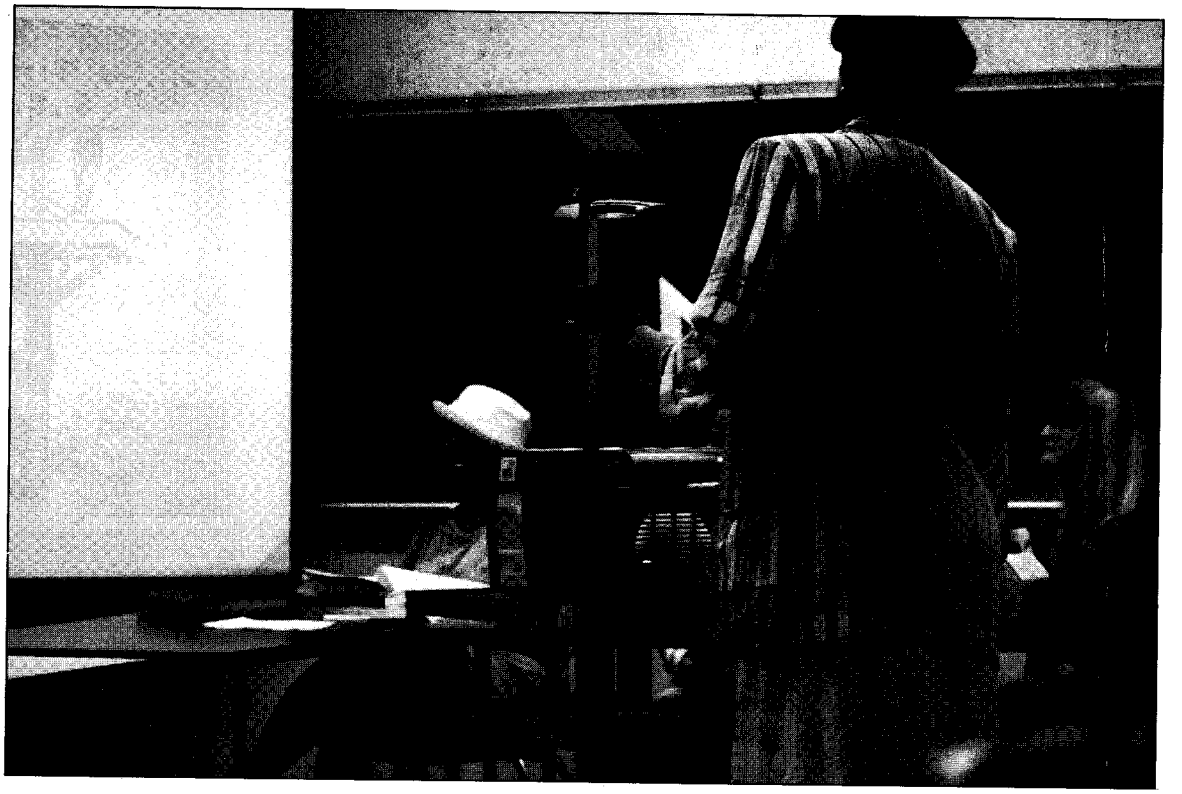
BUMK 235 Advertising
BUMK 220 Salesmanship
BUMK 225 Marketing Case Studies
BUMK 315 International Marketing
BUMK 320 Sales Management
BUMK 325 Marketing Research

Management

BUMG 225 Org. & Operation of Small Business
BUMG 235 Personnel Management
BUMG 240 Labor Relations
BUMG 310 Management Principles
BUMG 331 Business Ethics
BUMG 340 International Business

Finance

BUFI 205 Installment Credit
BUFI 240 Personal Finance
BUFI 250 Introduction to Investments
BUFI 301 Principles of Insurance
BUFI 315 Financial Institutions
BUFI 350 Investments



Sample Schedule

Course No.	Course	Cr. Hrs.
	FIRST QUARTER	
BUAC[1]	Accounting 101 or 201	4
BUMG 210	Management	4
ENGL 111S	Discourse and Composition	4
MATH	Elective	4
	Total	16
	SECOND QUARTER	
BUAC[1]	Accounting 102 or 203	4
BUMK 210	Marketing Concepts	4
BUAI 101	Intro. to Auto. Info. Syst. *OR*	4
BUIS 101	Intro. to Computer Info. Syst.	
ENGL 112S	Composition and Research	4
	Total	16
	THIRD QUARTER	
BUAI 103	Computer Applications *OR*	4
BUOA 215	Lotus 1-2-3 *OR*	
BUIS 204	Microcomputer Applications	
BUMG 242	Business Communications	4
ENGL 115S	Composition and Literature	4
SPCH 103	Pub. Speak. and Hum. Com.	3
	Emphasis Elective	4
	Total	19
	FOURTH QUARTER	
BUFI 245	Principles of Finance	4
BULW 250	Business Law 1	4
ECON 101	Principles of Macroeconomics	4
	Emphasis Elective	4
	Total	16
	FIFTH QUARTER	
BULW 260	Business Law 2	4
ECON 102	Principles of Microeconomics	4
	Emphasis Electives	8
	Total	16
	SIXTH QUARTER	
BUMG 285	Enterprise Mgt. and Strategy	4
SOCI 110S	Found. of Social Science *OR*	4
SOCI 101	Introduction to Sociology	
	Emphasis Electives	8
	Total	16

Business Information Systems

The business information systems associate degree program at Shawnee State University is designed to meet the manpower demand of industries, government, and educational institutions.

In addition to theoretical fundamentals, practical aspects of computer systems in business are emphasized. Hands-on opportunity is provided and encouraged.

Graduates of this program are fully prepared to enter employment as computer programmers, operators, or microcomputer specialists in computer installations or application departments. Graduates of this technology receive an associate degree in applied business.

Class Scheduling

Most computer classes are offered in both the day and evening sections. See your advisor.

Previous Typing Training

If you have had prior instruction, and received full credit, in typing, you may receive "K" credit for BUOA 108 Beginning Document Processing.

Sample Schedule

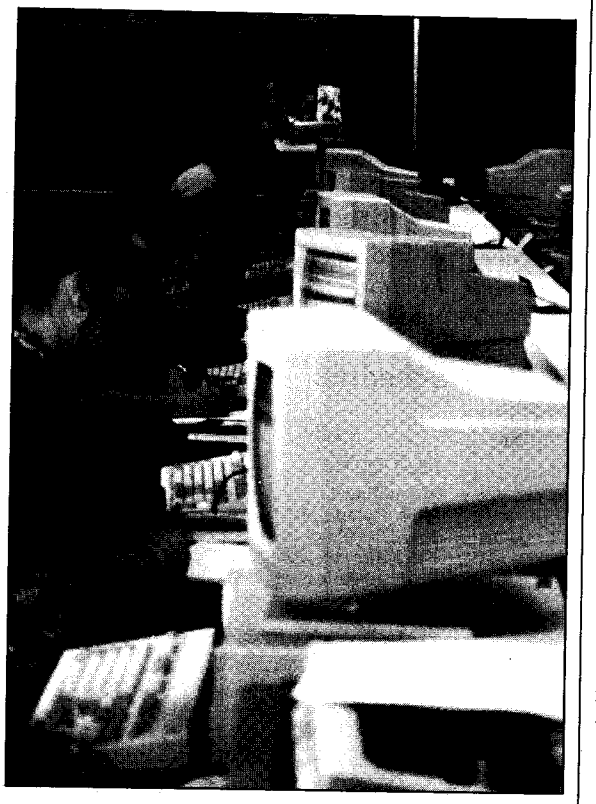
Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
BUAC 101	Accounting 1	3	2	4
BUIS 101	Intro. Comp. Info. Sys.	4	0	4
BUOA 108	Beg. Doc. Process.	4	0	4
ENGL 111S	Discourse and Comp.	4	0	4
MATH[2]	Math. Requirement	4	0	4
	Totals	19	2	20
	SECOND QUARTER			
BUAC 102	Accounting 2	3	2	4
BUAI 103	Computer Applic. *OR*	4	0	4
BUIS 204	Microcomputer Applic.			
BUIS 103	BASIC Language 1	4	0	4
ENGL 112S	Comp. and Research	4	0	4
	Totals	15	2	16
	THIRD QUARTER			
BUAC 103	Accounting 3	3	2	4
BUIS 201	"C" Language	4	0	4
ENGL 115S	Comp. and Literature	4	0	4
MATH[2]	Mathematics Requirement	4	0	4
	Totals	15	2	16
	FOURTH QUARTER			
BUIS 105	COBOL Programming 1	4	0	4
BUIS[3]	Elective	3-4	0	3-4
BULW 250	Business Law 1	4	0	4
ENGL 121	Technical Writing	3	0	3
PSYC 101	Introduction to Psychology	4	0	4
	Totals	18-19	0	18-19
	FIFTH QUARTER			
BUMG 210	Management Concepts	4	0	4
BUIS 106	COBOL Programming 2	4	0	4
BUIS 203	Bus. Computer Projects	4	0	4
ECON 101	Prin. of Macroeconomics	4	0	4
	Totals	16	0	16

[1] Choose either the BUAC 101/102 or the BUAC 201/203 sequence. Accounting sequences cannot be mixed.

[2] Student placement in mathematics courses depends on placement test results. All BUIS majors must take at least eight credit hours of mathematics at or above MATH 101.

[3] BUIS Electives: BUAI 310 Data Base Management, BUAI 320 Systems Analysis and Design, BUIS 104 Basic Language 2, BUIS 202 Computer Operations Management, BUIS 205 Business Data Systems and Communication, BUIS 206 FORTRAN 77, BUIS 207 Pascal Language, BUIS 299 Special Topics in Data Processing, BUOA 230 Desktop Publishing 1.

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	SIXTH QUARTER			
BUIS 208	RPG II Language	4	0	4
BUIS[1]	Electives (2)	6-8	0	6-8
MATH 150	Principles of Statistics	4	0	4
	Totals	14-16	0	14-16



Office Administration Technology

Various positions are available after completion of the office administration program. The graduate is qualified to fill a broad range of office positions which require technical skills. The program includes training in the preparation of medical and legal documents, equipping you for all positions in these specialized fields.

Word processing specialists are qualified to keyboard, revise, and store documents for immediate or future use. Graduates are trained in the various functions of the WordPerfect 6.0 for Windows word processing system. Students also have the opportunity to use Lotus 1-2-3, dBase, Graph-In-A-Box, and PageMaker 5.0 software.

Class Scheduling

Certain office administration courses are normally offered **only** in the day sections. See your advisor.

Previous Typing Training

If you have had prior instruction, and received full credit, in typing, you may receive "K" credit for BUOA 108 Beginning Document Processing.

Suggested Electives

The following classes are suggested as electives to provide a wider training base to qualify the graduate for a variety of office positions: BUAI 310, BUMG 242, BUOA 230, and BUOA 231.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
BUMG 101	Introduction to Business	4	0	4
ENGL 111S	Discourse and Comp.	4	0	4
BUFI 240	Personal Finance *OR*	4	0	4
MATH 125	Business Mathematics			
BUOA108[2]	Beg. Document Process.	4	0	4
BUOA 130	Records Management	4	0	4
	Totals	20	0	20
	SECOND QUARTER			
ENGL 112S	Comp. and Research	4	0	4
BUOA 109	Intermed. Doc. Process.	4	0	4
BUOA 111	SuperWrite 1	4	0	4
BUOA 221	Word Processing 1	4	0	4
	Totals	16	0	16
	THIRD QUARTER			
BUOA 110	Advanced Doc. Process.	4	0	4
BUOA 112	SuperWrite 2	4	0	4
BUOA 222	Word Processing 2	4	0	4
ENGL 115S	Comp. and Literature	4	0	4
	Totals	16	0	16
	FOURTH QUARTER			
BULW 250	Business Law 1	4	0	4
BUOA 214	Microcomputer Off. Prac.	4	0	4
BUOA 217	Office Computer Applic.	4	0	4
BUOA 241	Office Administration 1	4	0	4
	Totals	16	0	16
	FIFTH QUARTER			
BUOA 215	Lotus 1-2-3	4	0	4
BUOA 242	Office Administration 2	4	0	4

[1] BUIS Electives: BUAI 310 Data Base Management, BUAI 320 Systems Analysis and Design, BUIS 104 Basic Language 2, BUIS 202 Computer Operations Management, BUIS 205 Business Data Systems and Communication, BUIS 206 FORTRAN 77, BUIS 207 Pascal Language, BUIS 299 Special Topics in Data Processing, BUOA 230 Desktop Publishing 1.

[2] See "Previous Typing Training" section above.

	FIFTH QUARTER (cont'd.)			
BUOA 244	Med./Legal Office Admin.	4	0	4
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	15	0	15
	SIXTH QUARTER			
BUMG 235	Personnel Management	4	0	4
BUOA 243	Office Administration 3	4	0	4
PSYC 101	Introduction to Psychology	4	0	4
SOCI 101	Introduction to Sociology	4	0	4
	Totals	16	0	16

Legal Assisting Technology

Legal assistants perform many tasks under the supervision of attorneys. Their responsibilities may include:

- Legal and factual research
- Interviewing clients and witnesses
- Reviewing and organizing material for cases
- Drafting legal documents and forms
- Functioning as a member of a legal team

Jobs for the legal assistant vary in scope and nature from small to large law firms, financial institutions, corporations, law courts, insurance agencies, banks, department stores, credit departments, and health care facilities. It is one of the fastest growing areas of employment in the United States today.

The legal assisting program has clearly established goals designed to meet the unique needs of our students, potential employers of our graduates, and the mission of Shawnee State University. Our goals are as follows: (1) to graduate ethically responsible legal assistants who are conscious of the prohibitions against the unauthorized practice of law; (2) to create and maintain a program responsive to the needs of its constituency; (3) to strive to qualify graduates who will contribute to the advancement of the profession, rather than to serve only the purposes of one institution or locality; and (4) to develop the student's sensitivity to emerging concepts regarding the role of the legal assistant in the effective delivery of legal services in both the private and public sectors of our society.

The legal assisting courses at Shawnee State are not theory courses, but rather practical "how to" courses taught by attorneys and judges who have specialized in the area in which they teach. The associate degree in legal assisting requires a minimum of 99 hours.

Class Scheduling

Because most of the legal assisting (BULA) courses are taught by attorneys and judges, these courses are most often offered in the evening sections.

Sample Schedule

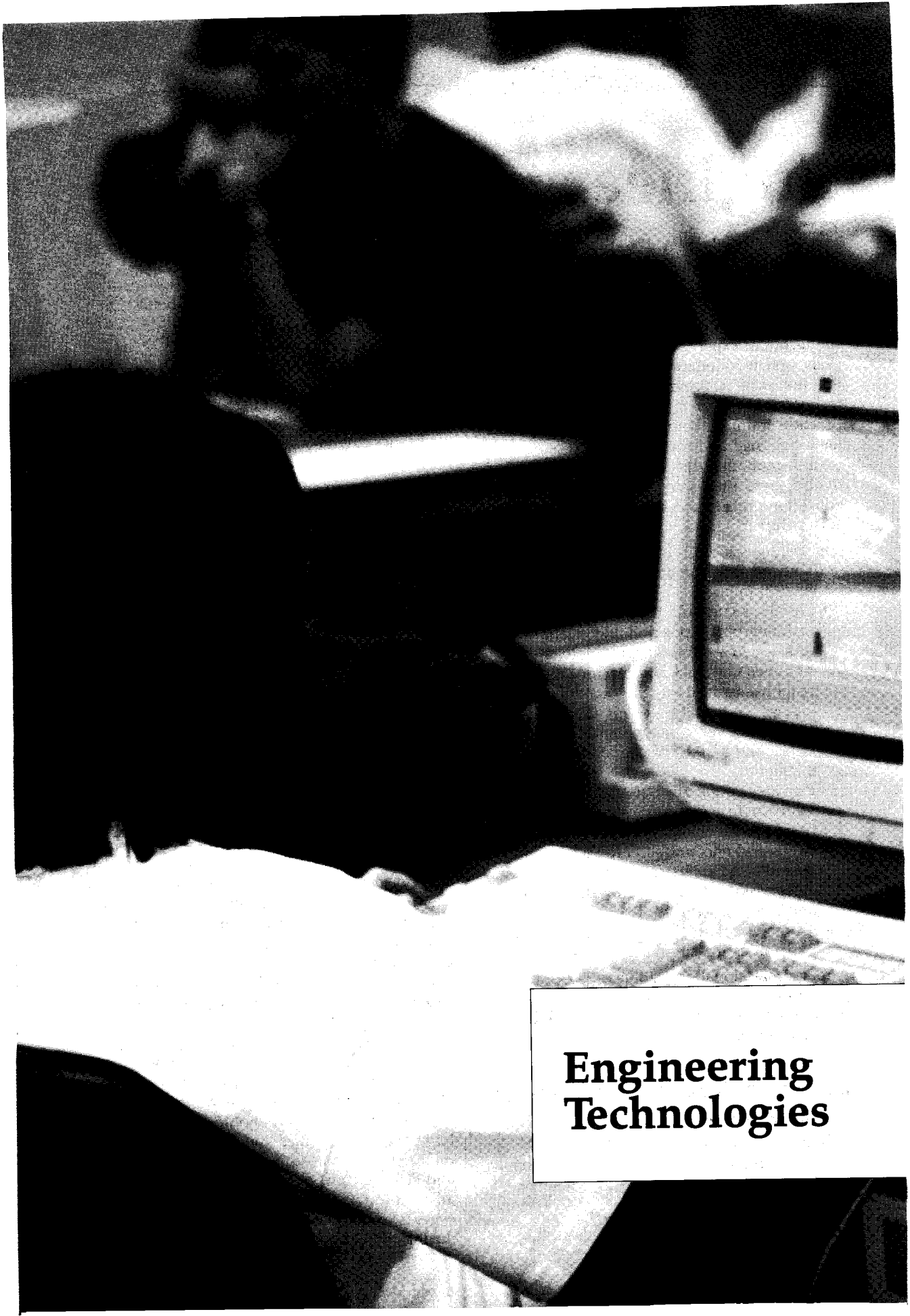
Course No.	Course	Cr. Hrs.
	FIRST QUARTER	
BUAC 101	Accounting 1	4
BULA 101	Introduction to Legal Assisting	4
BULW 250	Business Law 1	4
ENGL 111S	Discourse and Composition	4
	Total	16
	SECOND QUARTER	
BUAC 102	Accounting 2	4
BULA 251	Legal Research and Writing 1	4
BULW 260	Business Law 2	4
ENGL 112S	Composition and Research	4
	Total	16
	THIRD QUARTER	
BULA 252	Legal Research and Writing 2	4
BULA 262	Introduction to Civil Litigation	4
PSYC 101	Introduction to Psychology	4
SOCI 110S	Foundations of Social Science	4
	Total	16
	FOURTH QUARTER	
BULA 261	Tort Law: Personal Injury Litigation	4
BULA 263	Intro. to Contracts and Restitution	4
BULA 269	Criminal Law/Criminal Procedure	4
ENGL 121	Technical Writing	3
	Total	15
	FIFTH QUARTER	
BULA 212	Real Estate Law for Legal Assistants	4
BULA 264	Computer Applications and The Law	4
BULA 265	Family Law	4
BULA 270	Evidence	4
	Totals	16
	SIXTH QUARTER	
BULA 266	Wills, Trusts, and Estate Admin.	4
BULA 267	Legal Assisting Practicum	4
GOVT 250	Introduction to Political Science	4
PHIL 320S	Ethics in Public & Private Life *OR*	4
BUMG 331	Business Ethics *OR*	
BULA 272	Ethics for Legal Assistants	
MATH	Mathematics Placement (101 or above)	4
	Total	20

Legal Assisting Technology 1 + 1

Shawnee State's Department of Business, in collaboration with Southern State Community College, South Campus (Sardina, Ohio), offers a 1 + 1 legal assisting program. The program is designed for students who complete the first year of the legal assisting program at Southern State Community College, South Campus, and who wish to complete the second year of the legal assisting technology program at Shawnee State University. The four legal assisting courses which are offered during the first year are BULA 101 Introduction to Legal Assisting, fall quarter; BULA 251 Legal Research and Writing 1, winter quarter; and BULA 252 Legal Research and Writing 2 and BULA 262 Introduction to Civil Litigation, both offered during the spring quarter. For additional information, contact Karen S. Crummie, Esq., at (614) 355-2575.

Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University allows you to formulate your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true if you are interested in combining a selection of courses that includes both academic as well as technical offerings in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. Contact the registrar for more information about this degree.



Engineering Technologies

Engineering Technology

The Department of Engineering Technologies provides you with the opportunity to develop the technical expertise, scientific knowledge, job skills, and work ethics that prepare you for entry into the social-industrial environment. Engineering technology programs provide both theory and practical training, being responsive to technological change and the industrial community while simultaneously stimulating analytical thinking and establishing a foundation for further education and learning.

The Department:

- Responds to the varied educational needs of students, the community, and the industrial environment.
- Develops curricula that create an understanding of the practical and scientific bases of selected engineering technologies and modifies curricula and teaching methods in response to technological advancement and change.
- Encourages the development of sound work ethics and a spirit of cooperation and excellence.
- Provides cooperative educational services, which help industries keep their employees current with changing technology.
- Seeks and encourages participation from the business and industrial community, providing a professional forum for curricular evaluation and program review.
- Promotes occupational and educational opportunities for all graduates.

Your professional education is our primary goal, and the quality of your success provides the ultimate evaluation of how well we are meeting our goal.

Degrees in Engineering Technologies

Bachelor of Science

Computer Engineering Technology
Plastics Engineering Technology

Associate of Applied Science

Computer Aided Drafting and Design
(Optional Concentration in Robotics)
Electromechanical Engineering Technology
(Optional Concentration in Robotics)
Instrumentation and Control Engineering Technology (Optional Concentration in Robotics)
Plastics Engineering Technology
(Optional Concentration in Robotics)

Associate of Individualized Studies

Interdisciplinary

Certificate

Computer Aided Drafting and Design (CADD)
Computer Technology
Plastics Engineering Technology

Engineering Technology Programs at Shawnee State

The term "engineering technology" is described by the Accreditation Board for Engineering and Technology as follows:

"Engineering technology is that part of the technological field which requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities: it lies in the occupational spectrum between the craftsman and the engineer at the end of the spectrum closest to the engineer."

This description reflects the common understanding among people in engineering and related professions that the engineering technologist is a distinct type of professional whose main concern and interest is with existing operation, maintenance, and management of products and processes. Technologists are finding increasing acceptance in positions formerly filled by engineers in such fields as sales, manufacturing, field service, and process engineering.

The programs offered by the Department of Engineering Technologies provide the opportunity for graduates to enter careers in the most modern, high-demand segments of industry. All of the programs offer career-oriented, technical instruction grounded in a strong base of science and mathematics. If you are interested in these programs, you should prepare yourself by taking mathematics and science courses in high school. If you did not take mathematics and science courses in high school, you are advised to take advantage of the developmental courses available at Shawnee State, preferably during the summer before starting fall quarter.

The University administers mathematics and English assessment tests in order to place each student in appropriate courses.

Articulation from Shawnee State's associate degree programs or other colleges' associate degree programs in technology into the junior year of our B.S. programs is possible. If you are interested in this option, you should see your faculty advisor for details.

Graduates of associate degree programs can expect to find jobs as technicians or production operators. Graduates with bachelor degrees are prepared for problem-solving jobs in production management, product development departments, or other technical positions.

Students in the B.S. degree programs in engineering technology are required to complete all courses in the University's general education program. In addition, the Department of Engineering Technologies requires that all B.S. degree candidates take a core curriculum of courses in mathematics, physics, computer programming, and engineering technology sciences.

Pass/No-Credit Policy

Students in the Department of Engineering Technologies are not permitted to take any course in their major course of study on a pass/no-credit basis. This includes any course that is specifically identified by course number and/or course title as a requirement for your graduation.

Robotics Option

Students enrolled in the associate degree programs in computer aided drafting and design and electromechanical, instrumentation and control, and plastics engineering technology may also pursue a concentration in robotics. You must have electromechanical faculty approval and complete 15 credit hours of the following courses in numerical sequence. These courses are offered upon sufficient enrollment.

ETCO 230	Introduction to Robotics *OR*
ETEM 209	Robotics
ETRO 211	Robotic Interfacing
ETRO 212	Robotic Maintenance/Servicing
ETRO 213	Robotic Applications

Bachelor Degrees

Bachelor of Science in Computer Engineering Technology

The computer engineering technology program is designed for the student who wishes to pursue a career as a computing professional and who desires a challenging curriculum which offers a wholistic approach to computing. Individuals who possess a good understanding of both computer hardware and software are rare, and thus, are in demand. Shawnee State's computer engineering technology program maintains balance between computer software and hardware by blending the most critical courses from computer science with those from electrical engineering technology. This gives you a solid computing foundation, with good overall depth in both hardware and software without sacrificing the important aspects of either.

The program also balances computing theory with application by offering rigorous, high quality courses, based on the most recent ACM/IEEE computer engineering technology curricula guidelines, and adding to each of these courses an applied lab component. These labs are designed to encourage the application of theoretical knowledge of computer engineering technology to real-world projects which involve software applications, microprocessor-based systems, and computer networks.

The computer engineering technology program is designed to produce graduates who are suited to any area in which computing-based solutions are needed to solve real-world problems. The overall breadth and depth of their background places graduates of the program in demand for applying computing-based solutions to problems in industry, business, and medicine. In addition, their skills help them to expand the frontiers of society by assisting and enabling those in the arts and sciences to attain greater levels of achievement and understanding in science, literature, art, music, and philosophy through appropriately applied computing technologies.

Careers in computing available to graduates of the computer engineering technology program include:

- Software application developer
- Hardware engineer
- Software engineer

- Local area network specialist
- Data communications specialist
- Digital system designer
- Applied research and development engineer

Due to the demand for individuals with a solid overall computing background, entry level salaries and benefits for graduates of the computer engineering technology program are excellent.

Degree Requirements

General Education Program	36 Hours
The General Education Program is composed of 48 credit hours of which 16 hours may be satisfied by computer engineering technology curriculum requirements. Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.	
Mathematics/Science Courses	36 Hours
Drafting/CADD Courses	8 Hours
Electricity and Electronics Courses	26 Hours
Computer Technology Courses	83 Hours
Engineering Tech. Mgt. Courses	9 Hours
Total Hours Required	**198 Hours**

Mathematics/Science Courses (36 Hours)

Course No.	Course	Cr. Hrs.
MATH 130	Intermediate Algebra	4
MATH 131	College Algebra	4
MATH 132	Trig. & Analytic Geometry	4
MATH 201	Calculus 1	4
MATH 202	Calculus 2	4
MATH	Elective[1] *Select one of the following: MATH 203, MATH 220, MATH 230, MATH 301, MATH 440.*	4
PHYS 211	Calculus-Based Physics 1	4
PHYS 212	Calculus-Based Physics 2	4
PHYS 213	Calculus-Based Physics 3	4

Drafting/CADD Courses (8 Hours)

ETCA 101	Introduction to CADD	3
ETEG 101	Engineering Drawing 1	3
ETEM 130	Electromechanical Drawing	2

Electricity and Electronics Courses (26 Hours)

ETEC 361	Advanced Circuit Analysis 1	3
ETEC 362	Advanced Circuit Analysis 2	3
ETEM 111	Electrical Fundamentals 1 (DC)	4
ETEM 112	Electrical Fundamentals 2 (AC)	4
ETEM 121	Electronics 1	3
ETEM 122	Electronics 2	3
ETEM 211	Electronic Logic Circuits 1	3
ETEM 212	Electronic Logic Circuits 2	3

Computer Technology Courses (83 Hours)

ETCO 110	Computer Software and DOS	2
ETCO 115	Computer Program. for Tech.	3
ETEC 102	Structured Programming w/C	3
ETEC 103	Data Structures with C	3
ETEC 211	Assembly Lang. Program. 1	3
ETEC 212	Assembly Lang. Program. 2	3
ETEC 241	Microprocessor Circuits 1	3
ETEC 242	Microprocessor Circuits 2	3
ETEC 250	Comp. Sys. Integ. w/Novell	4
ETEC 275	Systems Programming	3
ETEC 280	Applications Programming w/C	3
ETEC 315	Computer Architecture 1	3
ETEC 320	Embedded Systems	3
ETEC 351	Networking and Comm. 1	3
ETEC 352	Networking and Comm. 2	3
ETEC 371	Realtime Operating Systems 1	3
ETEC 372	Realtime Operating Systems 2	3
ETEC 373	Adv. Operating Sys. w/UNIX	3
ETEC 421	Digital Control Systems 1	3
ETEC 422	Digital Control Systems 2	3
ETEC 430	Database Systems	3
ETEC 477	Concurrency	3
ETEC 480	Compiler Design and Implemen.	3
ETEC 483	Software Engineering	3
ETEC 491	Design Laboratory 1	4
ETEC 492	Design Laboratory 2	4
ETEC 495	Topics in Computing	3

Engineering Technology Management Courses (9 Hours)

Course No.	Course	Cr. Hrs.
ENGL 121	Technical Writing	3
	Electives *Select two of the following: ETCO 210, ETCO 225, ETEC 355, ETPL 320*	6

Bachelor of Science in Plastics Engineering Technology

Plastics engineering technology applies the concept of engineering technology to the specific domain of plastics processing. Products made by the plastics industry range from simple articles like bottles and cups to highly intricate molded parts for the automotive, electronics, and medical products industries. Their production requires knowledgeable technologists who can design a product, select the best plastic for that product, design a mold, and establish the optimum operating conditions for the machines that are used to mold the product. The plastics engineering technology program prepares you to become a member of the team that accomplishes these objectives.

[1] Completion of these mathematics courses qualifies you for a minor in mathematical sciences. Consult your advisor and the chair of the Department of Mathematics for futher information.

The program emphasizes plastics processing operations and includes significant components in the areas of materials, mold design, and production methods. Graduates of the program are expected to have attained a level of expertise which enables them to assume an entry-level management position in a plastics production environment. Typical job titles are process engineer, project engineer, and production manager.

Degree Requirements

Additional General Ed. Program	32 Hours
The General Education Program is composed of 48 credit hours of which 16 hours are satisfied by the required mathematics/science courses below. Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.	
Engineering Technology Courses	33 Hours
Mathematics/Science Courses	40 Hours
Support Courses	16 Hours
Plastics Engineering Tech. Courses	81 Hours
Total Hours Required	**202 Hours**

Engineering Technology Courses (33 Hours)

Course No.	Course	Cr. Hrs.
ETCO 110	Computer Software and DOS	2
ETCO 115	Computer Program. for Tech.	3
ETCO 202	Statics & Strength of Materials	4
ETCO 210	Occup. Safety and Hlth. Mgt.	3
ETCO 220	Hydraulics and Pneumatics	3
ETCO 225	Industrial Management	3
ETCO 230	Introduction to Robotics	3
ETEG 101	Engineering Drawing 1	3
ETEM 110	Intro. to Electricity/Electronics	3
ETCA 120	Introduction to CADKEY	3
ETXX - - -	Elective (See Advisor)	3

Mathematics/Science Courses (40 Hours)

CHEM 121	Intro. to General Chemistry 1	4
CHEM 122	Intro. to General Chemistry 2	4
CHEM 200	Intro. to Organic Chemistry 1	4
MATH	Elective	4
MATH 130	Intermediate Algebra	4
MATH 131	College Algebra	4
MATH 132	Trig. & Analytic Geometry	4
MATH 201	Calculus 1	4
PHYS 201	Physics 1 (Mechanics)	4
PHYS 203	Physics 3 (Energy)	4

Support Courses (16 Hours)

ECON 102	Principles of Microeconomics	4
ENGL 121	Technical Writing	3
SPCH 103	Pub. Spk. and Hum. Comm.	3
	Technical Electives	6

Plastics Engineering Technology Courses (81 Hours)

Processing

ETPL 100	Plastics Manufacturing	3
ETPL 200	Injection Molding	4
ETPL 205	Extrusion/Blow Molding	4
ETPL 210	Thermoforming/Finishing	4
ETPL 215	Thermosetting Processes	4
ETPL 450	Advanced Processing 1	4
ETPL 455	Advanced Processing 2	4

Management/Supervision

ETPL 300	Plastics in Society	2
ETPL 310	Plant Layout and Mat. Hand.	3
ETPL 320	Production Cost Analysis	3
ETPL 440	Advanced Manufac. Tech.	3

Materials

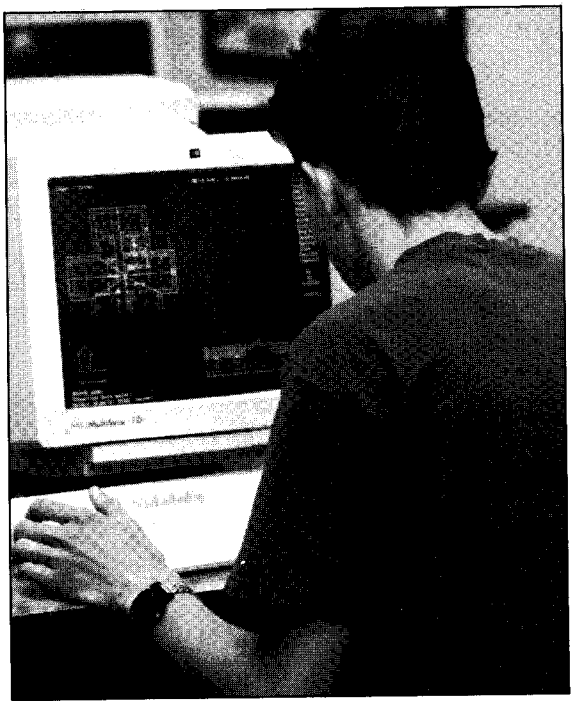
ETPL 230	Properties of Poly. Materials	4
ETPL 240	Testing of Plastics	3
ETPL 330	Material Science	3
ETPL 460	Composites	3

Statistics

ETPL 400	Statis. Proc./Quality Control 1	4
ETPL 405	Statis. Proc./Quality Control 2	4
ETPL 410	Applied Statistical Experimen.	4

Design/Fabrication

ETPL 290	Machine Tools	3
ETPL 420	Plastics Part Design	3
ETPL 425	Mold Design and Analysis 1	4
ETPL 430	Mold Design and Analysis 2	4
ETPL 470	Senior Project	4



Associate Degrees

Associate of Applied Science in Computer Aided Design

The advent of computer aided design is one of the most significant developments in the drafting area. Not only has CADD revolutionized the way in which drawings are produced, but when coupled with computer aided machining (CAM), the entire manufacturing process is bound together and integrated.

Shawnee State's CADD department uses industry standard hardware and software in all classes. All classes utilize the latest release of AutoCAD® unless otherwise stated, and AutoCAD® holds over 74% of the PC/CADD market.

The demand for CADD operators is high and is expected to increase rapidly through the 1990s. Positions for CADD operators exist in all of the following areas.

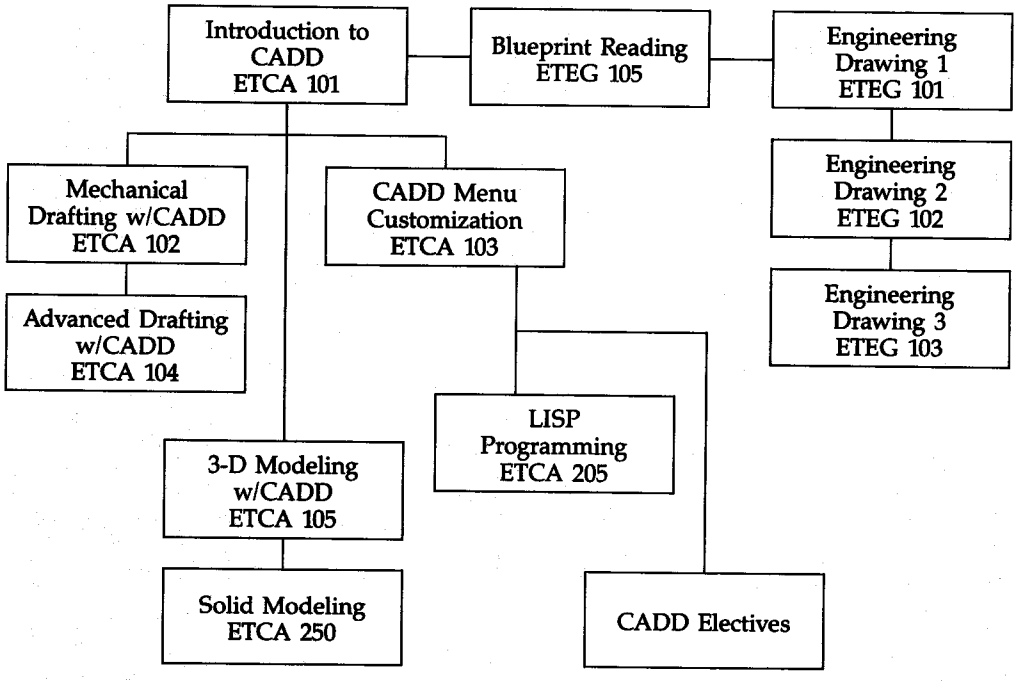
Aerospace	Med. equip. mfg.
Architecture	Packaging
Automotive industries	Petroleum
Building/construction	Piping
Civil engineering	Plastics
Defense	Tool design
Electronics	Transportation
Foundry	Utilities
Machining	Welding

Careers can be developed both locally and abroad. Students graduating from the program expect occupations as, for example, CADD operators, draftspersons, engineering designers, detailers, and technical illustrators.

Suggested Technical Electives

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
BUIS 201	C Language	2	3	3
ETCO 202	Stat. and Strngth. Mat.	3	3	4
ETEM 111	Electrical Fund. 1 (DC)	2	3	3
ETIN 120	Processing Instrumen.	3	3	4
ETPL 100	Introduction to Plastics	2	3	3

CADD Sequence



CADD Electives *May be used as technical electives.*

ETCA 120	Intro. to CADKEY®	2	3	3
ETCA 150	Comp. Aid. Machining	2	3	3
ETCA 202	Piping Draw. w/ CADD	2	3	3
ETCA 203	Wld. Prt. Des. w/CADD	2	3	3
ETCA 204	Cst.&Mld. Des.w/CADD	2	3	3
ETCA 230	Render. and Animation	2	3	3
ETCA 285	Spec. Top. in CADD	?	?	?
ETEG 285	Spec. Top. in Eng. Drw.	?	?	?

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER (Fall)			
ENGL111S	Discourse and Comp.	4	0	4
ETCA 101	Introduction to CADD	2	3	3
ETCO 110	Comp. Software and DOS	2	0	2
ETCO 115	Comp. Prog. for Tech.	2	3	3
ETEG 101	Engineering Draw. 1	2	3	3
ETEG 105	Blueprint Reading	2	0	2
	Totals	14	9	17
	SECOND QUARTER (Winter)			
ENGL 112S	Comp. and Research	4	0	4
ETCA 102	Mechan. Draft. w/CADD	2	3	3
ETCA 103	CADD Menu Custom.	2	3	3
ETEG 102	Engineering Draw. 2	2	3	3
MATH 130	Intermediate Algebra	4	0	4
	Totals	14	9	17
	THIRD QUARTER (Spring)			
ENGL 121	Technical Writing	3	0	3
ETCA 104	Advanced Draft. w/CADD	2	3	3
ETCA 105	3-D Model. w/CADD	2	3	3
ETEG 103	Engineering Drawing 3	2	3	3
MATH 131	College Algebra	4	0	4
	Totals	13	9	16
	FOURTH QUARTER (Fall)			
ETCA 205	LISP Programming	2	3	3
ETCA	CADD Elective	2	3	3
ETCO 210	Occ. Safety & Hlth. Mgt.	3	0	3
ETPL 290	Machine Tools	2	3	3
SOCI - - -	Elective *(advisor approved)*	4	0	4
	Totals	13	9	16
	FIFTH QUARTER (Winter)			
ETCA 220	Intergraph Microstation®	2	3	3
ETCO 220	Hydraulics and Pneumatics	2	3	3
MATH 132	Trig. and Analytic Geom.	4	0	4
PHYS 201	Physics 1 (Mechanics)	3	3	4
ETXX - - -	Technical Elective	2	3	3
	Totals	13	12	17
	SIXTH QUARTER (Spring)			
ETCA 201	Sm. Bldg. Design w/CADD	2	3	3
ETCA 250	Solid Modeling	2	3	3
ETCA	CADD Elective	2	3	3
PHYS	PHYS Elective (choose either 202 or 203 or PSCI 110S)	3	3	4
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	12	12	16

Associate of Applied Science in Electromechanical Engineering Technology

This degree prepares graduates for many career opportunities in a rapidly-growing segment of the economy. Modern life is very dependent on electromechanical technology; nearly every aspect of living is dependent on electricity. The electromechanical engineering technology program can prepare you to become a competent electromechanical technician capable of working and communicating with engineers, scientists, and production personnel.

The job market is almost unlimited for graduates of the electromechanical engineering technology program. Examples of positions in which our graduates are employed include:

- Computer development technician
- Computer service technician
- Design technician
- Draftsman
- Electrician
- Electronic assembler
- Electronic assembly foreman
- Instrumentation technician
- Maintenance foreman

Entry-level salaries and benefits for graduates of the electromechanical engineering technology program are typically excellent.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
ENGL 111S	Discourse and Comp.	4	0	4
ETCO 110	Comp. Software and DOS	2	3	2
ETEG 101	Engineering Drawing 1	2	3	3
ETEM 111	Electrical Fund. 1 (DC)	3	3	4
MATH 130	Intermediate Algebra	4	0	4
	Totals	15	9	17
	SECOND QUARTER			
ENGL 112S	Composition and Research	4	0	4
ETCA 101	Introduction to CADD	2	3	3
ETEM 112	Electrical Fund. 2 (AC)	3	3	4
ETEM 115	Electromechanical Devices	2	3	3
MATH 131	College Algebra	4	0	4
	Totals	15	9	18
	THIRD QUARTER			
ENGL 115S	Comp. and Literature	4	0	4
ETEM 121	Electronics 1	2	4	3
ETEM 130	Electromechanical Drawing	1	3	2
ETCO 115	Comp. Prog. for Tech.	2	3	3
MATH 132	Trig. and Analytic Geom.	4	0	4
	Totals	13	10	16

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FOURTH QUARTER			
ENGL 121	Technical Writing	3	0	3
ETCO 210	Occ. Safety & Hlth. Mgt.	3	0	3
ETEM 122	Electronics 2	2	3	3
ETEM 201	Electromechanical Systems	2	3	3
MATH 201	Calculus 1	4	0	4
PHYS 201	Physics 1 (Mechanics)	3	3	4
	Totals	17	9	20
	FIFTH QUARTER			
ETCO 220	Hydraulics and Pneumatics	2	3	3
ETEM 208	Automation Fundamentals	2	3	3
ETEM 209	Robotics	2	3	3
ETEM 211	Electronic Logic Circuits 1	3	3	4
SOCI 110S	Found. of Social Science	4	0	4
	Totals	13	12	17
	SIXTH QUARTER			
ETCO 202	Statics/Strength Materials	3	3	4
ETEM 212	Electronic Logic Circuits 2	3	3	4
ETEM 215	Electromechanical Design	1	6	3
ETEM 220	Technical Presentations	1	3	2
PHYS 203	Physics 3 (Energy)	3	3	4
	Totals	11	18	17

Associate of Applied Science in Instrumentation and Control Engineering Technology

Instrumentation is the field of science dealing with the art of measurement, control, and process manipulation. The instrumentation technician must calibrate equipment within the standards set by the National Institute of Standards and Technology in Washington, D.C. Although much of this work has been done in the past by electricians and other in-house workers, the rise in automation and computer control has created a need for workers who are specially trained in the field.

This degree can prepare you for many career opportunities in a rapidly-growing segment of the economy. Modern manufacturing is dependent on instrumentation technology. Every aspect of automation and process control is dependent on the instrumentation technician. The instrumentation and control engineering technology program prepares you to become a competent instrumentation technician, capable of working and communicating with engineers, scientists, and production personnel.

With experience, the job market is almost unlimited for graduates of the instrumentation and control engineering technology program. Our graduates are employed as:

- Electricians
- Maintenance foremen
- Process operators
- Instrument technicians
- Supervisors of bio-med technicians
- Plant engineers
- Maintenance supervisors
- Supervisory engineers
- Supervisors of instrumentation and electrical technicians

The salaries for graduates of the instrumentation and control engineering technology program are typically excellent.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
ETCO 110	Comp. Software and DOS	2	0	2
ETCO 115	Comp. Prog. for Tech.	2	3	3
ETEG 101	Engineering Drawing 1	2	3	3
ETEM 111	Electrical Fund. 1 (DC)	3	3	4
MATH 130	Intermediate Algebra	4	0	4
	Totals	13	9	16
	SECOND QUARTER			
CHEM 121	Intro. to Gen. Chemistry 1	3	3	4
ENGL 111S	Discourse and Comp.	4	0	4
ETEG 105	Blueprint Reading	2	0	2
ETEM 112	Electrical Fund. 2 (AC)	3	3	4
MATH 131	College Algebra	4	0	4
	Totals	16	6	18
	THIRD QUARTER			
ENGL 112S	Composition and Research	4	0	4
ETIN 103	Industrial Electricity	2	3	3
ETIN 111	Industrial Electronics	2	3	3
ETIN 120	Processing Instrumentation	3	3	4
MATH 132	Trig. and Analytic Geom.	4	0	4
	Totals	15	9	18
	FOURTH QUARTER			
ENGL 121	Technical Writing	3	0	3
ETIN 201	Instrumen. Electronics	3	3	4
ETIN 202	Prog. Controllers 1	2	5	4
ETIN 221	Instrument Fundamentals	3	3	4
MATH 201	Calculus 1	4	0	4
	Totals	15	11	19
	FIFTH QUARTER			
ETEM 211	Electronic Logic Circuits 1	2	4	3
ETIN 203	Prog. Controllers 2	2	5	4
ETIN 224	Industrial Control	3	3	4
PHYS 201	Physics 1 (Mechanics)	3	3	4
SOCI 110S	Found. of Social Science	4	0	4
	Totals	14	15	19
	SIXTH QUARTER			
ETCO 210	Occ. Safety & Hlth. Mgt.	3	0	3
ETCO 220	Hydraulics and Pneumatics	2	3	3
ETIN 223	Measurement Principles	3	3	4
ETIN 225	Distributive Control	3	3	4
PHYS 203	Physics 3 (Energy)	3	3	3
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	17	12	20

Concentration in Biomedical Instrumentation

Students enrolled in instrumentation and control engineering technology may choose a concentration in biomedical instrumentation, which prepares them for a career in the health care industry.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
ENGL 111S	Discourse and Comp.	4	0	4
ETCO 110	Comp. Software and DOS	2	0	2
ETCO 115	Comp. Prog. for Tech.	2	3	3
ETEG 101	Engineering Drawing 1	2	3	3
ETEM 111	Electrical Fund. 1 (DC)	3	3	4
	Totals	13	9	16
	SECOND QUARTER			
CHEM 121	Intro. to Gen. Chemistry 1	3	3	4
ENGL 112S	Composition and Research	4	0	4
ETEG 105	Blueprint Reading	2	0	2
ETEM 112	Electrical Fund. 2 (AC)	3	3	4
MATH	Elective	4	0	4
	Totals	16	6	18
	THIRD QUARTER			
BIOL 101	Introduction to Biology	3	0	3
ENGL 115S	Comp. and Literature	4	0	4
ETIN 111	Industrial Electronics	2	3	3
ETIN 120	Processing Instrumentation	3	3	4
MATH	Elective	4	0	4
	Totals	16	6	18
	FOURTH QUARTER			
BIOL 162	Human Anat. and Phys.	4	3	5
ENGL 121	Technical Writing	3	0	3
ETIN 201	Instrumentation Electronics	3	3	4
ETIN 252	Tech. & Dev./Elec. Trblshtng.	3	3	4
MATH	Elective	4	0	4
	Totals	17	9	20
	FIFTH QUARTER			
AHNR 102	Medical Terminology	2	0	2
AHNR 103	Prin. of Medical Science	3	0	3
ETIN 251	Biomedical Instrumen.	3	3	4
ETIN 253	Intern. 1 Wrk. in Hosp.	1	6	3
PHYS 201	Physics 1 (Mechanics)	3	3	4
	Totals	12	12	16
	SIXTH QUARTER			
ETIN 261	Instru. for Circulatory Sys.	2	3	3
ETIN 262	Bio Voltages	2	3	3
ETIN 263	Intern. 2 Wrk. in Hosp.	1	6	3
PHYS 203	Physics 3 (Energy)	3	3	4
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	11	15	16

Associate of Applied Science in Plastics Engineering Technology

Graduates of this associate degree program have the option of applying their two years directly into the bachelor's program in a 2+2 fashion. This gives you the flexibility to leave at the end of two years or finish the bachelor's degree in four years.

Today, plastics is one of the fastest growing industries in the United States. The economic impact of the plastic industry exceeds $100 billion annually and provides approximately 1.5 million jobs. As plastics continues its rapid growth in both sales and consumption, the industry will continue to lead others in both expansion and stability. Growth of 8% to 16% is projected yearly, creating employment opportunities for the qualified technician.

The plastics engineering technology associate degree program prepares you to become a valuable and integral part of the multifaceted plastics field.

Graduates of this program enter positions dealing with injection molding, extrusion, blow molding, thermoforming, RIM, structural and non-structural foams, rotomolding, supervision, industrial statistics, mold preparation, setup, quality control, production control, fabrication, and semi-professional research and development.

Many types of supervisory level positions are open to the experienced technician with solid technical training, as well as the ability and desire to assume responsibility.

Positions available to the plastics technology graduate include:

- *Process Engineer.* Assists company engineers in the development of prototype molds and the troubleshooting of current production molds.
- *Production Technician.* Operates and supervises the operation of commercial equipment used in the production of plastic items such as an extruder, injection molding machine, and thermoformer.
- *Senior Technician.* Supervises other technicians in various types of operations and takes part in project or process evaluations.
- *Application Research Technician.* Blends and compounds plastics with additives, fillers, and colors. Assists in selecting proper plastics for specific products and applications.
- *Technician Service Representative.* Aids customers in the proper selection and use of plastics resin products and in solving customer problems.

■ *Quality Control Technician.* Samples raw materials and finished products and performs numerous tests to assure compliance with quality specifications.

■ *Chemical Sales or Technical Service Representative.* Aids customers in the choice of the correct product to purchase and assists in solving customer materials problems.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
CHEM 121	Intro. to Gen. Chemistry 1	3	3	4
ENGL 111S	Discourse and Comp.	4	0	4
ETCO 110	Comp. Software and DOS	2	0	2
ETCO 115	Comp. Prog. for Tech.	2	3	3
ETPL 100	Plastics Manufacturing	2	3	3
	Totals	13	9	16
	SECOND QUARTER			
CHEM 122	Intro. to Gen. Chemistry 2	3	3	4
ENGL 112S	Composition and Research	4	0	4
ETEG 101	Engineering Drawing 1	2	3	3
MATH 130	Intermediate Algebra	4	0	4
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	16	6	18
	THIRD QUARTER			
CHEM 200	Intro. to Organic Chem.	3	3	4
ENGL 115S	Comp. and Literature	4	0	4
ETCA 120	Intro. to 3-D CADD	2	3	3
ETPL 200	Injection Molding	3	3	4
MATH 131	College Algebra	4	0	4
	Totals	16	9	19
	FOURTH QUARTER			
ETCO 210	Occ. Safety & Hlth. Mgt.	3	0	3
ETPL 205	Extrusion/Blow Molding	3	3	4
ETPL 230	Prop. of Polymeric Mat.	3	3	4
ETPL 240	Testing of Plastics	2	3	3
MATH 132	Trig. & Analytic Geometry	4	0	4
	Totals	15	9	18
	FIFTH QUARTER			
ETCO 225	Industrial Management	3	0	3
ETEM 110	Electricity/Electronics Prin.	3	3	4
ETPL 210	Thermoform. and Finish.	3	3	4
MATH 201	Calculus 1	4	0	4
PHYS 201	Physics 1 (Mechanics)	3	3	4
	Totals	16	9	19
	SIXTH QUARTER			
ETCO 202	Statics/Strength Materials	3	3	4
ETCO 220	Hydraulics and Pneumatics	2	3	3
ETPL 215	Thermosetting Processes	3	3	4
PHYS 203	Physics 3 (Energy)	3	3	4
SOCI 110S	Found. of Social Science	4	0	4
	Totals	15	12	19

Enrolling students should possess solid mechanical and mathematical skills. Students who successfully complete the two-year A.A.S. degree are eligible for entry into the B.S. third and fourth year components.

Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University allows you to formulate your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true if you are interested in combining a selection of academic as well as technical offerings in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. Contact the registrar for more information about this degree.

Certificates

Computer Aided Drafting and Design Technician Program

(One-year certificate program)

The one-year CADD certificate program allows you to quickly develop skills in drafting and CADD operation. The program prepares you for an occupation as a drafter or CADD operator using the latest version of AutoCAD. In this three-quarter program, you take three drafting courses and at least five courses in CADD. The remaining three electives allow you to explore other areas of technology and to specialize in an individual field of study. The one-year turnaround time allows you to quickly develop marketable skills in CADD/drafting. If you wish to further your studies after completing the certificate, you may choose to continue in the associate degree program in CADD.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
ETCA 101	Introduction to CADD	2	3	3
ETCO 110	Comp. Software and DOS	2	0	2
ETXX - - -	Elect.: CADD fclty. approv.	2	3	3
ETEG 101	Engineering Drawing 1	2	3	3
ETEG 105	Blueprint Reading	2	0	2
MATH 105	Plane Geometry	4	0	4
	Totals	14	9	17

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	SECOND QUARTER			
ETCA 102	Mech. Draft. with CADD	2	3	3
ETCA 103	CADD Menu Custom.	2	3	3
ETEG 102	Engineering Drawing 2	2	3	3
MATH 130	Intermediate Algebra	4	0	4
ETXX	Elect.: CADD faclty. approv.	2	3	3
	Totals	12	12	16
	THIRD QUARTER			
ETCA 104	Advanced Draft. w/CADD	2	3	3
ETCA 105	3-D Modeling with CADD	2	3	3
ETCA	CADD Elective	2	3	3
ETEG 103	Engineering Drawing 3	2	3	3
ETXX	Elect.: CADD fclty. approv.	2	3	3
	Totals	10	15	15

Plastics Engineering Technology

(One-year certificate program)

The plastics engineering technology certificate program combines various coursework in plastic processes, production, processing, and the basic plastic science necessary for a realistic grasp of the industry.

Graduates of the program are prepared for entry into one of the largest production environments in the country. Entry-level positions available to individuals with this certificate include machine operator, material handler, mold set-up assistant, and other basic entry-level plastics positions.

With additional production work experiences, you may expect to assume a higher level entry position.

Sample Schedule

Course No.	Course	Cr. Hrs.
	FALL QUARTER	
ETCO 110	Computer Software and DOS	2
ETCO 115	Comp. Prog. for Technology	3
ETPL 100	Plastics Manufacturing	3
ETPL 205	Extrusion/Blow Molding	4
ETPL 300	Plastics in Society	2
	Total	14
	WINTER QUARTER	
ETCO 225	Industrial Management	3
ETCO 220	Hydraulics and Pneumatics	3
ETEM 110	Intro. to Electricity/Electronics	4
ETEG 101	Engineering Drawing 1	3
ETPL 210	Thermoforming/Finishing	4
	Total	17
	SPRING QUARTER	
ETCA 120	Introduction to CADKEY®	3
ETCO 210	Occ. Safety and Health Mgt.	3
ETPL 200	Injection Molding	4
ETPL 215	Thermosetting Processes	4
SPCH 103	Pub. Speak. and Hum. Com.	3
	Total	17

Minors

Minor in Plastics Engineering Technology

(For non-plastics engineering technology baccalaureate degrees)

A minor in plastics engineering technology offers students in any of Shawnee State University's baccalaureate programs an opportunity to broaden their major course of study with an auxiliary focus in plastics engineering technology. The minor requires eight classes (24-25 credit hours) from the plastics engineering technology program. The minor in plastics engineering technology is designed for students in degree programs other than plastics engineering technology. Plastics engineering technology students desiring a minor in plastics should consider the plastics one-year certificate.

Required Courses (17 Hours)

ETCA 120	Introduction to CADKEY®
ETPL 100	Plastics Manufacturing
ETPL 240	Testing of Plastics
ETPL 300	Plastics in Society
ETPL 320	Production Cost Analysis
ETPL 330	Material Science

Elective Courses (7-8 Hours)

Two additional courses from the following list, one of which must be 300 or 400 level.

ETPL 200	Injection Molding
ETPL 205	Extrusion/Blow Molding
ETPL 210	Thermoforming/Finishing
ETPL 215	Thermosetting Processes
ETPL 230	Properties of Polymeric Materials
ETPL 290	Machine Tools
ETPL 400	Statistical Process/Quality Control 1
ETPL 405	Statistical Process/Quality Control 2
ETPL 440	Advanced Manufacturing Techniques
ETPL 450	Advanced Processing 1
ETPL 460	Composites

Minor in Computer Aided Design

(25-28 Hours)

Students enrolled in any of Shawnee State University's baccalaureate programs may elect to pursue a minor in computer aided design. A CAD minor provides the computer, technical, and design skills necessary to stay competitive

in today's job market. Students use the latest version of AutoCAD® which is the number one CAD software company worldwide (Daratech Inc., Cambridge, MA). The popularity of this software ensures a growing demand for proficient AutoCAD operators.

Required Courses (17 Credits)

Course No.	Course	Cr. Hrs.
ETCA 101	Introduction to CADD	3
ETCA 102	Mech. Draft. with CADD	3
ETCA 103	CADD Menu Customization	3
ETCA 105	3D Modeling with CADD	3
ETEG 101	Engineering Drawing 1	3
ETEG 105	Blueprint Reading	2

Elective Courses (8-11 Credits)

The number of credits is dependent on sequence selected. Choose from one of the following.

Sequence A

BUAI 101	Intro. to Automated Info. Sys.	4
BUAI 103	Computer Applications	4

Sequence B

BUIS 101	Intro. to Computer Info. Sys.	4
BUIS 103	BASIC Language	4

Sequence C

ETCO 110	Computer Software and DOS	2
ETCO 115	Computer Program. for Tech.	3

AND, select one of the following courses (regardless of which sequence is chosen):

ETCA 104	Adv. Drafting with CADD	3
ETCA 150	Computer Aided Machining	3
ETCA 201	Small Building Design	3
ETCA 230	Rendering and Animation	3

Minor in Computer Technology

(For baccalaureate degree students)

Certificate in Computer Technology

(For nondegree students)

Computer technology has had a profound impact on our lives, most obviously through the evolution of the personal computer (PC). In the past decade, the increased power and connectivity of PCs have increased their utility to the point where they are commonplace throughout business, industry, government, health care, and education. Today's competitive industries and institutions realize that the computer age is not coming, but is here now.

This area of study, which leads to a minor for degree students or a certificate for nondegree students, is in keeping with Shawnee State's mission of preparing you for the changing needs of business, industry, education, and society and also the general education program which recognizes that keyboarding skills and the use of programming and applications software are considered essential communication skills.

Graduates and nondegree students who wish to compete in the postindustrial enterprises of the 21st century must

- Be technologically literate.
- Understand appropriate computer terminology.
- Understand specific application software: for instance, word processing, spreadsheet,

data base management, drafting software (CADD), and desktop publishing.
- Accurately use the computer keyboard to input information.
- Configure the PC for effective and efficient operation to manage files and data.
- Know how to utilize and configure the computer operating system to save information to a disk.
- Be familiar with, and able to use, programming languages.

This minor and certificate are recommended for mathematics and science majors, but any student enrolled at Shawnee State University may pursue these programs except those enrolled in associate or baccalaureate degrees which require eight or more hours of automated information systems (BUAI), business information systems (BUIS), computer engineering technology (ETEC), computer aided drafting design (ETCA), engineering technology core (ETCO), or office administration (BUOA) computer courses.

The minor and certificate are divided into four components: keyboarding, hardware and operating systems, programming languages, and applications software.

Required Courses (22 Hours)

Keyboarding

Course No.	Course	Cr. Hrs.
BUOA 108	Beg. Document Processing	4

Computer Hardware, Algorithms, and Operating Systems

BUIS 205	Bus. Data Syst. and Comm.	3
ETCA 101	Introduction to CADD	3
ETCO 110	Computer Software and DOS[1]	2
ETCO 115	Programming for Technology	3
ETEC 250	Comp. Syst. Integr. w/Novell	4
ETEC 373	Adv. Operating Syst. w/UNIX	3

Elective Courses (select three)

Programming Languages

BUIS 201	"C" Language	4
BUIS 206	Fortran 77	4
BUIS 207	PASCAL Language	4
BUIS 208	RPG II Language	4
ETEC 102	Structured Programming w/C	3
ETEC 103	Data Structures with C[2]	3
ETEC 211	Assemb. Lang. Program. 1[3]	3
ETEC 212	Assemb. Lang. Program. 2[4]	3
ETEC 280	Applications Program. w/C[3]	3

Applications Software

BUAI 103	Computer Applications	4
BUAI 310	Data Base Management	4
ETCA 105	3-D Modeling with CADD	3
ETCA 120	Introduction to CADKEY®	3
ETCA 230	Rendering and Animation	3
BUOA 215	Lotus 1-2-3	4
BUOA 216	MS Word for Windows	4
BUOA 221	Word Processing 1	4
BUOA 222	Word Processing 2	4
BUOA 240	Desktop Publishing	4

Hours required for completion: 31 to 34

Students enrolled in the computer technology certificate or minor program will be assigned a computer engineering technology faculty advisor in the Department of Engineering Technologies.

Pre-Engineering Curriculum

The College of Professional Studies and the College of Arts and Sciences offer a two-year pre-engineering program to students who intend to pursue a career in engineering. Designed for students who wish to transfer to a traditional engineering school, this two-year curriculum includes technical, humanities, and liberal arts courses. Pre-engineering students are enrolled in the Department of Engineering Technologies or College of Arts and Sciences and are advised by appropriate faculty. These faculty are also available to help you decide which particular branch of engineering you might wish to pursue.

While this curriculum is designed to meet the general needs of many traditional engineering institutions, you should verify any specific needs of the school and discipline of your choice. In addition, most of this coursework will satisfy scholastic requirements if you wish to pursue a degree in engineering technology or natural sciences, concentrating in physics, through

[1] BUIS 101 and BUAI 101 may be substituted with the approval of the faculty advisor for this minor and certificate program.
[2] Prerequisites are ETEC 102 and MATH 220. Recommended for mathematics and science majors.
[3] Prerequisite ETEC 103 or advisor approval.
[4] Prerequisite ETEC 211.

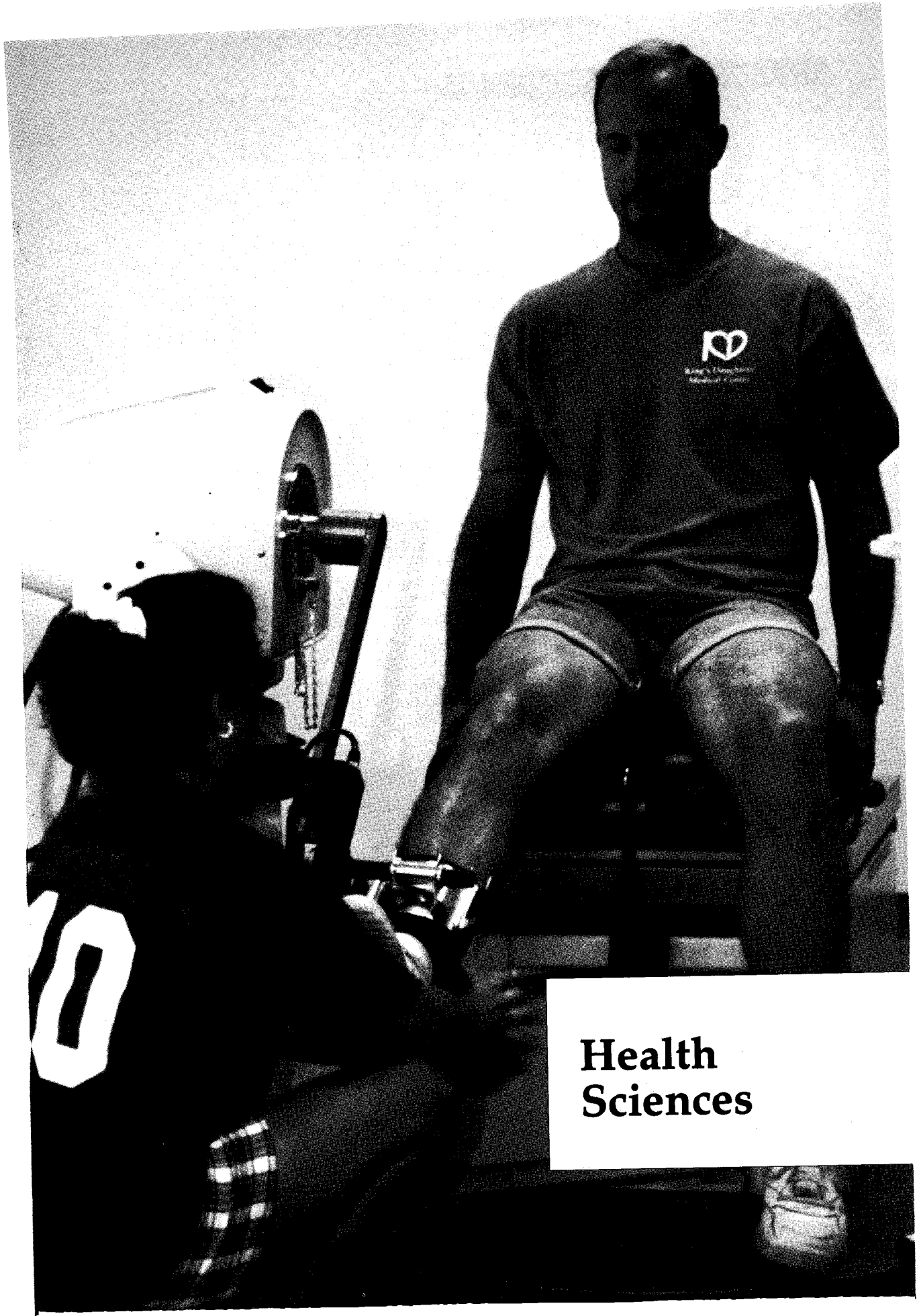
Shawnee State University. Another option is an associate of science degree in individualized studies with concentrations in a number of technical disciplines.

Pre-Engineering General Course Sequence

Course No.	Course	Cr. Hrs.
	FIRST YEAR	
	FALL QUARTER	
CHEM 141	General Chemistry 1	4
ENGL 111S	Discourse and Composition	4
ETCO 110	Computer Software and DOS	2
ETCO 115	Comp. Program. for Tech.	3
MATH 201	Calculus 1	4
	Total	17
	WINTER QUARTER	
CHEM 142	General Chemistry 2	4
ENGL 112S	Composition and Research	4
ETEC 102	Structured Programming w/C	3
MATH 202	Calculus 2	4
PSYC 101	Introduction to Psychology	4
	Total	19
	SPRING QUARTER	
CHEM 143	General Chemistry 3	4
ECON 101	Principles of Economics	3
ENGL 115S	Composition and Literature	4
ETEC 103	Data Structures with C	3
MATH 203	Calculus 3	4
	Total	18
	SECOND YEAR	
	FALL QUARTER	
ENGL 121	Technical Writing	3
ETCA 101	Introduction to CADD	3
ETEG 101	Engineering Drawing	3
MATH 204	Calculus 4	4
PHYS 211	Calculus-Based Physics 1	4
	Total	17
	WINTER QUARTER	
ENGL 225S	Civilization and Literature 1	4
MATH 301	Ordinary Differ. Equations	4
PHIL 320S	Ethics in Pub. and Priv. Life	4
PHYS 212	Calculus-Based Physics 2	4
	Total	16
	SPRING QUARTER	
ENGL 226S	Civilization and Literature 2	4
PHYS 213	Calculus-Based Physics 3	4
SOCI 110S	Foundations of Social Science	3
SOCI 150	Principles of Statistics	4
SPCH 103	Pub. Speak. and Hum. Com.	3
	Total	18

Special Notes

- Students starting in an even numbered year should schedule physics in the first year and chemistry in the second. Students starting in an odd numbered year, should follow the schedule shown above.
- Some prerequisites are presumed, and remediation will be required if not met:
  a) CHEM 141 requires high school chemistry or CHEM 121 and corequisite of MATH 130.
  b) MATH 201 requires placement or the following sequence: MATH 099, 101, 105, 130, 131, 132. (This sequence may be entered at any point.)



Health Sciences

Health Sciences

The Department of Health Sciences serves the tri-state area by educating and preparing competent and responsible health-care professionals so that they can deliver the best quality health care possible. The Department of Health Sciences also fosters professionalism, personal growth and development, and self-actualization and is committed to continuing professional development for the health care practitioners in the tri-state area.

Degrees in the Health Sciences

Bachelor of Science

Occupational Therapy

Associate of Applied Science

Associate Degree Nursing
Dental Hygiene
Medical Laboratory Technology
Occupational Therapy Assistant
Physical Therapist Assistant
Radiologic (X-ray) Technology
Respiratory Therapy

Associate of Individualized Studies

Interdisciplinary

Bachelor Degree

Bachelor of Science in Occupational Therapy

To become an occupational therapist, a student must complete an educational program in occupational therapy at either the baccalaureate or graduate level. The program at Shawnee State University leads to a bachelor of science degree with a concentration in occupational therapy. Studies include basic academic courses in the sciences and liberal arts as well as occupational therapy theoretical constructs and practices. The occupational therapy program requires six to nine months of full-time (usually 40 hours per week) internships in a variety of health care settings. You are responsible for your own transportation to and from clinical facilities as well as any other costs associated with clinical placements.

To ensure continuity of application of academic concepts, all fieldwork must be completed within 24 months following academic preparation and two weeks prior to the AOTCB Certification Examination date.

Accreditation

The occupational therapy program has initiated accreditation procedures with the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-AOTA. Once accreditation has been obtained, its graduates will be able to sit for the national certification examination for the occupational therapist administered by the American Occupational Therapy Certification Board. After successful completion of this exam, the individual will be an occupational therapist, registered (OTR). Most states require licensure in order to practice; however, state licenses are usually based on the results of the AOTCB Certification Examination.

Admission Requirements

Due to limited enrollment for this program, a selective admission process is followed.

Students with a standing of second quarter freshmen or more are considered for admission to the occupational therapy bachelor's program. Students will be admitted to the professional courses during winter quarter.

Candidates are selected from applicants who have met the following *minimum* criteria:

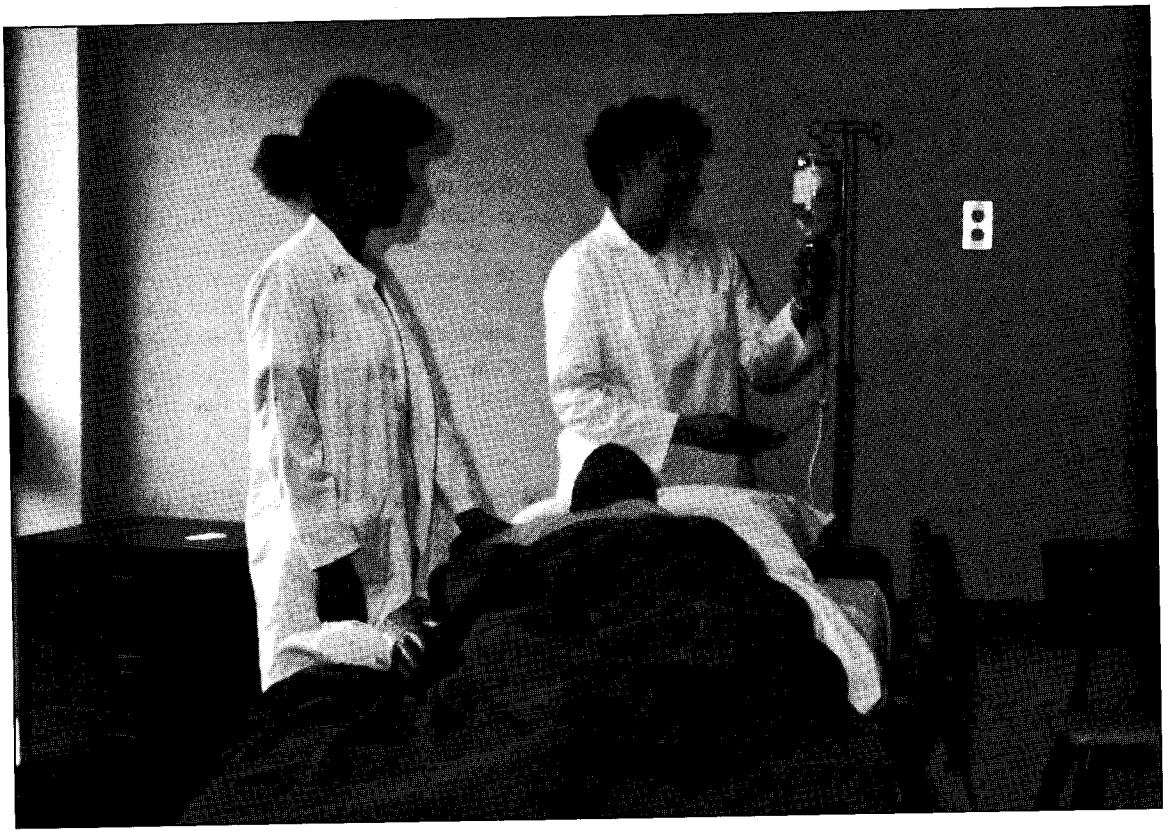
- Application to Shawnee State University with current, nonrefundable application fee (new students).
- "Change of Major" form, indicating application to occupational therapy B.S. program (current students).
- Cumulative GPA of 2.5 or above on a 4.0 scale based on courses listed under 'A' below.
- Cumulative GPA of 2.5 or above on a 4.0 scale at time of enrollment in the professional program.

- A minimum of 2.0 in all prerequisite courses at time of application.
- Completion of either high school or college chemistry with a grade of "C" or higher.
- Completion of 40 hours verified volunteer experience in an occupational therapy setting *OR* certification as an occupational therapy assistant (proof of certification is required).
- A. Completion of the following courses at the time of application: *(Check course prerequisites in the "Course Description" section of the current university catalog. More coursework may be necessary than is indicated here.)*
  - AHNR 102
  - ARTS 231 or fine arts GEP course
  - Introductory college level biology (BIOL 101, 151, or NTSC 110S)
  - ENGL 111S, 112S
  - Mathematics (MATH 110S, 130, or 150)
  - PSYC 101
  - SOCI 101
- B. Successful completion of the following courses prior to admission to the program: *(Check course prerequisites in the "Course Description" section of the current university catalog. More coursework may be necessary than is indicated here.)*
  - AHNR 102
  - ARTS 231
  - BUAI 101 or BUIS 101
  - CHEM elective
  - Cultural perspectives, 4 of 8 hours
  - ENGL 111S, 112S, and 115S
  - MATH 150
  - NTSC 110S, BIOL 101 or 151, and 310
  - PHYS 201
  - PSYC 101 and 151
  - SOCI 101
- Completion of all required forms and requested materials by the application deadline.

Requirements for graduation and to remain in the program are listed in the *OT Student Handbook.*

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the dean's office.*	48 Hours
Required OT Courses	89 Hours
Other Required Courses	48 Hours
Chemistry Elective *(approved by advisor)*	4 Hours
Minimum Hours Required	**189 Hours**



Required Occupational Therapy Courses (89 Hours)

Course No.	Course	Cr. Hrs.
OTST 101	Intro. to Occupational Therapy	4
OTST 103	Disease Pathology 1	4
OTST 110	Group Dynamics	2
OTST 205	Therapeutic Media 2	3
OTST 206	Contemporary Media in OT	2
OTST 305	Disease Pathology 2	4
OTST 310	Practicum 1 for OTS	2
OTST 330	Orthotics	3
OTST 410	OT in Physical Disabilities 1	4
OTST 411	OT in Physical Disabilities 2	4
OTST 412	OT in Mental Health 1	4
OTST 413	OT in Mental Health 2	4
OTST 416	OT in Gerontology	4
OTST 420	Practicum 2 for OTS	2
OTST 421	Practicum 3 for OTS	2
OTST 430	OT in Devel. Disabilities 1	5
OTST 431	OT in Devel. Disabilities 2	4
OTST 450	Rsrch. Dsgns. & Mthds. in OT	4
OTST 451	OT Mgt. & Program Planning	4
OTST 495	Clinical Application 1	12
OTST 496	Clinical Application 2	12

Other Required Courses (48 Hours)

Course No.	Course	Cr. Hrs.
AHNR 102	Medical Terminology	2
ARTS 231	Ceramics 1	4
BIOL 101	Introduction to Biology *OR*	3
BIOL 151	Principles of Biology (5 cr. hrs.)	
BIOL 310	Principles of Anatomy	5
BIOL 314	Human Neuroanatomy	5
BIOL 320	Principles of Physiology	5
BUAI 101	Intro. to Auto. Info. Syst. *OR*	4
BUIS 101	Intro. to Computer Info. Syst.	
PHYS 201	Physics 1 (Mechanics)	4
PSYC 101	Introduction to Psychology	4
PSYC 151	Human Growth & Develop.	4
PSYC 400	Abnormal Psychology	4
SOCI 330	Social Theory	4

Associate Degrees

Minimum Admission Requirements for Associate Degree Programs

The following requirements apply to all associate degree health science programs:

- New students must submit an application to Shawnee State University, along with the current nonrefundable application fee.
- Current Shawnee State students wishing to apply for admission to a health science associate degree program should complete a "Change of Major" form, indicating the program(s) for which they are applying.
- Official high school transcript or GED test score transcript (along with partial high school transcript) and official college transcripts.

  Please note: Transcripts may be sent directly from the high school or applicants may hand-carry the transcript in an envelope sealed with a guidance counselor's signature. Guidance counselors or high school officials may send transcripts via FAX at [614] 354=7794 if accompanied by a signed transmittal form or by electronic transfer. The University reserves the right to verify the final, official authenticity of any student's transcript. Any transcript document found to be fraudulent becomes the student's responsibility and the University reserves the right to withdraw admission acknowledgement and/or approval of acceptance.

  College transcripts must be sent directly from the school to Shawnee State to be "official." Photocopies, fax, and hand-carried transcripts are not accepted.
- Students must have a "C" or above in algebra, biology, and chemistry requirements. A "C-" is not accepted. Students with a "C-" average in one of these courses are not considered for admission.
- If the ACT test was taken *before* October 1989, students must have a score of "16" in the published requirement areas. On tests taken October 1989 or later, students must have a score of "18" in the published requirements.

- Students may be required to complete an "Autobiography Form," which is provided to students *after* the application to the University is received.
- Applicants to the physical therapist assistant or occupational therapy assistant programs are required to complete a minimum of 20 hours volunteer or work experience in a facility serving the disabled or handicapped. OTA applicants must work under the direct supervision of either a licensed occupational therapy assistant or occupational therapist. Appropriate forms are provided to students *after* the application to the University is received.
- When *all* minimum admission criteria have been met, files are forwarded to the appropriate department's chairperson. Students **are not** considered for admission to a health science program until *all* minimum admission requirements are completed.
- Applicants to the medical laboratory program have a meeting with the department's chairperson when their file is complete. Applicants to other programs are contacted if further information is needed.
- Physical examinations are required for students who have been officially accepted into a health science program. Forms are provided by the department.

Questions regarding admission procedures or application status should be directed to the health sciences representative in the Office of Admission at (614) 355-2209.

Deadline for Receipt of ALL Application Materials:

After the application deadlines listed below, students who have completed application materials are accepted on a space-available basis.

February 1

Associate Degree Nursing
Physical Therapist Assistant

April 1

Dental Hygiene
Medical Laboratory
Occupational Therapy (B.S. degree)
Radiologic Technology
Respiratory Therapy

May 15

Occupational Therapy Assistant

Associate Degree Admission Requirements

	High School or College Algebra, Biology, and Chemistry (C or above)	20 Hours Volunteer or Work Experience with Disabled or Handicapped	ACT Score of 18 in Science Reasoning Section	ACT Score of 18 in EACH area	SSU MATH/ENGL Placement Score *OR* Transfer Credit Equivalent to:
Associate Degree Nursing[1]	✔			✔	ENGL 111S
Dental Hygiene	✔		✔		
Medical Laboratory[2]	✔		✔		ENGL 111S MATH 105
Occupational Therapy Assistant	✔	✔[3]			
Physical Therapist Assistant	✔	✔			ENGL 111S MATH 101
Radiologic Technology[4]	✔		✔		ENGL 111S MATH 130
Respiratory Therapy[4]	✔		✔		ENGL 111S MATH 130

The chart above indicates requirements of individual associate degree health science programs.

Selective Admission Criteria

Fulfilling the criteria for admission into a health sciences program **does not** automatically guarantee entrance into the program. Since the number of candidates who meet the minimal criteria for admission generally far exceeds the number of vacancies, each program ranks the candidates using selected criteria **in addition** to the minimal admission requirements. For example, this additional criteria may include, but is not limited to, high school and/or college grade point average; completion of additional coursework in college level biology, mathematics, and chemistry; work experience; and autobiographies. You may obtain information about the criteria used for the ranking of applicants by contacting the department's chairperson or the dean's office.

Hospital Clinical Sites

Some health science programs utilize hospital clinical sites for the completion of their requirements for graduation. These affiliating hospitals have the right to accept or reject a student, which could result in your being delayed in a program or unable to complete the requirements for graduation. If you have a conviction record for certain classes of misdemeanors or any felony, you may be ineligible for licensure in specific health occupations. Also, the affiliating hospitals have the right to reject students due to a criminal record.

Health Science Class Scheduling

The majority of all health science classes are scheduled between 8:00 a.m. and 5:00 p.m. However, you need to know that it may be necessary to schedule your required classes in English, natural sciences, and humanities during the evening hours as the required clinical and laboratory times in the health science courses involve many hours during the 8:00 to 5:00 day schedules.

[1] ADN applicants must be eligible for ENGL 111S.
[2] Medical laboratory students must place in MATH 105 or earn at least a grade of "C" in MATH 101. Also, students must place in ENGL 111S or earn at least a grade of "C" in ENGL 099 or UNIV 101.
[3] Applicants to the occupational therapy assistant program must work under the direct supervision of either a licensed occupational therapy assistant or occupational therapist.
[4] Radiologic technology and respiratory therapy applicants must be eligible to enter MATH 130 and ENGL 111S as the program curriculum describes.

Pass/No-Credit Policy

Students in health science programs are not permitted to take courses on a pass/no-credit basis. This applies to courses taken in preparation for admission to the health science programs as well as courses taken after admission to a program. Classes may be taken for non-credit, but **only** with the prior permission of the health science department's chairperson.

Guidelines for Appealing a Dismissal From a Health Science Program

Each of the programs within the Department of Health Sciences has set minimum academic and clinical performance standards which permit a student to continue in that program. Failure to meet these minimum performance standards will result in dismissal from the program. Information concerning these performance standards is available in this catalog, the student handbook for the individual program, or from the office of the program's chairperson.

If you wish to appeal your dismissal from a health science program, the following sequence of events shall be followed:

- Within three working days following your notification of dismissal from the health science program, you must request in writing a meeting with the program's chairperson to appeal the dismissal. You will be notified of the results of this appeal within two working days following this meeting. If you are unsatisfied with the decision, you may request, within three working days, a second appeal hearing.
- Upon your written request for the next level of appeal, the program's chairperson will arrange a joint meeting with you, the chairperson (or designee), the dean of the College of Professional Studies (or designee), and the provost (or designee). You will be notified of the results of this appeal hearing within two working days following the meeting.

Criteria to be used in ruling on your dismissal appeal include your past academic achievement, your rationale for current grade status, and the prediction of future performance in the program.

Dismissal from a health science program is not the same as dismissal from the University. University dismissal policies are outlined in this catalog under the section titled "Academic Policies."

Associate Degree Nursing

Associate degree nursing students graduating from Shawnee State University are qualified to take the NCLEX-RN examination[1] for registered nurses and, after successfully passing this examination, are capable of providing nursing care at a beginning level in hospitals, nursing homes, doctors' offices, clinics, and selected public health agencies.

Accreditation

The associate degree nursing program has full approval of the Ohio Board of Nursing.

Please Note

- All suggested or equivalent courses listed for the first three quarters must be completed by the end of the third quarter and prior to continuing into the second year. Prerequisites for each quarter are identified under course descriptions.
- For a student to remain in good academic standing in the associate degree nursing program, a grade of "C" (2.0) or better must be achieved in each course included in the curriculum. Failure to do so may result in academic dismissal from the program. Students requesting readmission must do so in writing within one quarter of leaving the program in order to obtain the requirements and forms from the nursing department.
- Only those students who have been officially accepted into the program or who have received the approval of the department's chairperson may take the courses beginning with the ADNR prefix.
- Students must have current CPR certification or enroll in EMTA 102.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
ADNR 101	Nursing 1	5	9	8
AHNR 103[2]	Prin. of Med. Science	3	0	3
BIOL 101[2]	Introduction to Biology	3	0	3
ENGL 111S	Discourse and Comp.	4	0	4
	Totals	15	9	18
	SECOND QUARTER			
ADNR 102	Nursing 2	5	9	8
BIOL 310	Principles of Anatomy	4	3	5
PSYC 101	Intro. to Psychology	4	0	4
	Totals	13	12	17
	THIRD QUARTER			
ADNR 103	Nursing 3	4	12	8
BIOL 320	Prin. of Physiology	5	0	5
PSYC 151	Hum. Grow. and Devel.	4	0	4
	Totals	13	12	17
	SUMMER QUARTER (Optional): The following courses may be taken in the summer or during the second year as designated.			
BIOL 350	Microbiol. 1 (or 4th qtr.)	4	3	5
ENGL 112S	Cmp. & Rsrch. (or 5th qtr.)	4	0	4
SOCI 101	Intro. to Soc. (or 5th qtr.)	4	0	4
	Totals	12	3	13
	FOURTH/FIFTH QUARTER			
ADNR 201[3]	Nursing 4	6	12	5
ADNR 202[3]	Nursing 5	6	12	5
ADNR 203	Nursing 6	2	0	2
BIOL 350	Microbiol. 1 (4th qtr.)	4	3	5
	Totals	12	15	17
	FOURTH/FIFTH QUARTER			
ADNR 204	Nursing 7	6	12	10
ENGL 112S	Comp. & Rsrch. (5th qtr.)	4	0	4
SOCI 101	Intro. to Soc. (5th qtr.)	4	0	4
	Totals	14	12	18
	SIXTH QUARTER			
ADNR 205	Nursing 8	4	15	9
ADNR 211	Nursing 9	3	0	3
[4]	Approved Elective	4	0	4
	Totals	11	15	16

[1] Felony conviction requires permission from Ohio Board of Nursing before taking the examination.
[2] Students who are planning to continue their education toward a baccalaureate degree are encouraged to substitute CHEM 121 for AHNR 103 and BIOL 151 for BIOL 101.
[3] May be half-quarter course.
[4] Elective must be approved by nursing advisor.

Dental Hygiene

Dental hygiene is a vital health service component of dentistry which emphasizes oral health and the prevention of oral diseases.

Most dental hygienists are employed in private dental offices or clinics and work under the supervision of the dentist. The hygienist's main function is performing oral prophylaxis—scaling and polishing of the patient's teeth to remove soft and hard deposits. They also perform other procedures, such as dental charting and oral examinations, exposing and processing dental radiographs, fluoride treatments, and preliminary impressions for study models. The hygienist also places great emphasis on dental health education, home care, brushing/flossing, and diet/nutritional counseling.

Accreditation

The dental hygiene program is accredited by the American Dental Association—Commission on Dental Accreditation.

Job Opportunities

Hygienists are employed with dentists in private practice as well as in the following areas:

- **School systems** Primarily concerned with the proper care of children's teeth. Inspect students' teeth and report findings to a supervising dentist. May also instruct students in proper care of teeth, give demonstrations on the proper use of a toothbrush, and present talks on nutrition and its effects on dental health.
- **Hospitals and clinics** Concerned primarily with the special oral health problems of the bedridden and chronically ill.
- **Teaching and research** Hygienists with advanced degrees may be employed in research or may teach in dental hygiene educational programs that help students to prepare for the profession.

Academic Requirements

In order to remain in good academic standing in the dental hygiene program, you must:

- Maintain a cumulative GPA of 2.0 in all coursework needed to meet the requirements for an associate of applied science degree in dental hygiene. This applies to all required courses taken before as well as after admission into the dental hygiene program.
- Maintain a cumulative GPA of 2.0 in all dental hygiene courses.
- Not receive a failing grade in any of the required courses for the dental hygiene program.

Students who fail to achieve *any one of the three* requirements for good academic standing will be dismissed from the dental hygiene program with the option of reapplying for admission the following year. You may appeal a dismissal from the dental hygiene program by following the guidelines for appeal as detailed in this catalog.

Please Note

- After the first quarter, all subsequent basic and technical courses are closely related and, therefore, must be taken in sequential order.
- Only those students who have been officially accepted into the program or who have received the approval of the department's chairperson may take the courses beginning with the DTHY prefix.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
AHNR 103	Prin. of Medical Science	3	0	3
BIOL 101	Introduction to Biology	3	0	3
DTHY 111	Oral Anatomy 1	3	0	3
DTHY 121	Clinical Dental Hygiene 1	2	6	4
	Totals	11	6	13
	SECOND QUARTER			
BIOL 162	Human Anat./Phys.	4	3	5
DTHY 101	Radiology 1	2	0	2
DTHY 102	Oral Histology/Embryo	3	0	3
DTHY 112	Oral Anatomy 2	2	0	2
DTHY 122	Clinical Dental Hygiene 2	2	6	4
	Totals	13	9	16

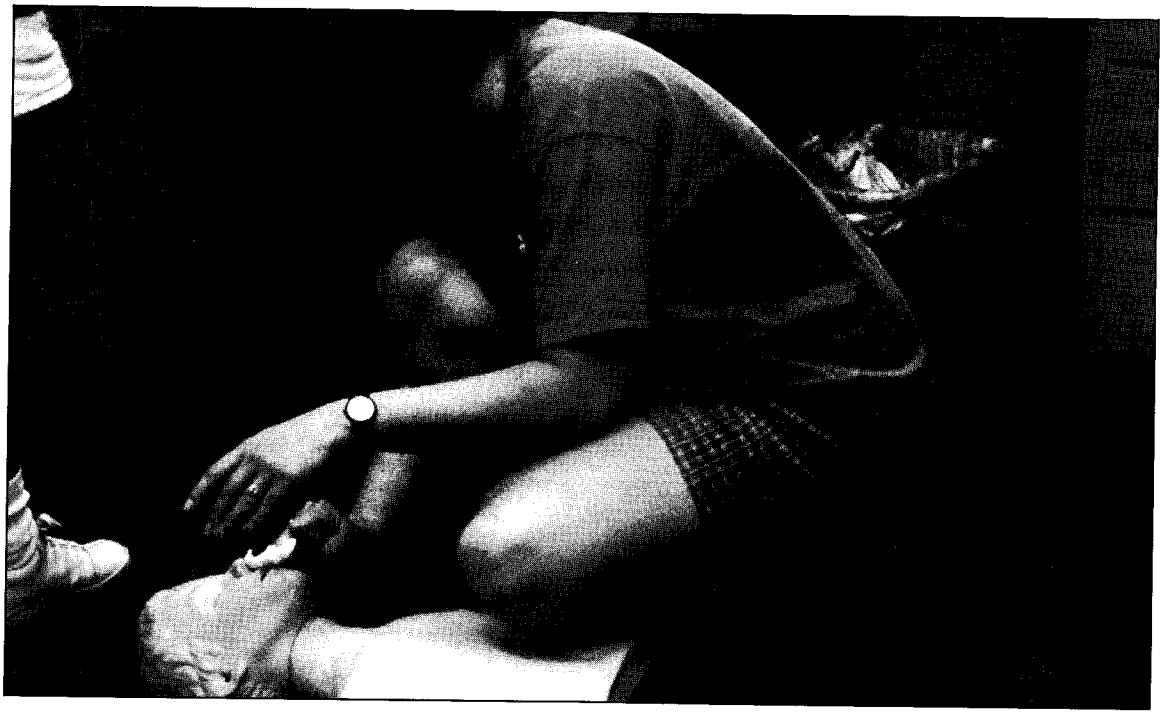
Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	THIRD QUARTER			
DTHY 113	Radiology 2	1	3	2
DTHY 123	Clinical Dental Hygiene 3	2	8	4
DTHY 202	Periodontics	3	0	3
DTHY 220	Oral Microbiol./Immun.	3	0	3
[1]	English/Human./Social Sc.	4	0	4
	Totals	13	11	16
	FOURTH QUARTER (Summer)			
DTHY 203	Dental Materials	2	3	3
DTHY 205	Dental Health Education	3	0	3
DTHY 224	Clin. D. H. 4/Off. Emerg.	2	9	5
DTHY 290	Sem./Adv. Periodontics	1-3	0	1-3
	Totals	8-10	12	12-14
	FIFTH QUARTER			
DTHY 103	Human Nutrition	3	0	3
DTHY 201	Gen. and Oral Pathology	3	0	3
DTHY 225	Clin. D. H. 5/Spec. Needs	2	9	5
[1]	English/Human./Social Sc.	4	0	4
	Totals	12	9	15
	SIXTH QUARTER			
DTHY 204	Pharmacology	3	0	3
DTHY 206	Public Health	3	0	3
DTHY 226	Cln. D.H. 6/Prv. Dnt. & Jrs.	1	12	5
[1]	English/Human./Social Sc.	4	0	4
	Totals	11	12	15
	SEVENTH QUARTER			
DTHY 227	Clin. D.H. 7/Career Mgt.	1	9	4
[1]	English/Human./Social Sc.	7	0	7
[2]	Elective	3	0	3
	Totals	11	9	14

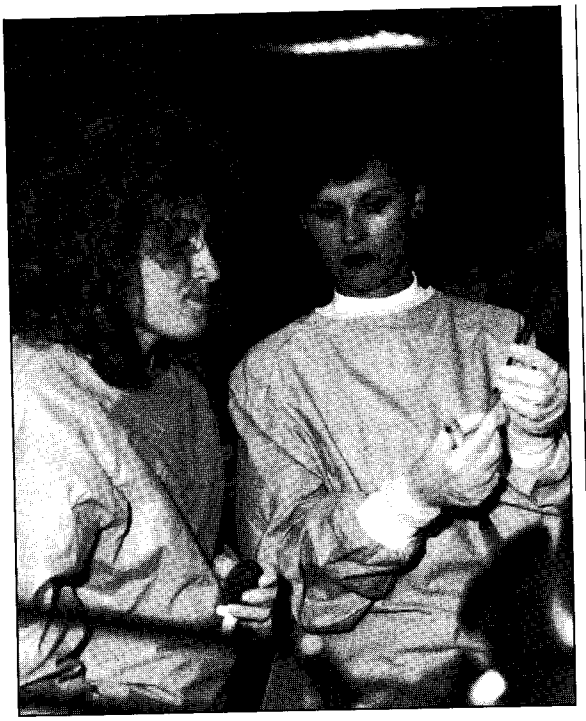
Emergency Medical Technology

You may apply credits you earned in the emergency medical-paramedic courses toward an associate of individualized studies (AIS) in emergency medical technology. This AIS degree program allows you to formulate your own program of study, combining courses in the academic and technical areas—particularly your emergency medical and paramedic courses. To be eligible for this AIS degree you must complete 20 hours of courses in a minimum of two concentration areas. In addition, you must complete at least 45 credit hours **after** your AIS program of study has been approved. Contact the director of the emergency medical technology program or the registrar for more information.

[1] English/Humanities/Social Science Requirements: ENGL 111S, ENGL 112S, PSYC 101, SPCH 103, SOCI 101.

[2] 3-Credit Hour Elective: Any English, psychology, speech, or sociology course with a catalog number higher than the required courses listed above. Any business management, personnel management, computer course, or HPER 202 - Personal and Community Health.





Medical Laboratory Technology

Medical laboratory technology occupies an essential and responsible position in laboratory medicine. Physicians rely on the laboratory staff and the results of their analysis to aid them in determining the presence and extent of disease. Technicians also provide data needed to evaluate the effectiveness of treatment and patient management.

The medical laboratory technician (MLT) works under the supervision of a pathologist or medical technologist (MT) and is qualified to perform a wide variety of analytical tests on patient specimens in the areas of hematology, chemistry, microbiology, immunology, blood banking, and urinalysis. Individuals must be accurate and conscientious, possess manual dexterity, have an interest in science, have an inquiring mind, and recognize their responsibility for human lives.

The associate degree medical laboratory technology program provides the basic education and clinical environment you need to acquire the knowledge, skills, and competency to accurately perform routine and selected specialized analyses in a laboratory setting.

The curriculum consists of seven academic quarters of general education, basic science, and clinical laboratory sciences, including an 18-week internship in one of the affiliated hospital laboratories.

Certification

Upon successful completion of this program, you are awarded the associate of applied science degree and are eligible to become nationally certified by the American Society of Clinical Pathologists (ASCP) and/or the National Certification Agency for Medical Laboratory Personnel (NCA) as a medical laboratory technician.

Accreditation

The MLT-AD program is nationally accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Employment Opportunities

Medical laboratory professionals work in many settings, which may include hospitals, doctors' offices, clinics, research and industrial facilities, public health centers, the Armed Forces, veterinary offices, and educational institutions.

Scholarships

A medical laboratory scholarship is awarded each year to a high school graduate who demonstrates academic excellence and has been admitted into the medical laboratory technology program.

Academic Requirements

- Eligibility for clinical practicum, as well as continuation in the MLT program, requires that you maintain a 2.0 cumulative grade point average, a minimum grade of "C" in the lecture and laboratory portions of all MLTC courses, and a minimum grade of "C" in all non-MLTC coursework required in the curriculum. Detailed academic requirements are outlined in the *MLT Preadmission Handbook,* available at the time of application or upon request.
- Medical Laboratory Orientation (MLTC 111) is open to any student who may be interested in gaining information about medical laboratory as a career choice. However,

continuation in the MLT program is dependent upon being admitted to the program or being on the alternate list for admission. For more information, contact the department's chairperson.

Health and Physical Ability Requirements

There are specific health and physical ability requirements for the medical laboratory technology program. This information is provided to you at the time of your application to the program.

Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
BIOL 101	Introduction to Biology	3	0	3
CHEM 141	General Chemistry 1	3	3	4
ENGL 111S	Discourse and Comp.	4	0	4
MATH 130	Intermediate Algebra	4	0	4
MLTC 111	Medical Tech. Orientation	2	0	2
	Totals	16	3	17
	SECOND QUARTER			
BIOL 162	Human Anat. and Phys.	4	2	5
CHEM 142	General Chemistry 2	3	3	4
ENGL 112S	Composition and Research	4	0	4
MLTC 112	Basic Laboratory Skills	2	6	4
	Totals	13	11	17
	THIRD QUARTER			
CHEM 200	Intro. to Organic Chem. 1	3	3	4
MLTC 209	Hematology 1	2	6	4
MLTC 210	Hemostasis	2	2	2
MLTC 212	Clinical Chemistry 1	2	6	4
BUIS 101[1]	Intro. to Comp. Info. Syst.	4	0	4
	Totals	13	17	18
	FOURTH QUARTER			
BIOL 350	Microbiology	4	3	5
MLTC 202	Immunoserology	2	3	3
MLTC 207	Clinical Microbiology	3	6	5
MLTC 211	Hematology 2	2	3	3
	Totals	11	15	16
	FIFTH QUARTER			
MLTC 201	Urinalysis	2	3	3
MLTC 203	Blood Banking	2	6	4
MLTC 204	Parasitology	1	2	1
MLTC 213	Clinical Chemistry 2	2	6	4
SOCI 101	Intro. to Sociology	4	0	4
	Totals	11	17	16
	SIXTH QUARTER			
MLTC 215	Lab. Simulation (1st 5 wks.)	0	9	3
MLTC 216	Med. Tech. Sem. (1st 5 wks.)	1	0	1
MLTC 217	Case Stud. (1st 5 wks.)	1	0	1
MLTC 220	Clin. Prac. (2nd 5 wks.)	0	40	4
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	5	49	12
	SEVENTH QUARTER			
MLTC 221	Clinical Practicum 2	0	40	8
MLTC 225	Spec. Prob. in Med. Lab.	2	0	2
MLTC 226	Technical Electives[2]	2	0	2
	Totals	4	40	12

[1] Or ETCO 110 Computer Software and DOS

[2] **MLTC 226 Technical Electives:** Special Topics in Laboratory Instrumentation, Special Topics in Laboratory Management, Special Topics in Quality Control and Computer, Special Topics in Hematology, Special Topics in Clinical Chemistry, Special Topics in Immunology, Special Topics in Immunohematology, Special Topics in Microbiology, Special Topics in Urinalysis, Special Topics in Histology.
Recommended electives for students who want to take additional hours: BIOL 340 Genetics, BIOL 432 Cell Biology, CHEM 143 General Chemistry 3, CHEM 223 Quantitative Analysis, ENGL 115S Composition and Literature, ENGL 121 Technical Writing, MATH 150 Principles of Statistics.

Occupational Therapy Assistant

Occupational therapy is a vital health care service that uses "occupation," meaning purposeful activity, as the basis for treatment of people with a wide variety of physical, developmental, and emotional disabilities.

Occupational therapists and occupational therapy assistants help disabled people of all ages acquire or regain the skills they need to live independent, productive, and satisfying lives. They work in hospitals, rehabilitation centers, nursing homes, public and private schools, and home health agencies.

Occupational therapy assistants work under the guidance of occupational therapists. They may choose or construct equipment that helps people to function more independently; they may carry out treatment activities for individuals or groups of patients; and they work closely with families of patients who are preparing to return home.

To become an occupational therapy assistant, you must complete an educational program. The majority of these are two-year associate degree programs like the one at Shawnee State University. Studies include basic academic subjects, human growth and development, the functioning of the human body, and occupational therapy principles and techniques. The OTA program requires at least two, six-week rotations of supervised practical experience in a variety of health care settings.

After successfully completing the educational program, you are eligible to take the national certification examination for the occupational therapy assistant. Many states, including Ohio, Kentucky, and West Virginia, also require licensing by their respective states to practice occupational therapy.

Accreditation

The occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-AOTA. Graduates of the program are able to sit for the national certification examination for the occupational therapy assistant administered by the American Occupational Therapy Certification Board (AOTCB). After successful completion of this exam, you are a certified occupational therapy assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the AOTCB Certification Examination.

Academic Requirements

To remain enrolled in the occupational therapy assistant program, you must:

- Not receive below a "C" in any course with the OTAT prefix.
- Maintain a 2.00 GPA in all courses with the OTAT prefix.
- Obtain an overall GPA of no less than 2.00 prior to the third quarter (spring) of the first year.
- Maintain at least a 2.00 GPA during each remaining quarter.
- Successfully complete (with a "D–" or higher) BIOL 101 and 162 by the end of the third quarter (spring) of the first year.

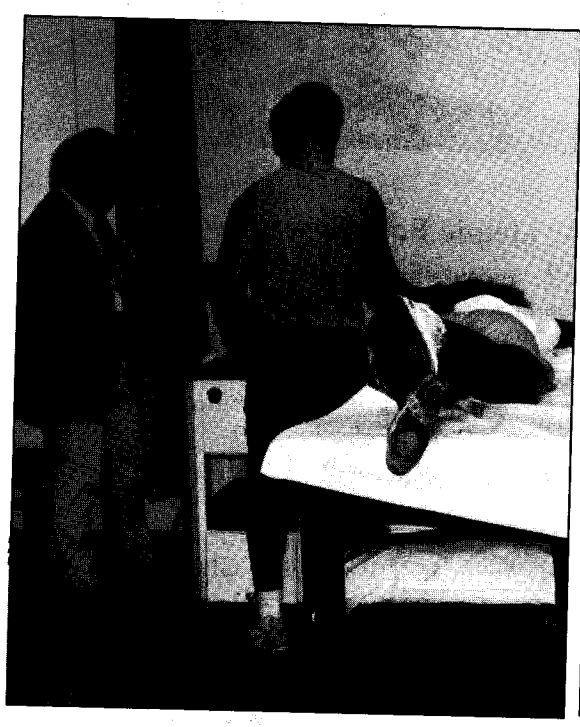
If *any* of these criteria are not met, you are dismissed from the OTA program. Conditions for readmission to the OTA program are specified by the chairperson of the department at the time of dismissal.

Clinical Requirements

Clinical placements for the OTA program in the Portsmouth area are limited. OTAT 108, 204, and 208 (Fieldwork 1) are clinical courses requiring six to seven hours, one day per week at the assigned facility. These placements may be up to, and sometimes at distances greater than, 70 miles away from Shawnee State University. You are responsible for your own transportation to and from these facilities.

OTAT 220 and 221 (Fieldwork 2) consist of two rotations of eight weeks each. You are required to be at that facility during normal working hours (usually 40 hours per week). The OTA program assigns each student two placements. You are responsible for all expenses incurred to complete the Fieldwork 2 requirements of the OTA program. Students who are dissatisfied with their assigned placements are responsible for finding their own placement which must meet the Fieldwork 2 criteria of the OTA program.

You are required to have successfully completed all OTAT and other courses in the curriculum (as indicated by a minimum 2.00 GPA) prior to participating in OTAT 220 and 221. OTAT 220 and 221 must be completed within 12 months following completion of other OTA courses and two weeks prior to the AOTCB certification examination date.



Sample Schedule

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER (Fall)			
AHNR 102	Medical Terminology	2	0	2
ARTS 231	Ceramics 1	4	0	4
BIOL 101	Introduction to Biology *OR*	3-5	0	3-5
BIOL 151	Principles of Biology			
BUIS 101[1]	Intro. to Comp. Info. Syst.	4	0	4
PSYC 101	Introduction to Psychology	4	0	4
	Totals	17-19	0	17-19
	SECOND QUARTER (Winter)			
BIOL 162	Human Anat. and Phys.	4	3	5
OTAT 101	Intro. to Occup. Ther.	3	3	4
OTAT 102	Therapeutic Media 1	1	6	3
OTAT 108	Practicum 1 (FW1)	1	6	2
PSYC 151	Hum. Growth and Devel.	4	0	4
	Totals	13	18	18
	THIRD QUARTER (Spring)			
ENGL 111S	Discourse and Comp.	4	0	4
OTAT 103	Disease Pathology	4	0	4
OTAT 109	Applied Anat. and Kines.	1	3	2
OTAT 110	Group Dynamics	1	3	2
SOCI 101	Introduction to Sociology	4	0	4
	Totals	14	6	16
	FOURTH QUARTER (Summer)			
ENGL 112S	Composition and Research	4	0	4
OTAT 204	Practicum 2 (FW1)	2	6	3
OTAT 205	Therapeutic Media 2	1	6	3
OTAT 210	OTA in Physical Disabil.	4	4	5
	Totals	11	16	15
	FIFTH QUARTER (Fall)			
OTAT 203	OTA in Devel. Disabilities	5	3	6
OTAT 206	Contemp. Media in OT	1	3	2
OTAT 208	Practicum 3 (FW1)	2	6	3
PSYC/SOCI	Elective	4	0	4
	Totals	12	12	15
	SIXTH QUARTER (Winter)			
EMTP 101[2]	First Aid	2	0	2
OTAT 209	OTA in Geriat. Prog. Plan.	3	3	4
OTAT 211	OTA Seminar	2	0	2
OTAT 212	OTA in Mental Health	3	3	4
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	13	6	15
	SEVENTH QUARTER (Spring)			
OTAT 220	Clinical Application (FW2)	0	40	6
OTAT 221	Clinical Application (FW2)	0	40	6
	Totals	0	80	12

[1] Due to the high demand for BUIS 101, you are strongly encouraged to take this course early in the program.
[2] Students must have current first aid and CPR certificates prior to starting clinical application (OTAT 220 and 221) spring quarter. This may be obtained either through EMTP 101, 102, HPER 227 (for CPR only), or at another agency.

Physical Therapist Assistant

Physical therapist assistants are skilled technical health workers. They work under the supervision of physical therapists to help rehabilitate disabled persons so that they may again lead useful and productive lives. They may use heat, cold, electricity, and exercise for the treatment of patients. The program is designed over a seven-quarter sequence; four quarters include clinical practicums.

Accreditation

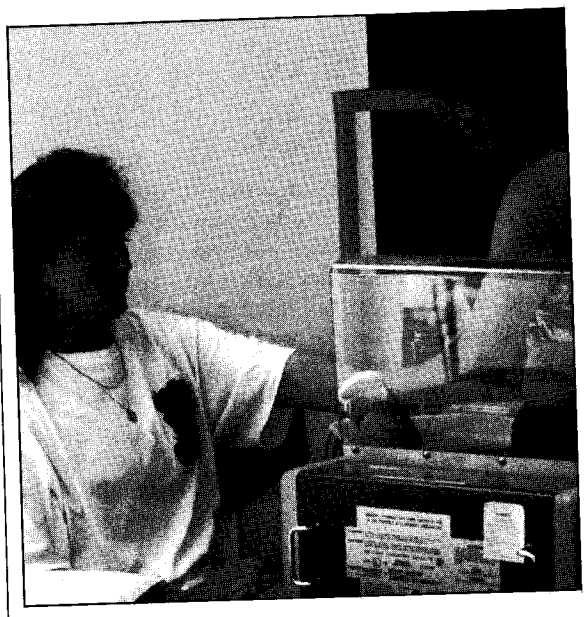
The physical therapist assistant program at Shawnee State University is accredited by the Commission on Accreditation in Physical Therapy Education.

Please Note

- In order to remain in good academic standing in the physical therapist assistant program, you must receive a "C" (2.0) or better in each course included in the curriculum.
- Only those students who have been officially accepted into the program or who have received the approval of the department's chairperson may take the courses beginning with the PTAT prefix.

Sample Schedule

Course No.	Course	Class Hours	Lab Hours	Credit Hours
	FIRST QUARTER (Fall)			
AHNR 102	Medical Terminology	2	0	2
AHNR 103[1]	Prin. of Medical Science	3	0	3
BIOL 101	Introduction to Biology	3	0	3
ENGL 111S	Discourse and Comp.	4	0	4
PTAT 111	Prin. of Phys. Ther. Asst.	3	0	3
	Totals	15	0	15
	SECOND QUARTER			
BIOL 162	Anatomy and Physiology	4	2	5
EMTP 101[2]	First Aid & CPR	2	0	2
PTAT 112	PTA Procedures 1	3	6	5
PTAT 115	PT in Physical Dysfunction	3	0	3
	Totals	12	8	15



	THIRD QUARTER			
BIOL 311	Prin. of Kinesiology	3	0	3
ENGL 112S	Composition and Research	4	0	4
PSYC 101	Introduction to Psychology	4	0	4
PTAT 113	PTA Procedures 2	3	6	5
PTAT 116	Neurology for PT	1	0	1
	Totals	15	6	17
	FOURTH QUARTER			
PTAT 114	Anatomy and Kinesiology	3	6	5
PTAT 216	Clinical Practicum Seminar	1	4	2
SOCI 101	Introduction to Sociology	4	0	4
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	11	10	14
	FIFTH QUARTER			
PTAT 202	PTA Procedures 3	3	6	5
PTAT 212	Clinical Practicum 1	2	12	4
PTAT 231	Rehab. Procedures 1	2	6	4
PTAT 235	PT Trends and Admin.	2	0	2
	Totals	9	24	15
	SIXTH QUARTER			
PSYC 151	Human Growth and Devel.	4	0	4
PTAT 213	Clinical Practicum 2	3	3	4
PTAT 232	Rehab. Procedures 2	3	3	4
	Elective	4	0	4
	Totals	14	6	16
	SEVENTH QUARTER (Spring)			
PTAT 214	Clinical Practicum 3	1	38	6
PTAT 255	PTA Seminar	2	0	2
	Totals	3	38	8

[1] PSCI 105 may be substituted.

[2] Students must have a current first aid card prior to enrolling in PTAT 216. EMTP 101 is not required if the student has a current first aid card. This can be obtained either through EMTP 101, HPER 227, or another agency.

Radiologic Technology

The radiologic technology curriculum prepares students for careers as radiographers, who work under the supervision of medical radiologists or physicians in hospital radiology departments, clinics, commercial x-ray laboratories, or doctors' offices. The responsibility of the radiographer is to produce a radiographic (x-ray) image of the highest diagnostic quality of any designated area of the human body. It is from this image that the radiologist makes his or her interpretations.

Curriculum for this program covers eight academic quarters. The first four academic quarters are designed to provide you with mathematics, basic science, general education courses, supporting technical courses, clinical education, and specialized courses in radiography. The second year of the program consists of additional clinical education scheduled in affiliated hospitals along with advanced radiologic technology courses.

Experience in the radiology departments of the affiliated hospitals provides opportunity for the practical application of knowledge learned in the classroom. This experience in the hospital is a vital part of the program, since it enables you to assist in the handling of sick and injured patients as they undergo a wide variety of radiographic examinations.

Upon satisfactory completion of the course requirements, you are awarded the associate in applied science degree and are eligible to apply for examination by the American Registry of Radiologic Technologists.

Accreditation

The radiologic technology program at Shawnee State University is fully accredited by the Joint Review Committee on Education in Radiologic Technology.

Academic Requirements

To remain in good standing in the radiologic technology program, the following three conditions *must* be met:

- You must not receive a grade of "F" in any of the required courses listed in the eight-quarter sequence.
- You must not receive a grade below a "C–" in any of the courses with the RDLT prefix.

- You must earn an overall grade point average of 2.0 by the end of the third quarter and maintain it throughout the remainder of the program.

If *any one* of these three conditions is not met, you are academically dismissed from the radiologic technology program. You may apply for readmission to the radiologic technology program the following year.

Please Note

- Only those students who have been officially accepted into the program or who have received the approval of the department's chairperson may take the courses beginning with the RDLT prefix.
- After the first quarter, all subsequent technical and science courses are closely related and, therefore, must be taken in sequential order. The basic courses (psychology, speech, etc.) may be taken at your convenience assuming all prerequisites are satisfied.
- You must have a current CPR certification or enroll in EMTA 102.

Sample Schedule

Course No.	Course	Class Hours	Lab Hours	Credit Hours
	FIRST QUARTER			
BIOL 101	Introduction to Biology	3	0	3
ENGL 111S	Discourse and Comp.	4	0	4
MATH 130	Intermediate Algebra	4	0	4
RDLT 101	Radiologic Technology 1	2	6	4
	Totals	13	6	15
	SECOND QUARTER			
BIOL 310	Human Anatomy	4	3	5
CHEM 121	Intro. to Gen. Chemistry 1	3	3	4
RDLT 102	Radiologic Technology 2	2	10	4
RDLT 200	Basic Patient Care	3	2	3
	Totals	12	18	16
	THIRD QUARTER			
BUIS 101	Intro. to Comp. Info. Syst.	4	0	4
ENGL 112S	Composition and Research	4	0	4
RDLT 103	Radiologic Technology 3	3	2	3
RDLT 111	Radiologic Physics	3	2	4
RDLT 211	Clinical Experience 1	0	16	2
RDLT 312	Sectional Anatomy	2	2	3
	Totals	16	22	20
	FOURTH QUARTER			
RDLT 104	Radiologic Technology 4	3	2	3
RDLT 212	Clinical Experience 2	0	24	3
	Totals	3	26	6
	FIFTH QUARTER			
RDLT 105	Radiologic Technology 5	3	0	3
RDLT 201	Radiographic Exposure	3	2	4
RDLT 213	Clinical Experience 3	0	24	3
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	9	26	13
	SIXTH QUARTER			
RDLT 106	Radiologic Technology 6	3	0	3
RDLT 112	Radiobiol. & Radia. Protect.	3	0	3
RDLT 214	Clinical Experience 4	0	24	3
PSYC 101	Introduction to Psychology	4	0	4
	Totals	10	24	13
	SEVENTH QUARTER			
RDLT 107	Radiologic Technology 7	3	0	3
RDLT 113	Radiographic Processing	2	0	2
RDLT 215	Clinical Experience 5	0	24	3
SOCI 101	Introduction to Sociology	4	0	4
[1]	Commun./Leader. Elective	3-4	0	3-4
	Totals	12-13	24	15-16
	EIGHTH QUARTER			
RDLT 108	Radiologic Technology 8	2	0	2
RDLT 216	Clinical Experience 6	0	32	4
	Totals	2	32	6

[1] Communication/Leadership Electives: Any English course 115S or higher, PSYC 400 Abnormal Psychology, PSYC 375 Educational Psychology, PSYC 273 Human Adjustment, PSYC 151 Human Growth and Development, BUMG 101 Introduction to Business, BUMG 210 Management Concepts, BUMG 235 Personnel Management, BUMG 240 Labor Relations, BUMG 242 Business Communications

Respiratory Therapy

Respiratory therapy is an allied health specialty, whose practitioners are employed, under medical direction, to provide treatment, management, diagnostic evaluation, and care to patients with deficiencies or abnormalities associated with the process of breathing.

Respiratory therapists work side-by-side with physicians, nurses, and other health care team members to treat patients ranging in age from premature infants to the elderly. Their duties vary from the administration of oxygen, humidity, and aerosols and the drainage of lung secretions, to the use of technologically sophisticated monitoring devices and treatment techniques in order to assure the survival of patients with life threatening conditions such as head or chest trauma.

Some practitioners choose to spend the majority of their time working in diagnostic laboratories, where they assist in the evaluation of the type and extent of a patient's pulmonary dysfunction and evaluate the effectiveness of the patient's current therapy. Other practitioners may choose to work in specialized areas of respiratory care, including education, management, home care, sales, research, and specialized areas of diagnostic or patient care such as cardiovascular diagnostics or care of infants and children.

Certification

The graduate of the respiratory therapy program is eligible to sit for the examinations of the National Board for Respiratory Care. Successful completion of the "entry-level" examination of the NBRC results in the student being awarded the CRTT (Certified Respiratory Therapy Technician) credential. After successful completion of the "entry-level" examination, graduates of this program are eligible to take the "advanced practitioner" examination of the NBRC. Successful completion of that examination results in the student being awarded the RRT

(Registered Respiratory Therapist) credential by the NBRC. Successful completion of the entry-level examination also results in graduates being eligible for a license to practice in any state currently having a licensure law.

Accreditation

In 1980 the Ohio Board of Regents approved the creation of this program of study, leading to the associate of applied science degree at Shawnee State University. The respiratory therapy program at Shawnee State is fully accredited by the Joint Review Committee for Respiratory Therapy Education and the Commission on Accreditation of Allied Health Education Programs.

Employment Opportunities

Because of the rapid growth of the profession since its inception in the late 1940's, many medical institutions have found that their need for trained respiratory therapy practitioners has exceeded supply. In addition, many clinics, nursing homes, and home care programs are realizing the potential benefits of having a trained respiratory care practitioner on staff. These needs, coupled with the ever-increasing number of cardiovascular disorders being diagnosed, should continue to assure that individuals who enter this profession will enjoy good career opportunities.

Academic Requirements

To remain in good standing in the respiratory therapy program, the following three conditions *must* be met:

- You must *not* receive a grade of "F" in any of the required courses listed in the curriculum.
- You must *not* receive a grade below a "C-" in any course with the RPTT prefix.
- You must earn an overall grade point average of 2.00 by the end of the third quarter and maintain it throughout the remainder of the program.

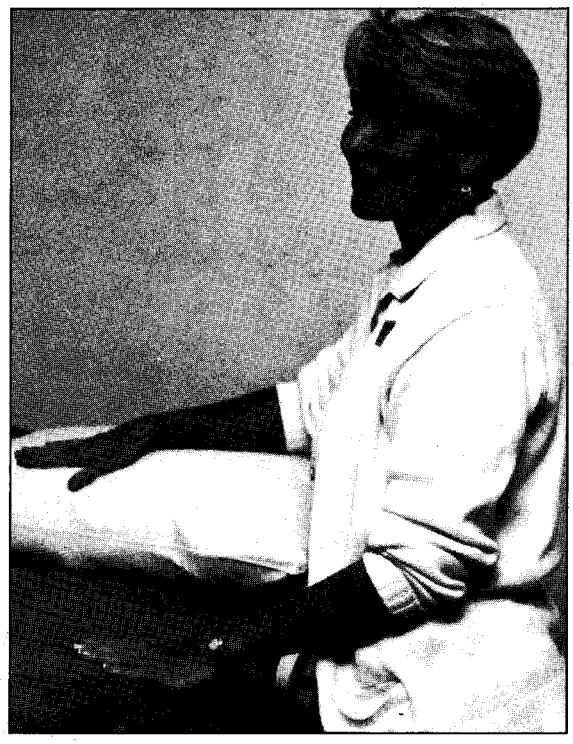
Failure to meet *any one* of the three stated conditions results in dismissal from the respiratory therapy program. You may apply for readmission to the respiratory therapy program the following year after you have successfully completed the required remedial work as detailed by the chairperson of the department at the time of dismissal.

Please Note

- Only those students who have been officially accepted into the respiratory therapy program or have received the approval of the department's chairperson may take courses beginning with the RPTT prefix.
- After the first quarter, all subsequent technical courses are closely related and, therefore, must be taken in sequential order.

Sample Schedule

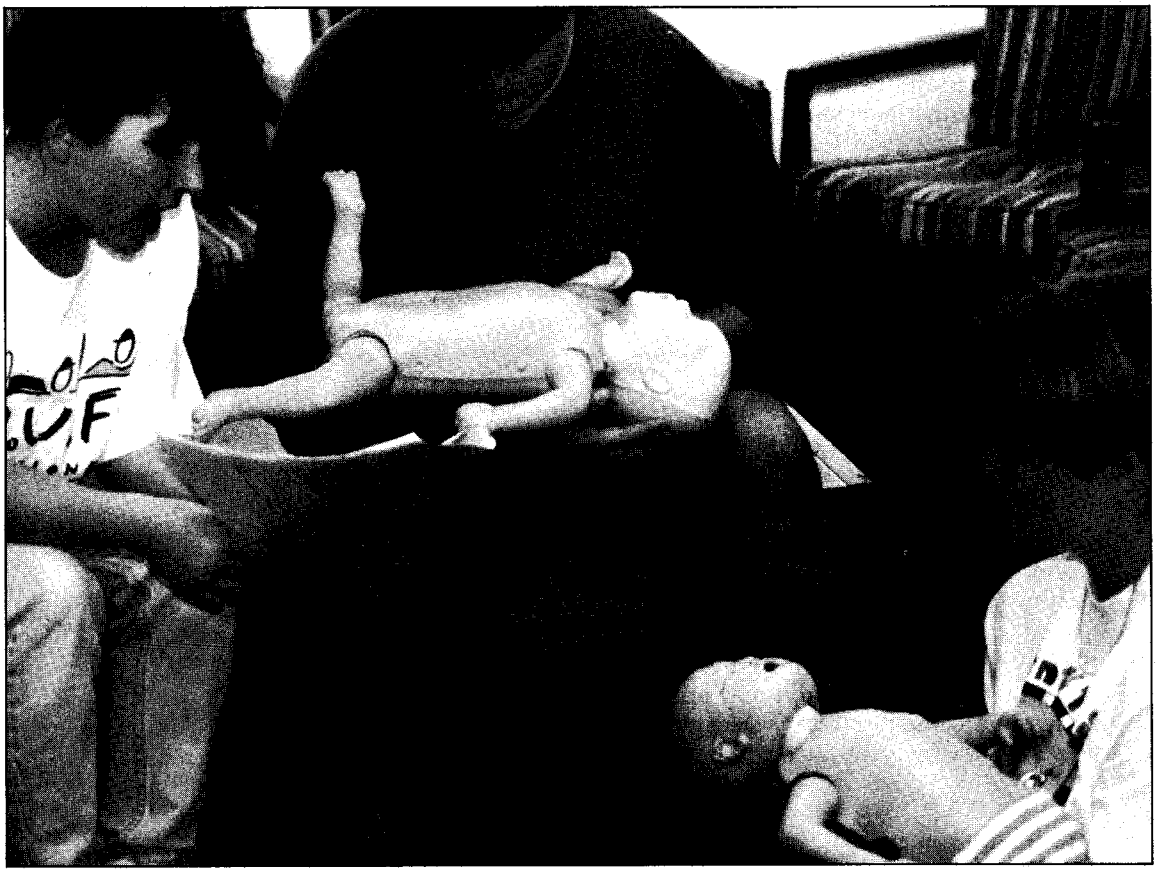
Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	FIRST QUARTER			
AHNR 102	Medical Terminology	2	0	2
BIOL 101[1]	Introduction to Biology	3	0	3
RPTT 101	Basic Patient Care	2	3	3
RPTT 102	Card./Renal Anat. & Phys.	5	0	5
SPCH 103	Pub. Spk. and Hum. Com.	3	0	3
	Totals	15	3	16



[1] BIOL 151 may be substituted.

Course No.	Course	Class Hrs.	Lab Hrs.	Credit Hrs.
	SECOND QUARTER			
CHEM 121	Intro. to Gen. Chemistry	3	3	4
ENGL 111S	Discourse and Comp.	4	0	4
MATH 130	Intermediate Algebra	4	0	4
RPTT 110	Medical Gas Therapy	3	3	4
RPTT 115	Clinical Application 1	0	8	1
	Totals	14	14	17
	THIRD QUARTER			
BIOL 162	Human Anat. and Phys.	4	3	5
ENGL 112S	Composition and Research	4	0	4
RPTT 120	Perioperative Care	3	3	4
RPTT 121	Airway Management	1	3	2
RPTT 125	Clinical Application 2	0	8	1
	Totals	12	17	16
	FOURTH QUARTER			
BIOL 350	Microbiology	4	3	5
RPTT 130	Ped. and Neon. Res. Care	4	0	4
RPTT 131	Pulm. Func. Test.	2	0	2
RPTT 132	Art. Blood Gas/Acid-Base	1	0	1
RPTT 133	Laboratory Procedures	0	3	1
RPTT 135	Clinical Application 3	0	16	2
	Totals	11	22	15
	FIFTH QUARTER			
RPTT 200	Pharmacology	3	0	3
RPTT 201	Continuous Mech. Vent.	5	3	6
RPTT 202	Pathophysiology	3	0	3
RPTT 205	Clinical Application 4	0	16	2
[1]	General Studies Elective	4	0	4
	Totals	15	19	18
	SIXTH QUARTER			
RPTT 210	Critical Care	2	0	2
RPTT 211	Adv. Cardio. Assess.	1	0	1
RPTT 212	Pul. Rehab. & Home Care	2	0	2
RPTT 213	Department Management	1	0	1
RPTT 215	Clinical Application 5	0	24	3
[1]	General Studies Elective	4	0	4
	Totals	10	24	13
	SEVENTH QUARTER			
RPTT 220	Seminar	4	0	4
RPTT 225	Clinical Application 6	0	40	8
	Totals	4	40	12

[1] General Studies Electives should be selected from the following approved list: ANTH 101 Introduction to Anthropology, any English course not currently required greater than ENGL 115S, PHIL 110 Elements of Symbolic Logic, PSYC 101 Introduction to Psychology, SOCI 101 Introduction to Sociology. Other communication or social science courses may be accepted, with the approval of the department chairperson.



Associate of Individualized Studies Degree

The associate of individualized studies degree (AIS) at Shawnee State University allows you to formulate your own individualized program of study. The philosophical basis for the degree is the assumption that you may not be able to achieve your personal educational goals through one of the more formalized two-year degree structures offered at Shawnee State. This is especially true if you are interested in combining a selection of academic as well as technical courses in a way that may not meet the degree requirements of Shawnee State's associate of arts, associate of science, associate of applied science, or associate of applied business degrees. Contact the registrar for more information about this degree.

Certificate

Emergency Medical Technology

Emergency medical technicians are health care professionals who provide emergency treatment to patients in the prehospital environment. Several levels of training are available for emergency medical technicians. The entry level for the profession is the emergency medical technician-basic (EMT-B). Education for this level of emergency care provider is the 110-hour emergency victim care course (EMTP 110). The emergency medical technician-advanced (EMT-A) is able to provide emergency care at a high level, utilizing advanced skills in airway and shock management. Educational preparation for the EMT-Advanced is included in EMTP 210 through 212. The emergency medical technician-paramedic (EMT-P) is the highest level of certified emergency care provider. The paramedic receives education in a program of study which encompasses seven courses in addition to the EMT-Basic and EMT-Advanced courses (EMTP 210 through 241). This education includes classroom and laboratory instruction, as well as hospital and field clinical experiences.

As part of the initial educational experience, or for career advancement, you may elect to pursue the associate of individualized study degree in emergency medical technology. This two-year program is intended to expand the knowledge and experience base of the EMT-paramedic in both general academics and prehospital emergency medicine.

Certification

Upon successful completion of the course(s) listed below you will be eligible to sit for the National Registry Exam indicated:

- EMTP 110 —
  National Registry EMT-Basic Exam
- EMTP 210, 211, and 212 —
  National Registry Intermediate Exam
- EMTP 210 and 240 —
  National Registry EMT-Paramedic Exam

Successful completion of the National Registry exam results in your being awarded Ohio certification as well as national registry certification at the level tested.

Accreditation

The EMT-A and paramedic training programs are accredited by the Ohio Department of Public Safety, Division of EMS.

Academic Requirements

In order to remain in good academic standing in the emergency medical technology program, you must:

- Maintain a grade point average of 2.0 in all coursework needed to meet the requirements for an associate of individualized studies degree.
- Maintain a grade point average of 2.0 in all emergency medical technology courses.
- Not receive a failing grade in any of the required courses for the emergency medical technology program.

Students who fail to achieve *any one of the three* requirements for good academic standing will be dismissed from the emergency medical technology program with the option of reapplying for admission the following year. You may appeal a dismissal from the emergency medical technology program by following the guidelines for appeal as detailed in this catalog.

Please Note:

- After the first quarter, all subsequent basic and technical courses are closely related and, therefore, must be taken in sequential order.
- Only those students who have been officially accepted into the program or who have received the approval of the department's chairperson may take the courses beginning with the EMTP prefix, except EMTP 101 and 102.

Entrance Requirements

EMT-Basic Course (EMTP 110)

- Minimum of 18 years of age
- High school diploma or equivalent
- Current, unconditional drivers license
- Completed Pre-Entrance Medical Record
- Completed university application
- Evidence that you are not currently charged with, incarcerated for, or on parole or probation for a felony charge

EMT-Advanced Course (EMTP 210, EMTP 211, EMTP 212)

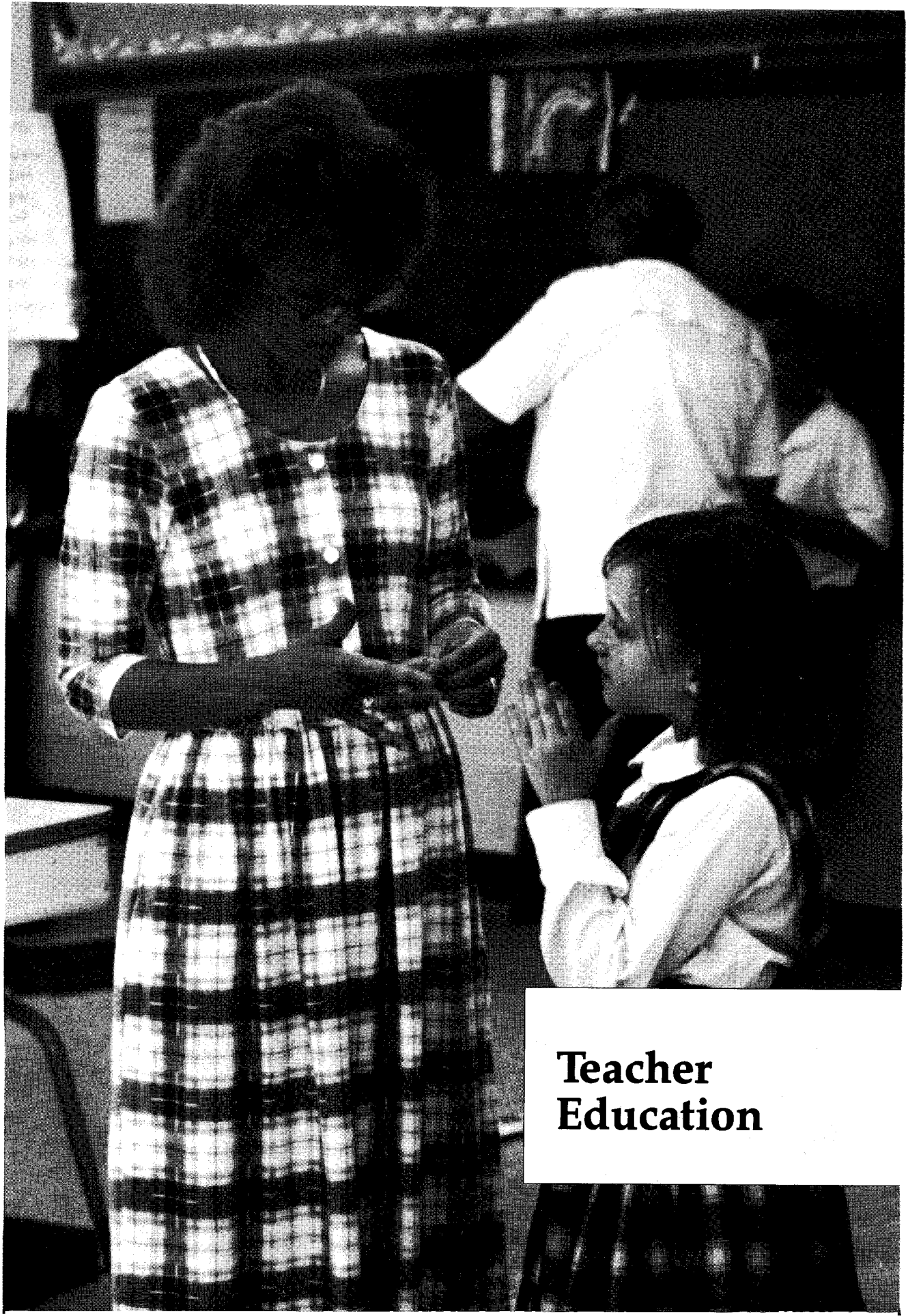
All of the above, and:

- Current Ohio EMT-Basic certification
- Evidence of not less than six months' experience providing care in the prehospital setting
- Letter of recommendation from a supervisor of the emergency medical service with which the above requirement was met
- Conference with the chairperson of the department, showing evidence of maturity, good judgement, and good moral character

Paramedic Program (EMTP 210 through 242)

All of the above, and:

- Successful completion of the National Registry of EMT's basic or intermediate level examination
- Completion of an examination which addresses aptitude in reading, writing, and mathematics skills. Remedial education in deficient areas may be required.



Teacher Education

Center for Teacher Education

The Center for Teacher Education prepares students for careers as elementary school teachers or for careers in areas related to health, recreation, and physical fitness. The Center also offers a reading education program that leads to a reading endorsement for Shawnee State students enrolled in the teacher education program or for educators who are currently teaching in the classroom.

Degrees and Certification Offered by the Center for Teacher Education

Bachelor of Science
Sports Studies, Athletic Training
Sports Studies, Sports Management

Elementary Education Certification
in conjunction with Shawnee State University's
Bachelor of Arts in English/Humanities
Bachelor of Arts in Social Science
Bachelor of Science in Natural Science
Bachelor of Science in Natural Science, Applied Mathematics

Reading Endorsement

Elementary Education Certification

Shawnee State University's teacher education program combines the breadth of the liberal arts and the depth of the academic discipline with the rigor of a professional development program to prepare the entry level teacher to meet the dynamic responsibilities of contemporary schools.

The vision of teaching which guides the teacher education program at Shawnee State is that of a reflective and inquiring professional. Assuming that teachers continue to develop over time cognitively, technically, and professionally, our program emphasizes lifelong learning in addition to the acquisition of specific skills and knowledge.

From your freshman year on, the program's theme of practice-centered inquiry is developed. The combination of the University's general education program and an in-depth academic major extends your knowledge of your chosen discipline to an understanding of how you learn that discipline. The professional sequence then provides directions for developing the strategies and skills you need to teach the discipline in light of how children learn. The education program provides a well articulated arrangement of field and clinical activities, beginning with a set of exercises designed to screen students for desired teacher qualities and culminating in student teaching experiences which assess your professional competence and potential.

During your senior year, you engage in the integrative study of core methods. Specified themes provide interrelatedness not only within the blocks but between and among the other courses in the professional sequence. Foundational studies occur throughout the program and, in fact, serve as a major clarifying and culminating activity. Throughout the program, the emphasis is on structured inquiry and reflection.

The certification program seeks to lead you to a greater mastery of a teaching specialization, an increased understanding of the liberal arts perspective, a wider context within which to make good choices, a research-based professional education core, and a greater sense of the need to contribute your abilities to the present community through your service and to future communities through your students' lives.

Eligibility Criteria for Admission to the Teacher Education Program

- Successful completion of at least 45 credit hours of coursework.
- Cumulative GPA of 2.50.
- Completion of specified general education program courses with a grade of "C" or higher. (See Teacher Education Policy Handbook.)
- Completion of professional education courses with a 3.0 GPA or higher.
- Completion of liberal arts/sciences major courses with a 3.0 GPA or higher.
- Successful completion of field experiences.
- Successful completion of required entrance exams.

Certification Requirements

- Apply for and receive admission to the teacher education program.
- Complete a liberal arts degree with a major in English/humanities, natural sciences, or social sciences with an emphasis in elementary education.
- Demonstrate teaching proficiency and professional competencies throughout the field/clinical experiences and student teaching.
- Pass sections of the National Teachers Examination requested by the Ohio Department of Education.

Pass/No-Credit Policy

Required courses in the elementary education certification program may not be taken on a pass/no-credit basis.

Course Scheduling

The majority of courses in teacher education are offered during the day. Most courses are designed with a field component so that you have the opportunity to apply your knowledge and skills in a school setting throughout the program.

Certification Program Curriculum

The requirements for a baccalaureate degree with elementary education certification vary according to the major, but in all cases, in addition to the major selected, all students seeking such certification must complete the courses listed below. Further details, specific to the various majors, are provided on the following pages. Additional information can be obtained from the appropriate department chairperson.

General Education Program (48 Hours)

Further information is listed on page 66 of the current university catalog or can be obtained from the Center for Teacher Education or from the appropriate department chairperson.

Arts and Sciences Curriculum Content (37 Hours)

Course No.	Course	Cr. Hrs.
ARTS 201	Art in the Elem. Curriculum 1	3
ARTS 202	Art in the Elem. Curriculum 2	3
HPER 202	Personal and Comm. Health	4
HPER 270	Phys. Ed. for the Elem. Class.	4
MATH 120	Elem. Topics in Mathematics 1	5
MATH 121	Elem. Topics in Mathematics 2	5
MUSI 160	Fundamentals of Music	3
MUSI 161	Music for the Class. Teacher	3
PSYC 375	Educational Psychology	4
SPCH 103	Pub. Spk. and Hum. Com.	3

Professional Education Requirements (45 Hours)

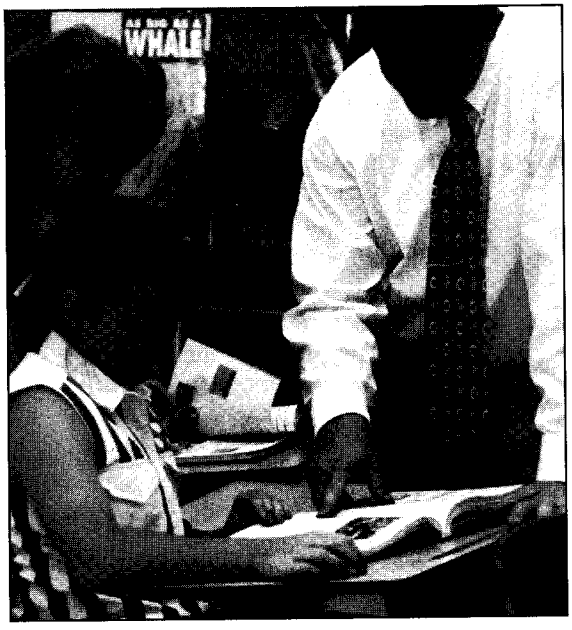
Course No.	Course	Cr. Hrs.
EDUC 110	Teacher as Inquir. Professional 1: Strategies for Observation and Reflection	2
EDUC 210	Teacher as Inquir. Professional 2: Strategies for Action Research	2
EDUC 220	Social/Physical/Intellectual Growth and Development	3

Professional Education Requirements (cont'd.)

Course No.	Course	Cr. Hrs.
EDUC 230	Instructional Media, Technology, and Computers	2
EDUC 240	Foundations and Competing Epistemologies 1	2

As a general rule, no 300 or 400 level education courses will be transferred.

EDUC 310	Teacher as Inquir. Professional 3: Measurement, Diagnosis, and Evaluation	3
EDUC 320	Interdisciplinary Teaching Methods 1: Literacy and Social Studies Education	7
EDUC 340	Foundations and Competing Epistemologies 2	2
EDUC 420	Interdisciplinary Teaching Methods 2: Science and Mathematics Education	7
EDUC 450	Directed Teach. and Seminar	15



English/Humanities Major with Elementary Education Certification

Degree Requirements

General Education Program — 48 Hours
Further information is listed on page 66 of the current catalog or can be obtained from the department chairperson's office.

English/Humanities Courses — 56 Hours
See page 75 of the current catalog or obtain from department chairperson's office.

Arts and Sciences Requirements — 37 Hours
See previous page. NOTE: Students may doublecount 15 hours toward their English/humanities major.

Professional Education Requirements — 45 Hours
See previous page.

Total Hours Required — 186 Hours

Natural Science Major with Applied Mathematics Concentration and Elementary Education Certification

Students seeking a bachelor of science in natural science degree with a concentration in applied mathematics who wish to be certified in elementary education must also complete the coursework listed below. It is important to note that these requirements are not entirely in addition to the bachelor of science degree but rather meet certain electives. *You are urged to work closely with your mathematics advisor and with an advisor from the elementary education program.*

Degree Requirements

General Education Program — 48 Hours
Further information is listed on page 66 of the current catalog or can be obtained from the mathematics department chairperson's office.

Concentration Area 1 — 32 Hours
See page 82 of current catalog or obtain from mathematics department chairperson's office.

Concentration Area 2 — 16 Hours
See page 82 of current catalog or obtain from mathematics department chairperson's office.

Concentration Area 3 — 8 Hours
See page 82 of current catalog or obtain from mathematics department chairperson's office.

Senior Project in Mathematics — 4 Hours
MATH 496 and 497

Computer Science Elective — 4 Hours
To be selected in consultation with department advisor.

Arts and Sciences Requirements — 37 Hours
See previous page.

Professional Education Requirements — 45 Hours
See previous page.

Total Hours Required — 194 Hours

Natural Science Major with Elementary Education Certification

Students seeking a bachelor of science in natural science who wish to be certified in elementary education must complete the requirements which follow. It is important to note that these requirements are not entirely in addition to the bachelor of science degree but rather meet certain electives, such as the mathematics requirement, humanities/social science electives, and general electives. You will have some additional hours to meet all of the requirements. *You are urged to discuss the elementary education option with your primary advisor in the Department of Natural Sciences and your advisor from the elementary education program.*

Degree Requirements

General Education Program *Further information is listed on page 66 of current catalog or can be obtained from the natural science department chairperson's office.*	48 Hours
Concentration Area 1 *See page 91 of current catalog or obtain from natural science department chairperson's office.*	36 Hours
Concentration Area 2 *See page 91 of current catalog or obtain from natural science department chairperson's office.*	16 Hours
Concentration Area 3 *See page 91 of current catalog or obtain from natural science department chairperson's office.*	8 Hours
NTSC 110S	4 Hours
Computer Science Elective	4 Hours
Arts and Sciences Requirements *See page 155. NOTE: Students may doublecount 10 hours toward their science major.*	37 Hours
Professional Education Requirements *See page 155.*	45 Hours
Total Hours Required	**198 Hours**

Social Science Major with Elementary Education Certification

Students majoring in social science who wish to complete requirements toward certification in elementary education may choose a special program which was designed to meet their needs. In this curriculum, social science majors take courses which cover subject matter traditionally taught as social studies in the elementary school. You must achieve a minimum grade of "C" in each required social science course in order to graduate. *If you choose to pursue elementary education certification, you are urged to work closely with your social science advisor and with an advisor from the elementary education program.*

Degree Requirements

General Education Program *Further information is listed on page 66 of current catalog or can be obtained from the department chairperson's office.*	48 Hours
Social Science Requirements *See page 98 of current catalog or obtain from department chairperson's office.*	60 Hours
Arts and Sciences Requirements *See page 155.*	37 Hours
Professional Education Requirements *See page 155.*	45 Hours
Total Hours Required	**190 Hours**

Reading Education Program

The reading education program provides a series of specially designed courses and field experiences leading to a reading endorsement (K-12) which can be added to the elementary or secondary certificate. This program is designed for both pre-service students and in-service teachers.

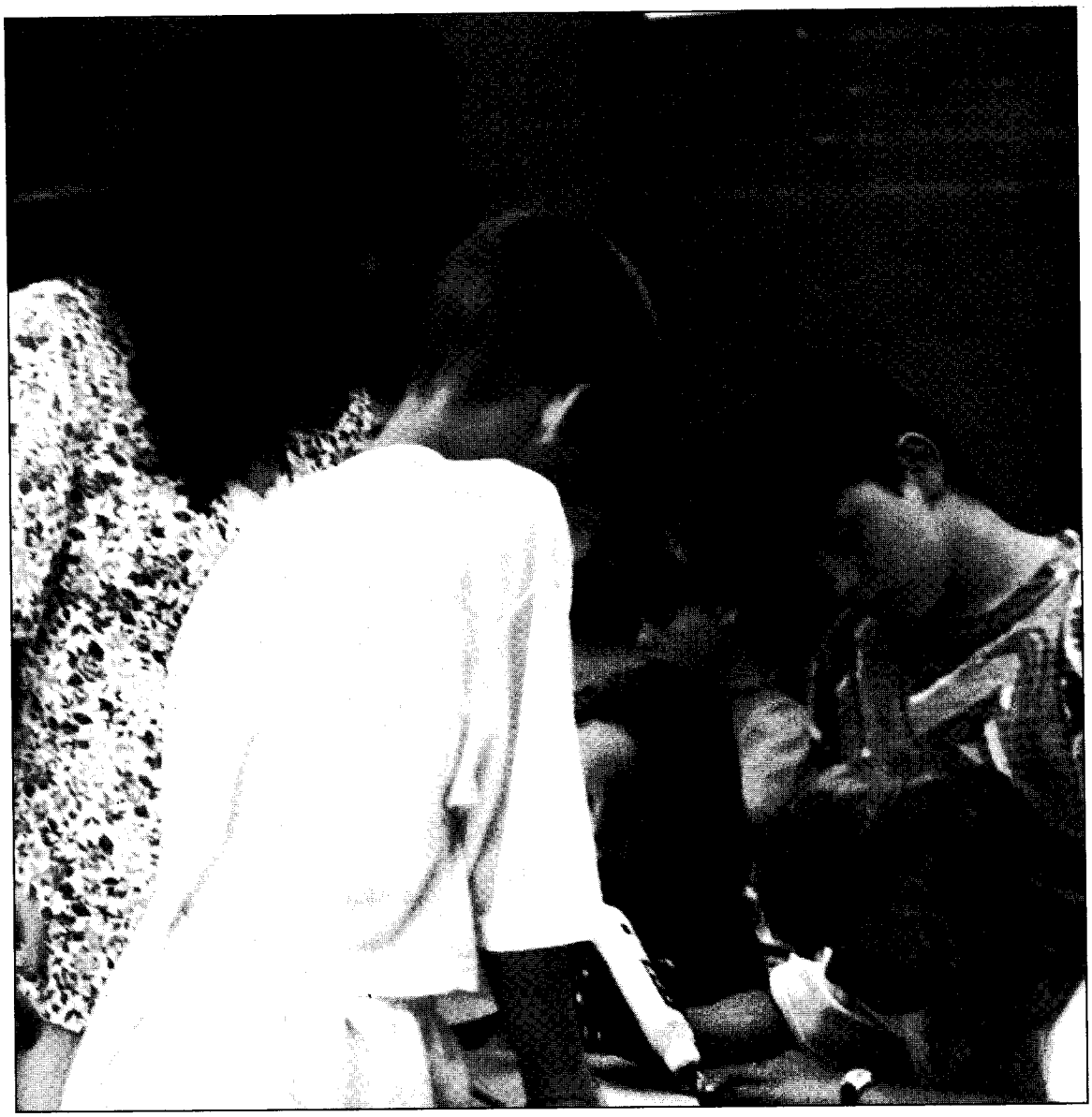
Reading Endorsement Requirements

Course No.	Course	Cr. Hrs.
EDUC 312	Literacy Foundations *OR*	4
EDUC 320	Int. Tch. Meth: Lit. & Soc. St.	
EDUC 321	Adv. Developmental Reading	4
EDUC 322	Teach. of Wrtng. for Elem. Ed.	4
EDUC 323	Adolescent Literature	4
EDUC 324	Critical Rdng. in Content Areas	4
ENGL 300	Children's Literature	4
ENGL 360	Intro. to Lang. and Ling.	4
ENGL 362	Patterns of English	4
Total Hours Required		32

Note: Students must take and pass the NTE Reading Education Specialty Area Exam.

Bachelor Degrees

The bachelor of science in sports studies offered by the Center for Teacher Education prepares you for a career in an employment area that addresses the health, recreational, and physical fitness needs of people in our society. Our curriculum ranges from in-depth study of the levels of sports participation to injury prevention and treatment to sports management in general. The program also provides the real work situations, hands-on training, and strong theoretical base from which you can make a career decision.



Graduates of the sports studies program make sport and fitness opportunities available to all people. Through professional and personal interactions, our graduates touch the lives of others, influencing their goals, their attitudes, and their values. The importance of preparing you for this responsibility is central to Shawnee State's sports studies program and a charge we take seriously.

Application for Admission to the Sports Studies Degree Programs

(Athletic Training/Sports Management)

You must apply for and receive acceptance into the sports studies degree programs before you are eligible to take 300 and 400 level courses.

Applications are available from the Center for Teacher Education, located in Massie Hall, room 213. Once completed, applications should be returned to the Center for Teacher Education for review by the admissions committee, which meets to review applications on an as-needed basis.

Students are evaluated according to the minimum admission requirements listed below.

- You must have an overall GPA of 2.0 or higher.
- All of the following courses must be completed with a grade of C or higher:

BIOL 101	HPER 202
BIOL 110S	HPER 220
ENGL 111S	HPER 228
ENGL 112S	HPER 261
ENGL 115S	MATH 110S
HPER activity course	PSCI 110S
HPER activity course	SPCH 103

- You must have satisfactorily completed all components of HPER 251 Clinical/Field Experiences in Athletic Training taken prior to application.

Bachelor of Science in Sports Studies with a Concentration in Sports Management

This degree prepares you for employment in a corporate fitness center, health club, nautilus center, sports organization/federation, newspaper, television, and the many areas of recreation.

Students enrolled in the sports management concentration focus on business skills such as financial management, marketing, and the legal questions associated with sports and exercise. They also examine the relationship of play, game sports, athletics, fitness, and dance to our culture. This concentration's curriculum provides a foundation of sports management philosophy, principles, and objectives. Field experiences are also a part of the program and provide practical experience in various recreational settings.

Degree Requirements

General Education Program *Further information is listed on page 66 of the current catalog or can be obtained from the Center for Teacher Education.*	48 Hours
Sports Studies Core	56 Hours
Activity Classes	12 Hours
Sports Management Concentration	73 Hours
University Electives	9 Hours
Total Hours Required	198 Hours

Sports Studies Core (56 Hours)

Course No.	Course	Cr. Hrs.
BIOL 101	Introduction to Biology	3
BIOL 310	Principles of Anatomy	5
BIOL 311	Kinesiology	4
HPER 202	Pers. and Comm. Health	4
HPER 203	Human Nutrition	4
HPER 220	Intro. to Athletic Training	3
HPER 227	First Aid	4
HPER 228	Law and Liability of Sports	4
HPER 261	Found. of Physical Exercise	2
HPER 352	Sports for the Disabled	3
HPER 360	Drugs/Substance Abuse	4
HPER 385	Psychology of Sports	3
HPER 386	Sociology of Sports	3
HPER 420	Physiology of Exercise	4
HPER 450	Org./Adm. of Sports Prog./Ath.	3
SPCH 103	Pub. Spk. and Hum. Com.	3

Activity Classes (12 Hours)

Students take four team sports, four individual sports, and four lifetime/leisure activity classes.

Team:	HPER 111	Basketball
	HPER 117	Volleyball
	HPER 124	Softball
	HPER 125	Soccer
Individual:	HPER 115	Bowling
	HPER 116	Gymnastics
	HPER 120	Golf
	HPER 130	Beginning Racquetball
	HPER 140	Beginning Tennis
	HPER 150	Swimming
	HPER 154	Life Guard Training
	HPER 160	Aerobic Dance
	HPER 187	Conditioning & Weight Trng.

Actvity Classes (cont'd.)

Lifetime/ Leisure:	HPER 100	Dance: Concert and Recreation
	HPER 162	Yoga
	HPER 170	Karate
	HPER 172	Women's Self Defense
	HPER 180	Jogging
	HPER 182	Orienteering
	HPER 185	Backpacking
	HPER 186	Cycling

Sports Management Concentration (73 Hours)

Course No.	Course	Cr. Hrs.
BUAC 201	Financial Accounting	4
BUAC 203	Managerial Accounting	4
BUAI 101	Intro. to Auto. Info. Syst. *OR*	4
BUIS 101	Intro. to Computer Info. Syst.	
BUFI 201	Principles of Finance	4
BUMG 310	Management Principles	4
BUMG 330	Organizational Communication	4
BUMK 310	Marketing Principles	4
BUSL 270	Legal Environment of Business	4
ECON 101	Macroeconomics	4
ECON 102	Microeconomics	4
HPER 201	Intro. to Sports Management	3
HPER 366	Aquatic Management	4
HPER 368	Introduction to Sport Law	4
HPER 390	Sports & Fitness Mgt. 1	4
HPER 392	Sports & Fitness Mgt. 2	4
HPER 407	Practicum 1	4
	1 hr. seminar, 10 hrs. in field	
HPER 499	Practicum 2	6
	1 hr. seminar, 20 hrs. in field	
SPCH 105	Intro. to Mass Communication	4

Bachelor of Science in Sports Studies with a Concentration in Athletic Training

Graduates of our athletic training program are able to implement prevention-of-injury programs and provide immediate treatment and rehabilitation procedures for injured athletes. They have a thorough knowledge of anatomy, physiology, psychology, hygiene, kinesiology/biomechanics, nutrition, taping, conditioning, prevention of injury methodology, protective equipment, first aid, and emergency care.

Our graduates also possess the human relations and communication skills necessary to work well with team physicians, coaches, administrators, and athletes.

The athletic training program uses practical education and a work experience approach to gaining the knowledge and skills needed to fulfill certification requirements through the National Athletic Trainer Association (NATA). This program also prepares you to take the three-part national certification examination.

Special Note: Students are not automatically certified after the completion of the athletic training program. You must take and pass the National Athletic Trainers Association Certification Examination. Exam locations and dates are listed in the sports studies student handbook. Contact the coordinator of the program for more information.

Degree Requirements

General Education Program	48 Hours
Further information is listed on page 66 of the current catalog or can be obtained from the Center for Teacher Education.	
Sports Studies Core	56 Hours
See previous page.	
Activity Classes	12 Hours
See previous page.	
Athletic Training Concentration	66 Hours
University Electives	16 Hours
Total Hours Required	**198 Hours**

Athletic Training Concentration (66 Hours)

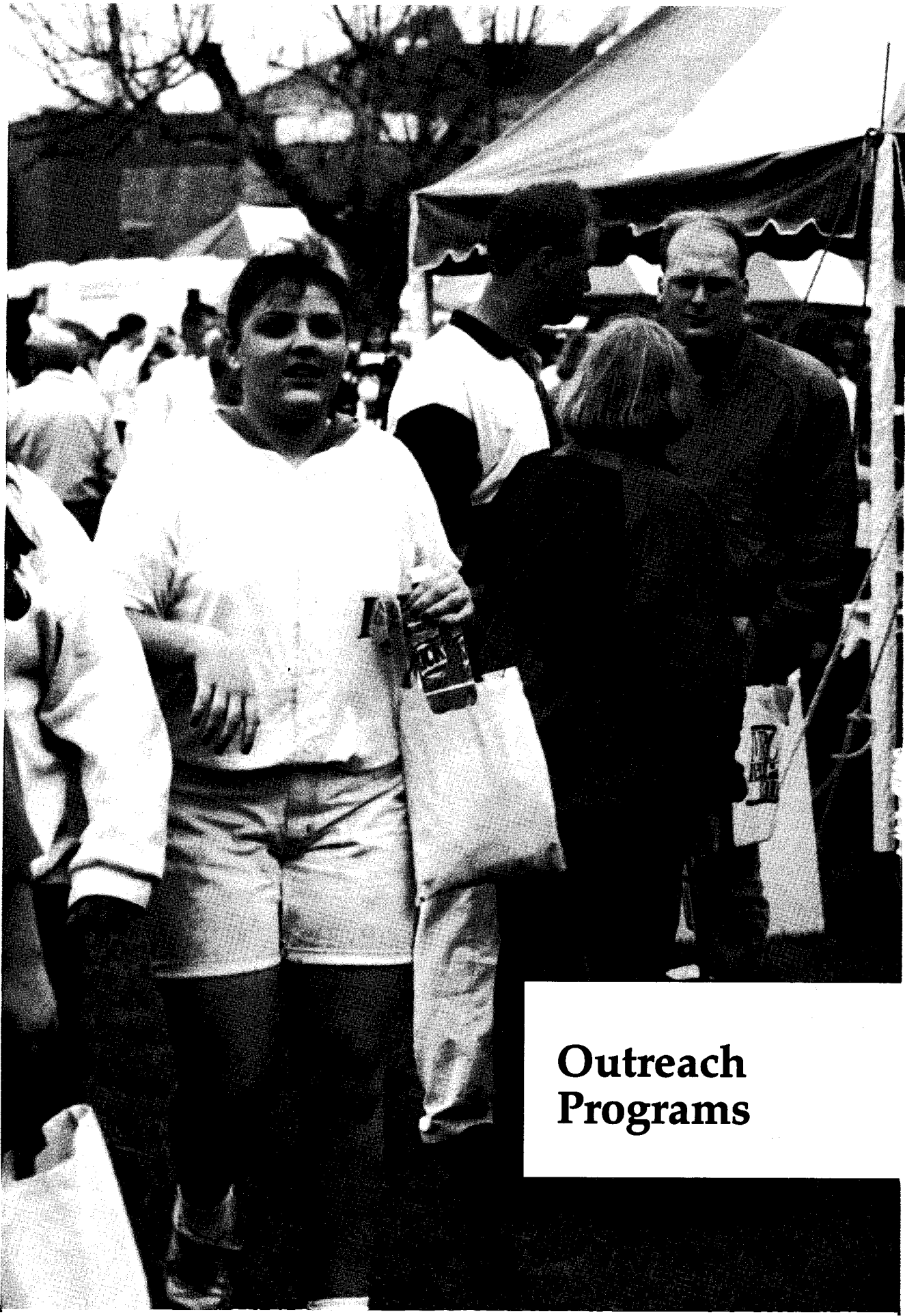
Course No.	Course	Cr. Hrs.
BIOL 151	Principles of Biology	4
BIOL 315	Histology	5
HPER 222	Practicum in Sports Medicine	2
HPER 251	Clin./Field Exper. in Ath. Trng.	
	Clinical and field experience in athletic training is required each quarter, up to a maximum of 36 credit hours within the total degree credit hour requirement.	
HPER 320	Advanced Athletic Training	3
HPER 322	Sports Medicine 1	4
HPER 325	Rehabilitation of Athletic Injury	3
HPER 326	Therapeutic Modalities	3
HPER 422	Advanced Sports Medicine 2	4
HPER 495	Spec. Top. in Athletic Training	2

Athletic Training Certification

(For students not majoring in sports studies)

Students not pursuing a degree in sports studies but who wish to become an athletic trainer must take the following courses, which are required for certification by the National Athletic Trainers Association. You may contact the coordinator of the sports studies program if you'd like more information.

Course No.	Course	Cr. Hrs.
BIOL 310	Principles of Anatomy	5
BIOL 311	Kinesiology	4
HPER 202	Pers. and Comm. Health	4
HPER 203	Human Nutrition	4
HPER 220	Intro. to Athletic Training	3
HPER 227	First Aid	4
HPER 385	Psychology of Sports	3
HPER 420	Physiology of Exercise	4
PSYC 360	Drugs/Substance Abuse	4



Outreach Programs

Outreach Programs

Project Discovery

Project Discovery is a State of Ohio- and National Science Foundation-sponsored effort to improve the quality of the teaching and learning of mathematics and science through research-based, long-term professional development for practicing teachers. The project initially focuses on middle and junior high school mathematics and science with inquiry-based instruction and the use of technology in teaching and learning. The South Region of Project Discovery includes a collaborative effort in eight southern Ohio counties and is housed in Shawnee State University's Vern Riffe Advanced Technology Center, room 308. For further information, call (614) 355-2304 or (614) 355-2239.

Talent Search

Shawnee State University's Educational Talent Search program is funded through a grant from the U.S. Department of Education and serves residents of Lawrence, Pike, and Scioto Counties. The program provides services to high school students or young adults up to 27 years of age who want to pursue a college education. Participants must meet low income guidelines, as established by the U.S. Department of Education, be a potential first generation college student, or have other needs as determined by assessment.

Participants receive:

- Educational Counseling: ACT, SAT, PSAT test preparation workshops; information about specific colleges, universities, and other schools; assistance selecting, applying to, and enrolling in educational programs after high school; college life orientation workshops; contacts with school representatives; and assistance selecting high school classes in preparation for college.
- Career Counseling Services: Career exploration and planning, career interest testing and follow-up, goal setting.
- Financial Aid Information and Assistance: Financial aid workshops for parents and students, individual information about and assistance with applications for grants, scholarships, college work programs, and student loans.
- Assistance with Special Needs: Identification of support services for disabled individuals and for students who may need additional help for college or vocational success (i.e., tutoring and counseling).

The Talent Search program is located in the Trio Center on the first floor of the Business Annex, and the office is open Monday through Friday, 8:00 a.m. to 5:00 p.m. Please call (614) 355-2558 for further information.

Tech Prep Ohio South Consortium

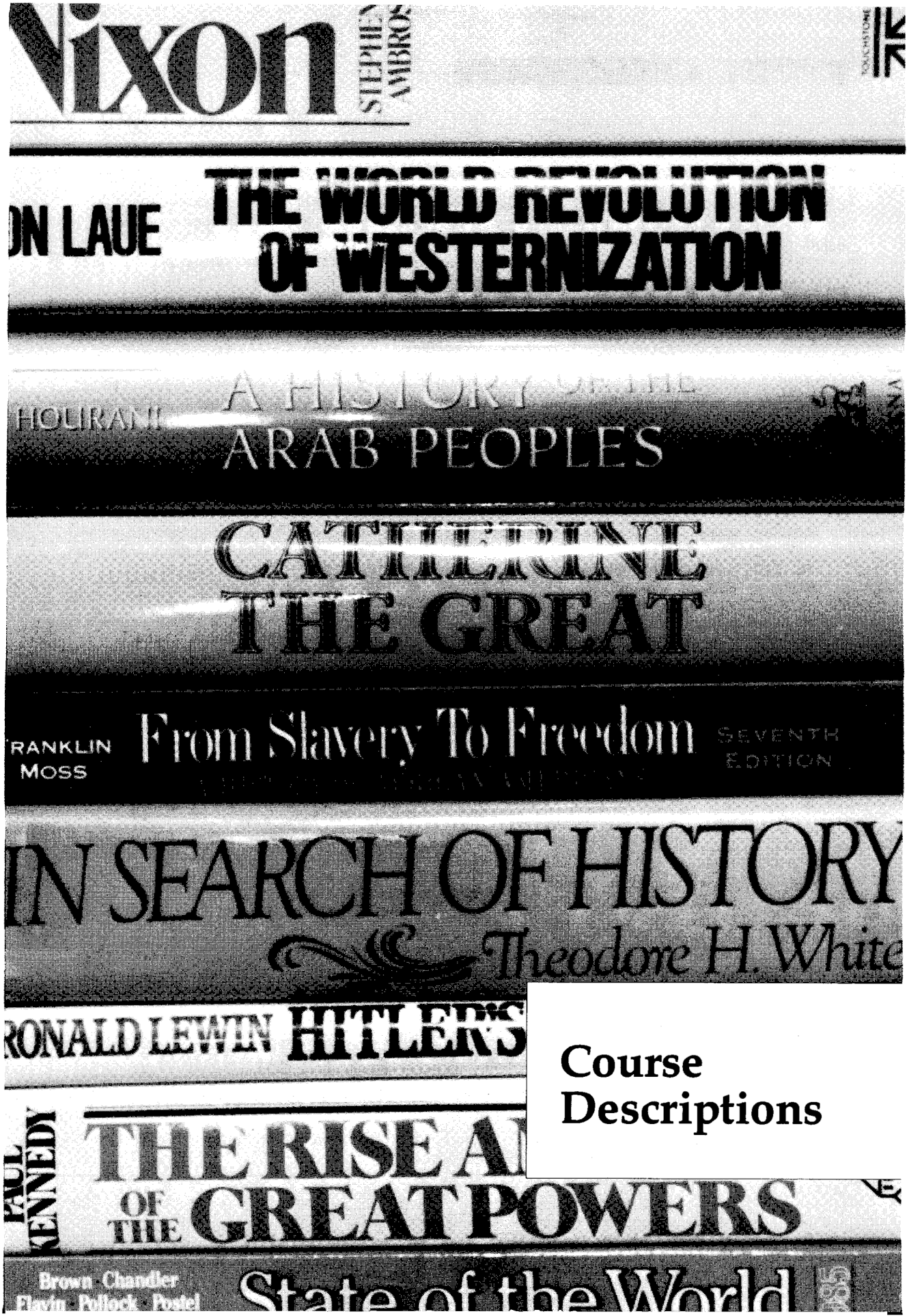
Tech Prep Ohio South is a consortium of schools, universities, business/industry, and agency representatives working in collaboration as part of a national educational reform movement. Combining secondary and postsecondary education programs through a formal articulation agreement, Tech Prep provides courses in a progressive, nonduplicative sequence, which lead to associate degrees in any number of technical and service careers.

Information about Tech Prep is available by contacting the director. The office is located on the first floor of Massie Hall and may be reached by calling (614) 355-2281.

Upward Bound

The Shawnee State University Upward Bound program is funded through a grant from the U.S. Department of Education and serves Scioto County high school students. The program provides special services, activities, and classes (including a residential component in the summer) to students who want to attend college after graduation. Participants must meet low income guidelines as established by the federal government or be a potential first generation college student.

The Upward Bound office is located in the Trio Center in the Business Annex and can be reached by calling (614) 355-2558.



Course Descriptions

Explanation of Prerequisites

Most learning beyond basic skills is dependent upon mastery of some prior skill or subject content. As a result, many courses at the University require the satisfaction of prerequisites prior to course enrollment. Prerequisites may be met by successful completion of the prior courses listed or by placement, via testing, into the course.

The academic division/college may withdraw a student from a course for which prerequisites have not been satisfied.

Explanation of Abbreviations

The abbreviations listed are found throughout the course descriptions on the following pages. In addition, it should be noted that some upper level courses are not included on these pages. Please contact your faculty advisor for further information.

ADNR — Associate Degree Nursing
AHNR — Allied Health/Nursing
ANTH — Anthropology
ARTH — Art History
ARTS — Art
BIOL — Biology
BUAC — Accounting
BUAI — Automated Information Systems
BUBA — Business Administration
BUFI — Banking and Finance
BUHE — Business/Health
BUIS — Business Information Systems
BULA — Legal Assisting
BULW — Business Law
BUMG — Management
BUMK — Marketing
BUOA — Office Administration
BURE — Real Estate
CHEM — Chemistry
DTHY — Dental Hygiene
ECON — Economics
EDUC — Education
EMTP — Paramedic
ENGL — English
ESL — English as a Second Language
ETCA — Computer Aided Drafting and Design
ETCO — Engineering Technology Core
ETEC — Electrical/Computer Engineering Technology
ETEG — Engineering Graphics
ETEM — Electromechanical Engineering Technology
ETIN — Instrumentation Technology
ETPL — Plastics Engineering Technology
ETRO — Robotics
FREN — French
GEOG — Geography
GEOL — Geology
GOVT — Government
HIST — History
HPER — Health, Physical Education, and Recreation
JOUR — Journalism
LING — Linguistics
MATH — Mathematics
MLTC — Medical Laboratory Technology
MUSI — Music
NTSC — Natural Science
OTAT — Occupational Therapy Assistant
OTST — Occupational Therapy
PHAR — Pharmacy
PHIL — Philosophy
PHYS — Physics
PSCI — Physical Science
PSYC — Psychology
PTAT — Physical Therapist Assistant
RDLT — Radiologic Technology
ROCI — Reflections on Community Involvement
RPTT — Respiratory Therapy
SOCI — Sociology
SPAN — Spanish
SPCH — Speech
THAR — Theater
UNIV — University

Su — Summer
F — Fall
W — Winter
Sp — Spring

Preq.— Prerequisite
Coreq.— Corequisite

$ — Indicates lab fee

Please Note: All business courses have changed their "call letters." There are a few exceptions, but generally speaking you should note the following:

ACCT is now BUAC
AISM is now BUAI
BADM is now BUBA
BAFT is now BUFI
BMNT is now BUMG
BUSL is now BULW
CISB is now BUIS
FINA is now BUFI
LAST is now BULA
MGNT is now BUMG
MRKT is now BUMK
OADM is now BUOA
REST is now BURE
RMMT is now BUMK
SBMT is now BUMG

SPECIAL NOTE—ADNR (Associate Degree Nursing): *Only students officially accepted into the nursing program or those with approval of the program director may take the courses with the ADNR prefix. All ADNR courses must be taken in sequence.*

ADNR 101 Nursing 1—Fundamentals 1 (8) Introduction to the nursing process system enabling students to assist individuals to meet daily living needs. Fundamental skills and related scientific principles of nursing are presented. Laboratory practice provides the opportunity to develop beginning skills in both technical and interpersonal aspects of nursing. *F; preq. admission to ADN program; 5 lec. 9 lab; $15.00*

ADNR 102 Nursing 2—Fundamentals 2 (8) Continuing development of basic nursing skills. A beginning study of medical-surgical nursing concepts relevant to all age groups. Emphasis on application of all components of the nursing process. *W; preq. 2.0 average or better in courses required for fall quarter of first year; 5 lec. 9 lab*

ADNR 103 Nursing 3—Nursing of Adults and Children 1 (8) Focuses on implementing the nursing process in meeting basic needs of the adult or child experiencing stressors related to safety and security, activity and rest, and sexual role satisfaction. Further development of technical skills. *Sp; preq. 2.0 average or better in courses required in winter quarter of first year; 4 lec. 12 lab*

ADNR 201 Nursing 4—OB Maternal/Newborn Nursing (5) Applies the nursing process in the study of the normal aspects of the maternal cycle and the normal newborn infant. Common recurring stressors related to the maternal/newborn cycle are presented. Skills needed to provide family-centered nursing in normal and stress situations are introduced. *F W; 6 lec. 12 lab (may be five-week course)*

ADNR 202 Nursing 5—Mental Health and Illness (5) Presents concepts of mental health and selected deviant emotional and mental responses to stress. Encourages increased self-awareness and development of beginning skills in the use of self. Application of the nursing process in providing nursing care for clients with specific behavior patterns. *F W; 6 lec. 12 lab (may be five-week course)*

ADNR 203 Nursing 6—Trends (2) Concerns of nursing—past, present, and future—are explored. Discussion of the relationship of the technical nurse to health professions and community, personal development of the individual, and legal and ethical implications for nursing practice. *F W*

ADNR 204 Nursing 7—Nursing of Adults and Children 2 (10) Applies the nursing process in caring for adults and children experiencing stressors affecting oxygen transport and fluids and electrolytes balance. *F W; 6 lec. 12 lab*

ADNR 205 Nursing 8—Nursing of Adults and Children 3 (9) Systematically applies the nursing process in caring for groups of patients. Synthesizes previous knowledge for utilization of the nursing process with adult and child clients experiencing stressors affecting nutrition and elimination. *Sp; preq. ADNR 201, 202, 203, and 204; 4 lec. 15 lab*

ADNR 211 Nursing 9—Nursing Seminar (3) A theoretical and practical approach to setting nursing priorities. Discussion of the transition from student role to graduate role as a member of the health team. *Sp*

ADNR 299 Nursing Special Topics (1-3) Individual or small-group study, under the supervision of an instructor, of topics not otherwise available to students.

AHNR 100 Pre-Anatomy (4) Students are prepared for anatomy by learning medical roots, muscles, bones, body planes, and medical abbreviations. This is a special course developed primarily for all health science programs. *F W Sp*

AHNR 101 Introduction to Health Technologies (2) Introduction to the health professions, including history, responsibilities, and ethics. Includes introduction to the health science programs at Shawnee State University. *Offered on demand*

AHNR 102 - AHNR 411

AHNR 102 Medical Terminology (2) Introduction to medical terminology commonly used in health occupations. Emphasis is placed on prefixes, suffixes, and building and analyzing medical terms. *Su F*

AHNR 103 Principles of Medical Science (3) Basic inorganic, organic, and biochemistry principles as applied to human physiology. Includes principles of physics and the metric system. Specifically designed for students in allied health or nursing programs. *Su F Sp; preq. acceptance into one of the health science programs or permission of health science department chair*

AHNR 199 Topics in Health Sciences (1-14) Individual or small group study, under the supervision of an instructor, of topics otherwise not available to students.

AHNR 285 Topics in Health Physics 1 (1-14) Ten (10) course modules of classroom instruction focus on biological effects of radiation, radiation protection standards, regulations/ ALARA, respiratory protection, radiological control and monitoring, radiation protection and measurement, atomic and nuclear properties, interaction of radiation with matter, and dosimetry.

AHNR 286 Topics in Health Physics 2 (1-14) A continuation of AHNR 285. Ten (10) course modules of classroom instruction focus on biological effects of radiation, radiation protection standards, regulations/ALARA, respiratory protection, radiological control and monitoring, radiation protection and measurement, atomic and nuclear properties, interaction of radiation with matter, and dosimetry.

AHNR 299 Topics in Health Sciences (1-14) Individual or small group study, under the supervision of an instructor, of topics not otherwise available to students.

AHNR 310 Orientation to Health Care Systems (4) Cross-listed as BUHE 310. A broad orientation to the health services industry. Segments of the health services industry are identified and described with historical background, functions, interrelationships, and future roles of each. *Required for health management concentration*

AHNR 311 Health Record Principles (4) Cross-listed as BUHE 311. Study of the health record, including definition, standards for content, and format. Also studied are the interactions of the health care professionals contributing to, utilizing, and analyzing health record data.

AHNR 312 Health Care Personnel Management (4) Cross-listed as BUHE 312. Principles of health care personnel recruitment, selection, and management. Characteristics of the professional health care worker are discussed. Legal responsibilities, collective bargaining, continuing education, and training are covered.

AHNR 325 Instructing Adults (4) Cross-listed as EDUC 325. Study of adult learning needs and participation patterns. Teaching styles and techniques best suited to adults are analyzed and demonstrated.

AHNR 327 Methods of Teaching in Health and Occupations (4) Cross-listed as EDUC 327. The subject matter and teaching methodologies of health instruction in classrooms, laboratories, and community settings are analyzed and demonstrated.

AHNR 402 Community Health Education (4) Cross-listed as EDUC 402. Philosophy of community health education with emphasis on historical, conceptual, and legal precepts.

AHNR 410 Patient Care in Long-Term Health Care Facilities (4) Cross-listed as BUHE 410. An overview of the total medical and social care required for residents of long-term health care facilities. The student is oriented and exposed to the various aspects required of the administrator and institution to provide for the total care of the individual. Topics include pharmaceutical services, disease process and recognition, biological aging, and psychology of patient care, patient assessment, care planning, and nutrition.

AHNR 411 Administration in Long-Term Care Facilities (4) Cross-listed as BUHE 411. The role and responsibility of management as applied to a long-term health care facility. The expectations for the administrator are identified and discussed relative to ethical practices, licensure, state and federal agency requirements, and financial management.

AHNR 420 Problems in Health Care Management and Policies (4) Cross-listed as BUHE 420. A seminar course. Health care management problems are studied and recommendations offered for the resolution of those problems. *It is recommended that this problems and policy course be taken as the last course in the 24-hour health management concentration.*

AHNR 430 Health Care Finance and Reimbursement (4) Cross-listed as BUHE 430. Financial aspects of health care management, including income projections, budgeting, and analysis of financial statements. Reimbursement plans and types of health insurance are investigated. *Preq. BUAC 101 and 102*

AHNR 451 Internship in Health Management/Education (1-6) Cross-listed as BUHE 451 and EDUC 451. Health care management/education experience is obtained in selected institutions or agencies related to the student's health management/education interest and ability. Written reports are required. Restricted to students who have completed a minimum of 60 hours in the business core and 24 hours of the health management concentration with a minimum GPA of 3.5 in those areas. *Not regularly offered; preq. approval from the dean of the College of Professional Studies.*

AHNR 461 Research Problems in Health and Recreational Education (4) Cross-listed as EDUC 461. Exploration of research methodologies, issues, and problems peculiar to health professions.

AHNR 495 Special Topics (2-4) Cross-listed as EDUC 495. Provides students an opportunity to gain additional knowledge or experience in a specific area or field.

ANTH 101 Introduction to Anthropology (4) An introduction to the biological nature of humans. The roots of primate and hominid evolution, speciation, cultural beginnings, and the processes of evolution in modern humans are examined. *W*

ANTH 199 Topics in Anthropology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

ANTH 250 Principles of Cultural Anthropology (4) How humans have adapted as foragers, hunters, farmers, and industrialists. The diversities of preliterate and living human societies, social structure, kinship, religion, and ecology are examined in cross-cultural settings. *Sp*

ANTH 299 Special Topics in Anthropology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Separate courses repeatable for credit.

ANTH 340 MesoAmerica Before Columbus (4) Cross-listed as HIST 340. Survey of MesoAmerican settlement prior to the arrival of the Europeans, including origins of the first hunters and gatherers, development of agriculture, Olmec and Zapotec civilizations, rise and fall of Teotihuacan, and settlement and influence of Mayans, Toltecs, and Aztecs up to the arrival of the Spanish.

ANTH 360 Indians of North America (4) Description and analysis of traditional native American cultural areas and impact of modern society on native Americans. *Preq. ANTH 250*

ANTH 371 Islamic Religion, Culture, and Civilization (4) Cross-listed as HIST 371. Survey of the cultural legacy of Islam through an integrated look at the religion, social customs, economic practices, arts, and literature. May be used to meet only one GEP requirement. *W*

ANTH 399 Topics in Anthropology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

ARTH 101 Introduction to Art (4) Beginning study of the nature and purposes of art as seen both in historical and contemporary works (primarily for non-art majors).

ARTH 261 Art History Survey 1 (Prehistoric through Roman) (4) Covering Paleolithic, Egyptian, Near Eastern, Aegean, Greek, Etruscan, and Roman art. *F W*

ARTH 262 Art History Survey 2 (Medieval through Renaissance) (4) Study of Early Christian, Byzantine, Romanesque, Gothic, and Renaissance art. *W Sp*

ARTH 263 Art History Survey 3 (Baroque through Modern) (4) Study of Baroque, Neoclassical, Romantic, Realist, Impressionist, Post Impressionist, and Twentieth Century art. *Sp*

ARTH 310 History of Photography (4) Survey of major figures and ideas involved in the evolution of photography as a creative art form. *Offered on demand*

ARTH 331 Ceramic History Survey 1 (4) Prehistoric to modern non-Asian, including Egypt, Pre-Columbian American, Middle East, Africa, Europe, U.S.A. *Offered on demand*

ARTH 332 Ceramic History Survey 2 (4) Asia, China, Korea, Japan, Vietnam, and India. *Offered on demand*

ARTH 360 Nineteenth-Century Art (4) Study of the visual arts in Europe and America, from Neoclassicism through Postimpressionism, in relation to social and cultural developments of that time.

ARTH 361 Twentieth-Century Art (4) Comparative study of developments in all fields of visual art as expressions of our time.

ARTH 364 North American Survey (4) A survey of American art (colonial through the present). *Offered on demand*

ARTH 366 Non-Western Survey (4) A survey of non-Western art: Asia, China, Korea Japan, Vietnam, and India. *Offered on demand*

ARTS 101 Studio Foundations 1 (4) An entry-level class focusing on the dynamics of black and white, two-dimensional media. It provides students with methods of seeing, visualizing, and expressing themselves on paper. Required of all students with BFA major. *F W Sp; $10.00*

ARTS 102 Studio Foundations 2 (4) An entry-level class which focuses on the use and perception of color. Discussion of various color systems. Color exercises based on theory and historic contexts. Required of all students with BFA major. *W; $10.00*

ARTS 103 Studio Foundations 3 (4) An entry-level course devoted to the concepts and use of three-dimensional materials used in sculptural terms. Required of all students with BFA major. *Sp; $10.00*

ARTS 104 Terminology, Tools, and Materials in Graphic Design (4) Course designed to make students familiar with the "building blocks" used by graphic designers. Hands-on experience with many of the tools used in this profession. Emphasizes the basics of using T-squares, triangles, and technical pens. Demonstrates modern graphic computers. Introduces the many types of materials involved such as rubber cement, acetate, and papers. *F W; $5.00*

ARTS 105 The Creative Process (4) Team-taught and interdisciplinary. Examines the creative process in all the arts via lectures, demonstrations, visiting artists, and films. Special emphasis is given to artists' statements about themselves and the role of the arts in the development of civilization. Required of all students with BFA major. *Sp*

ARTS 201 Art in the Elementary Curriculum 1 (3) First of two art courses required of those wishing to become certified as elementary teachers in Ohio. The emphasis of these two courses (201 and 202) is to teach the teacher to become a creative coach or a catalyst in the child's artistic growth. Emphasis is on understanding, facilitating, and integrating art into the elementary curriculum. *F W Sp; preq. EDUC 110; $5.00*

ARTS 202 Art in the Elementary Curriculum 2 (3) Continuation of ARTS 201. *F W Sp; preq. ARTS 201; $25.00*

ARTS 205 Graphic Design Reproduction Techniques (4) A course designed to familiarize the graphic design student with the various methods of reproducing the finished art work. Discussion of various methods of printing, color separation, and electronic media. Lectures, demonstrations, field trips, and studio work are included. *F W; $5.00*

ARTS 210 Photography 1 (4) An introduction to the art and techniques of photography. Student must provide 35mm camera. *Su F W Sp; $25.00*

ARTS 211 Photography 2 (4) Continued exploration of photographic techniques. Student must provide 35mm camera. *Su F W Sp; preq. ARTS 210; $25.00*

ARTS 212 Photography 3 (4) Continuation of ARTS 211. Student must provide 35mm camera. *Su F W Sp; preq. ARTS 211; $25.00*

ARTS 215 Photography for the Graphic Designer (4) An introduction to the basic knowledge of photography for the graphic designer, covering the basics of setting up, lighting, and designing photo compositions. *Offered on demand; $25.00*

ARTS 221 Painting 1 (4) A focus on individual expression through the use of oil and acrylic painting mediums. *Su F W Sp; preq. ARTS 101, 102, or permission; $5.00*

ARTS 222 Painting 2 (4) Continuation and expansion of ideas developed in ARTS 221. *Su F W Sp; preq. ARTS 221; $5.00*

ARTS 223 Painting 3 (4) Extension of the concepts developed in ARTS 222. *Su F W Sp; preq. ARTS 222; $5.00*

ARTS 231 Ceramics 1 (4) Entry-level course focusing on the use of clay in creating hand built pottery and forms. Basics of glazing work are covered. *F W Sp; $25.00*

ARTS 232 Ceramics 2 (4) Entry-level course focusing on the use of the potter's wheel to create basic thrown forms. *F W Sp; $25.00*

ARTS 233 Ceramics 3 (4) Concentration on the combination of hand built and wheel thrown forms and further study of glaze techniques. *F W Sp; preq. ARTS 231 and 232; $25.00*

ARTS 238 Wood Design 1 (4) This course explores the basis for using wood as a design/sculpture medium. Initial understanding of tool use and safety practices is the focal point of this first class. *F W; $10.00*

ARTS 239 Wood Design 2 (4) Extension of ARTS 238. Students having a solid background in the use of woodworking tools concentrate on achieving aesthetic/artistic results in their individual design projects. *F W; $10.00*

ARTS 240 Wood Design 3 (4) Extension of ARTS 239. Promotes further exploration of the medium. *W Sp; $10.00*

ARTS 241 Sculpture 1 (4) Course designed to develop the student's ability to conceive and build three-dimensional forms in various media (plaster, clay, wood, and metal). Understanding of shapes and mass, acquaintance with tools, techniques, and materials for expression. *F W Sp; $10.00*

ARTS 242 Sculpture 2 (4) Intermediate sculpture course designed to further a student's skill in three-dimensional work. Technical procedures include advanced woodcarving, clay molding, stone carving, and various direct over armature methods. *F W Sp; preq. ARTS 241; $10.00*

ARTS 243 Sculpture 3 (4) Studio problems based on concepts applied to various three-dimensional materials. Advanced sculpture places special emphasis on the development of individual expression in the student's chosen medium. *F W Sp; preq. ARTS 242; $10.00*

ARTS 244 Introduction to Printmaking (4) A studio course utilizing basic techniques in relief printing and screen printing. *Offered on demand; $5.00*

ARTS 245 Intaglio (4) Introduction to basic intaglio techniques. Emphasis on mastering techniques used to develop personal imagery. *Offered on demand; preq. ARTS 101 and 102; $5.00*

ARTS 246 Lithography (4) An introduction to basic lithographic technique and printing. Emphasis is placed on mastering techniques used to further personal aesthetic goals. *Offered on demand; preq. ARTS 101 and 102; $5.00*

ARTS 247 Screen Printing (4) An introduction to basic silk screen techniques. Emphasis is on mastering techniques used to develop personal imagery. *Su F W Sp; preq. ARTS 101 and 102; $5.00*

ARTS 248 Relief Printing (4) An introductory course employing the range of graphic possibilities in the relief printing process. *Offered on demand; preq. ARTS 101 and 102; $5.00*

ARTS 251 Typography for the Graphic Designer (4) Studio course beginning with some basic background in type design and theory and working through its use in modern graphic design. Use of transfer lettering, type sizing, and specifications in graphic design. *Offered on demand; $5.00*

ARTS 252 Basic Illustration (4) Studio course beginning with design basics and integrating these basics into illustration techniques for the graphic designer. Black and white graphics and color techniques. *F W Sp; $5.00*

ARTS 253 Illustration (4) Extension of ARTS 252. The instructor helps the student develop a portfolio. *Offered on demand; preq. ARTS 252; $5.00*

ARTS 271 Life Drawing 1 (4) Drawing from a model in black and white media. Repeatable for credit—maximum of two quarters. *Su F W Sp; preq. ARTS 101 or permission; $5.00*

ARTS 272 Life Drawing 2 (4) Continuation of ARTS 271. Repeatable for credit—maximum of two quarters. *Su F W Sp; preq. ARTS 271; $5.00*

ARTS 273 Life Drawing 3 (4) Continuation of ARTS 272. Repeatable for credit—maximum of two quarters. *Su F W Sp; preq. ARTS 272; $5.00*

ARTS 275 Drawing 1 (4) Extension of ARTS 101 and 102. Focus is on developing drawing skills (perspective, composition, etc.) through the use of colored pencils and advanced black and white media. *Su F W Sp; preq. ARTS 101 and 102; $5.00*

ARTS 276 Drawing 2 (4) Continuation of ARTS 275. Students are expected to demonstrate increased facility and conceptualization. *Su F W Sp; preq. ARTS 275; $5.00*

ARTS 277 Drawing 3 (4) A continuation of concepts developed in ARTS 275 and ARTS 276. *F W Sp; preq. ARTS 276*

ARTS 290 Weaving 1 (4) Introduction to weaving techniques through the construction and use of a simple loom and the use of the table or floor loom. *Offered on demand; $5.00*

ARTS 292 Fabric Design 1 (4) Printing and dyeing fabric as well as applying design to cloth. *F W Sp; $10.00*

ARTS 293 Fabric Design 2 (4) Continuation of ARTS 292. *F W Sp; preq. ARTS 292; $10.00*

ARTS 294 Fabric Design 3 (4) Continuation of ARTS 293. *F W Sp; preq. ARTS 293; $10.00*

ARTS 299 Topics in Art (1-4) Opportunity for the student to plan and complete a project which meets with the approval of the staff member supervising this arranged course. Repeatable for credit. *Su F W Sp; preq. permission of staff; $5.00*

ARTS 303 Elementary Art Methods (4) Focus is on implementing studio techniques with the elementary student. *Offered on demand*

ARTS 304 Secondary Art Methods (4) The aesthetic rationale and hands-on methodology of teaching art in the upper grades. Included are: studio projects, history, appreciation, and theory.

ARTS 310 Intermediate Photography 1 (4) Continuation of ARTS 212 utilizing more advanced dark room and camera techniques. *Su F W Sp; preq. ARTS 212; $15.00*

ARTS 311 Intermediate Photography 2 (4) Utilizes techniques taught in ARTS 310 with emphasis on artistic growth in the medium. *Su F W Sp; preq. ARTS 310; lab fee $15.00*

ARTS 312 Intermediate Photography 3 (4) Utilizes techniques taught in ARTS 311. Individualizes instruction promoting continued artistic growth in the medium. *Su F W Sp; preq. ARTS 311; $15.00*

ARTS 321 Intermediate Painting 1 (4) Oil and acrylic painting used to extend concepts developed in earlier painting courses. Individual concepts highly stressed. *Su F W Sp; preq. ARTS 223; $5.00*

ARTS 322 Intermediate Painting 2 (4) *Su F W Sp; preq. ARTS 321; $5.00*

ARTS 323 Intermediate Painting 3 (4) *Su F W Sp; preq. ARTS 322; $5.00*

ARTS 324 Watercolor 1 (4) Series of courses which focuses on the use of transparent watercolors to extend personal imagery. *Su F W Sp; preq. ARTS 101, 102, or permission; $5.00*

ARTS 325 Watercolor 2 (4) Continuation of ARTS 324. *Su F W Sp; preq. ARTS 324; $5.00*

ARTS 326 Watercolor 3 (4) Continuation of ARTS 325. *Su F W Sp; preq. ARTS 325; $5.00*

ARTS 327 Figure Painting 1 (4) Painting the human figure from a model in oil or acrylic. *F W Sp; preq. ARTS 223; $5.00*

ARTS 328 Figure Painting 2 (4) Continuation of ARTS 327. *F W Sp; preq. ARTS 327; $5.00*

ARTS 329 Figure Painting 3 (4) Continuation of ARTS 328. Emphasis on individual style and technique as opposed to strictly objective rendering. *F W Sp; preq. ARTS 328; $5.00*

ARTS 331 Intermediate Ceramics 1 (4) Intermediate hand built techniques, including use of clay and glazes. A continuation of ARTS 231. *F W Sp; preq. ARTS 231; $25.00*

ARTS 332 Intermediate Ceramics 2 (4) Intermediate throwing techniques, including decorative techniques. *F W Sp; preq. ARTS 232; $25.00*

ARTS 333 Intermediate Ceramics 3 (4) A continuation of concepts developed in ARTS 331 and ARTS 332. *F W Sp; preq. ARTS 332; $10.00*

ARTS 334 Raku Ceramics (4) Introduction to the philosophy and techniques of the traditional Japanese ceramic ware called "Raku." *Sp; preq. ARTS 231 or 232; $25.00*

ARTS 335 Porcelain Ceramics (4) For advanced students of the potter's wheel. History, use, and glazing of porcelain. *W; preq. permission of staff; $25.00*

ARTS 336 Glaze Theory and Practice (4) Understanding of the many standard types of ceramic glazes. *Offered on demand; $25.00*

ARTS 338 Mold Making (4) History and development of ceramic mold making. Techniques to be addressed: bisque molds, press molds, sprigging, jigger and jolley processes, casting, ram pressing, and plaster technology. *Offered on demand*

ARTS 341 Intermediate Sculpture 1 (4) Techniques of sculptural expression in the "additive" mode: clay, wax, found elements. *F W Sp; preq. ARTS 243; $10.00*

ARTS 342 Intermediate Sculpture 2 (4) Experience with low and high relief sculpture in "subtractive" processes: carving and sandblasting in glass, clay, wood, stone, plastics. *F W Sp; preq. ARTS 341; $10.00*

ARTS 343 Intermediate Sculpture 3 (4) Relief and small full-round sculpture by casting processes: soft metals, plaster, plastics. *F W Sp; preq. ARTS 342; $10.00*

ARTS 345 Intermediate Intaglio (4) Continuation of ARTS 245. Intermediate level techniques in etching and plate production combined with use of printing papers in producing an individualized image. *Offered on demand; preq. ARTS 245; $5.00*

ARTS 346 Intermediate Lithography (4) Continuation of ARTS 246. Individual styles and techniques in lithography and advances by understanding more advanced methods of register paper ink use. *Offered on demand; preq. ARTS 246; $5.00*

ARTS 347 Intermediate Screen Printing (4) Continuation of ARTS 247. Introduction of new techniques in manual and photo screen print production. *Offered on demand; preq. ARTS 247; $5.00*

ARTS 371 Intermediate Life Drawing 1 (4) Working from a model developing a unique personal approach to drawing. Repeatable for credit—maximum of two quarters. *Su F W Sp; preq. ARTS 101; $5.00*

ARTS 372 Intermediate Life Drawing 2 (4) Continuation of ARTS 371. Repeatable for credit—maximum of two quarters. *Su F W Sp; preq. ARTS 101; $5.00*

ARTS 373 Intermediate Life Drawing 3 (4) Continuation of ARTS 372. Repeatable for credit—maximum of two quarters. *Su F W Sp; preq. ARTS 101; $5.00*

ARTS 375 Intermediate Drawing 1 (4) Development of a personal style of expression in two-dimensional drawing mediums. *Su F W Sp; preq. ARTS 277; $5.00*

ARTS 376 Intermediate Drawing 2 (4) Continuation of ARTS 375. *Su; preq. ARTS 375; $5.00*

ARTS 399 Topics in Art (2-4) Opportunity for the student to plan and complete a project which meets with the approval of the staff member supervising this arranged course. Repeatable for credit. *Su F W Sp; preq. permission of staff; $5.00*

ARTS 410 Advanced Photography 1 (4) Advanced techniques in individualized areas such as lighting, color, and photographing the figure. *F W Sp; preq. ARTS 312; $5.00*

ARTS 411 Advanced Photography 2 (4) Continuation of ARTS 410. *W Sp; preq. ARTS 410; $5.00*

ARTS 412 Advanced Photography 3 (4) Continuation of ARTS 411 and presentation of senior portfolio. *Sp; preq. ARTS 411; $5.00*

ARTS 421 Advanced Painting 1 (4) *F W Sp; preq. ARTS 326; $5.00*

ARTS 422 Advanced Painting 2 (4) *F W Sp; preq. ARTS 421; $5.00*

ARTS 423 Advanced Painting 3 (4) Focus on helping the artist develop a coherent/cohesive body of work (developing an individual style). *F W Sp; preq. ARTS 422; $5.00*

ARTS 424 Advanced Watercolor 1 (4) Continuation of ARTS 326 with more emphasis on individual style and use of more advanced materials such as special papers, etc. *Su F W Sp; preq. ARTS 326; $5.00*

ARTS 425 Advanced Watercolor 2 (4) Continuation of ARTS 424 with a widening dialog of expression based on individual style. Combined with experiments in the medium. *Su F W Sp; preq. ARTS 424; $5.00*

ARTS 426 Advanced Watercolor 3 (4) Continuation of ARTS 425 combined with a presentation of senior portfolio. *Su F W Sp; preq. ARTS 425; $5.00*

ARTS 427 Advanced Figure Painting 1 (4) Painting from a model in oil or acrylic. *F W Sp; preq. ARTS 329; $5.00*

ARTS 428 Advanced Figure Painting 2 (4) Painting from a model in oil or acrylic. *F W Sp; preq. ARTS 427; $5.00*

ARTS 429 Advanced Figure Painting 3 (4) Continuation of ARTS 428. Considerable progress in a personal style is encouraged with emphasis on using the human form as a basis for advanced work. *F W Sp; preq. ARTS 428; $5.00*

ARTS 434 Advanced Raku (4) Continuation of ARTS 334. The Raku philosophy as applied to modern and western forms. *Offered on demand; preq. permission of staff; $25.00*

ARTS 435 Advanced Porcelain (4) Continuation of ARTS 335. Commercial and self-formulated porcelain applied to larger works. *Offered on demand; preq. permission of staff; $25.00*

ARTS 436 Advanced Glaze Theory and Practice (4) Continuation of ARTS 336. Compounding and testing of self-designed glazes. *Offered on demand; preq. ARTS 336; $25.00*

ARTS 441 Advanced Sculpture 1 (4) Techniques of casting in full-round, high-temperature, "harder" metals (bronze, aluminum) using the *cire perdue* process. *F W Sp; preq. ARTS 343; $10.00*

ARTS 442 Advanced Sculpture 2 (4) Emphasizes personal expression and the development of style in combinations of the foregoing technical processes. *F W Sp; preq. ARTS 441; $10.00*

ARTS 443 Advanced Sculpture 3 (4) Continuation of personal development. Introduction to land art, monument art, environment art, happenings, performance art. *F W Sp; preq. ARTS 442; $10.00*

ARTS 475 Advanced Drawing 1 (4) Continuation of ARTS 376. *Su F W Sp; preq. ARTS 376; $5.00*

ARTS 476 Advanced Drawing 2 (4) Continuation of ARTS 475. *Su F W Sp; preq. ARTS 475; $5.00*

ARTS 480 Senior Studio 1 (4) This course (and ARTS 481) must be taken the senior year in the area of the student's concentration. Arranged time. *Offered on demand; $5.00*

ARTS 481 Senior Studio 2 (4) This course must be in the area of the student's concentration. Arranged time. *Offered on demand; preq. ARTS 480; $5.00*

ARTS 499 Topics in Art (2-4) Opportunity for the student to plan and complete a project which meets with the approval of the staff member supervising this arranged course. Repeatable for credit. *Su F W Sp; preq. permission of staff; $5.00*

BIOL 099 Fundamental Biology (4) Designed for students with an inadequate background in biological science or those students with no high school biology who plan to enter one of the allied health programs. Material presented is intended to increase familiarity with terms and chemical processes. *Su F W Sp*

BIOL 101 Introduction to Biology (3) An introduction to basic concepts of biology for allied health and nursing students. *F W*

BIOL 110S Life Sciences Core Course (4) Students have the opportunity to gain familiarity with the characteristics of life on earth, consider physiological and anatomical features of their own body systems, analyze examples of the impact of biologic phenomena on the individual and society, and apply the scientific method. *2 lec. 2 discussion/activity; $10.00*

BIOL 151 Principles of Biology (5) Introduction to principles and concepts of life; emphasis on interrelationships of structural, functional, reproductive, evolutionary, and ecological principles related to cells and organisms. *F W; 4 lec. 2 lab; $30.00*

BIOL 162 Human Anatomy and Physiology (5) A general survey of the structure and function of the human body. Not applicable for students requiring BIOL 310 and BIOL 320. *W; preq. BIOL 101 or 151; 4 lec. 2 lab; $25.00*

BIOL 202 Principles of Plant Biology (5) Anatomy and morphology of seed plants are related to the functional aspects of photosynthesis, growth, transport, and reproduction. Practical emphasis on plant/man interactions. Brief survey of plant kingdom with focus on life histories and evolutionary relationships. *Sp; preq. BIOL 151; 4 lec. 2 lab; $10.00*

BIOL 203 Principles of Animal Biology (5) Principles of animal taxonomy, structure, function, development, and behavior. Laboratory survey of major phyla. *W; preq. BIOL 151; 4 lec. 3 lab; $20.00*

BIOL 210 Taxonomy of Vascular Plants (4) Principles of classification of extinct and extant seed plants with emphasis on family recognition. Collection, identification, and preservation of seed plants. *3 lec. 2 lab*

BIOL 212 Forestry Management and Practices (4) Investigation of the development and the existing practices of modern forestry in the U. S. Basic management practices are discussed with laboratory exercises designed to improve forest management skills. *Offered on demand; preq. BIOL 202; 3 lec. 2 lab*

BIOL 220 Wildlife Management (4) A study of ecological principles of the management of wild animals, both game and non-game species. The economic importance of wildlife and the role of various wildlife agencies are also considered. *Offered on demand; 3 lec. 2 lab; $10.00*

BIOL 260 - BIOL 340

BIOL 260 Neurobiology of Behavior (4) Basic neurology, neurophysiology, and neuropharmacology, with emphasis on how they relate to human behavior.

BIOL 271 Field Ornithology (4) A study of the classification, adaptation, and habitat requirements of birds with particular emphasis on Ohio species. Field identification is emphasized in lab. Sat. field trip *3 lec. 3 lab; $22.00*

BIOL 272 Ohio's Natural Heritage (4) An exploration of the natural history of Ohio. Arranged field trips visit all five of Ohio's physiographic regions. *3 lec. 3 lab arranged; Saturday field trip; $21.00*

BIOL 290 Seminar in Lifes Sciences (1-4) Discussion of advanced topics in the life sciences.

BIOL 301 Paleobiology (4) Cross-listed as GEOL 301. An introduction to major groups of invertebrates that are commonly preserved in rocks. Emphasis on preservation, morphology, collection, and geological and biological significance of invertebrate fossils. *Preq. GEOL 202 or instructor permission; 3 lec. 2 lab*

BIOL 302 Dendrology (4) Collection, identification, nomenclature, classification, and ecological relationship of native, introduced, and cultivated woody plants. *As needed; 3 lec. 2 lab; $15.00*

BIOL 303 Spring Flora (4) Identification, nomenclature, and classification of spring flowering plants. Origin and evolution of flora in Ohio. *3 lec. 2 lab*

BIOL 307 General Entomology (5) An introduction to the morphology and classification of insects. The major orders, families, and species of economic importance, both beneficial and pest, are emphasized. Students collect and identify local species. *4 lec. 2 lab; $15.00*

BIOL 310 Principles of Anatomy (5) An introduction to morphology of tissues and systems of the human body. *F W; preq. BIOL 101 or 151; 4 lec. 3 lab; $35.00*

BIOL 311 Kinesiology (4) Concentration on skeletal and muscle systems and their functional interplay in the analysis of motion. *Preq. BIOL 162 or 310; 3 lec. 2 lab; $20.00*

BIOL 312 Sectional Anatomy (3) An introduction to sectional human anatomy. *Preq. BIOL 162 or 310; 2 lec. 2 lab; $30.00*

BIOL 314 Human Neuroanatomy (5) A detailed anatomy of the human nervous system with attention to functional and clinical considerations. *Preq. BIOL 162 or 310; 4 lec. 2 lab; $40.00*

BIOL 315 Histology (5) Study of the microscopic structure of cells, tissues, and organ systems and their physiological properties. *Preq. BIOL 162 or 310; 4 lec. 2 lab; $15.00*

BIOL 320 Principles of Physiology (5) An introduction to human systems physiology. *W Su; preq. BIOL 162 or 310*

BIOL 321 Human Physiology Lab (2) Laboratory designed to complement BIOL 320. Exercises illustrate basic physiological principles and techniques, with emphasis on the human. *Preq. or Coreq. BIOL 320; 1 discussion 3 lab*

BIOL 330 Ecology (5) A study of the interrelationships among the many elements in an environment. A historical approach to the concept of evolution, man's impact upon the environment, and common ecological problems faced by society. Labs introduce common and basic ecological techniques. *F; preq. BIOL 202; 4 lec. 2 lab; Saturday field trip; $22.00*

BIOL 331 Advanced Field Biology (4) Examination of the principles and techniques of biological field investigation. *Offered on demand; preq. BIOL 330; 3 lec. 3 lab; Saturday field trip; $10.00*

BIOL 340 Genetics (5) Principles and concepts of genetics as revealed by classical and and modern investigation. Transmission, molecular, and population genetics are examined. *F; preq. BIOL 151*

BIOL 341 Genetics Lab (2) Experiments and experiences designed to illustrate principles of genetics. *Preq. or coreq. BIOL 340; 4 lab; $30.00*

BIOL 350 Microbiology (5) A survey of representative types of microorganisms. Emphasis is placed on cellular structure and physiology, nutritional, and environmental requirements and methods of reproduction. Introduction to the role of pathogenic organisms in diseases, principles of immunity and resistance to disease. Laboratory includes methods of sterilization, culturing, staining, and identification of bacteria. *Su F; preq. BIOL 101 or 151; 4 lec. 3 lab; $35.00*

BIOL 360 Plant Anatomy and Morphology (5) Detailed study of vascular plant anatomy and morphology considered from an evolutionary viewpoint. Labs involve study of anatomy and morphology of all major vascular plant groups, extinct and extant. *Offered on demand or by arrangement; preq. BIOL 202; 4 lec. 2 lab; $10.00*

BIOL 365 Phycology (5) An introduction to the taxonomy, morphology, evolution, and ecology of terrestrial, freshwater, and marine algae. Practice in identifying local species. *Preq. BIOL 151; 3 lec. 2 lab; $10.00*

BIOL 370 Marine Biology (5) An introduction to marine biology, including the areas of oceanography and ecology. All biological principles are infused into discussions with marine themes. *Preq. BIOL 151; 4 lec. 2 lab; $30.00*

BIOL 395 Special Topics in Biology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. *Preq. BIOL 110S; $20.00*

BIOL 407 Diagnostic Microbiology (5) Diagnostic procedures for the recovery and identification of medically important bacteria and fungi. Emphasis is on the morphological, cultural, biochemical, and serological characteristics of various pathogenic bacteria and fungi. *Preq. BIOL 350; 3 lec. 6 lab*

BIOL 410 Advanced Human Anatomy (5) A regional approach to the anatomy of the human body utilizing cadaver dissection. *Preq. BIOL 162 or 310; 4 lec. 3 lab; $60.00*

BIOL 411 Biochemistry (4) Cross-listed as CHEM 411. General principles of the structural and functional properties of carbohydrates, lipids, nucleic acids, and proteins. This course can be counted as a concentration area in biology or chemistry. *Preq. CHEM 307; 4 lec.*

BIOL 420 Mammalogy (5) A study of the structural features, evolution, and classification of mammals, especially of Ohio. Other topics include ecology, zoogeography, behavior, reproductive strategies, physiological adaptations to extreme environments, and economic aspects. *Preq. BIOL 151 or equivalent; 4 lec. 3 lab*

BIOL 432 Cell Biology (5) Current survey of the structure and function of eukaryotic and prokaryotic cells, including recent advances in molecular biology and tissue culture technique. *Preq. BIOL 151 and CHEM 122 or 142*

BIOL 450 Immunology (4) Study of antigen and antibodies with emphasis on in vivo and in vitro reactions, including recent information in immunogenetics and monocional strategies. *Preq. BIOL 350*

BIOL 470 Plant Physiology (5) A general introduction, including plant/soil, plant/water relationships, mineral nutrition, photosynthesis, and growth integrated with related aspects of biophysics. *Preq. BIOL 202 and 360; 4 lec. 2 lab*

BIOL 485 Senior Project (1-4) In-depth study of a selected topic in the life sciences, culminating in the preparation of a senior paper. *Su F W Sp; preq. junior or senior standing; $15.00*

BIOL 490 Seminar in the Life Sciences (1-4) Discussion of advanced topics in the life sciences. *preq. junior or senior standing*

BIOL 495 Undergraduate Research (1-4) Independent life science investigation under the direction of a faculty member. *Preq. junior or senior standing; $5.00*

BIOL 499 Special Topics in Life Science (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

BUAC 101 Accounting 1 (4) Introduction to accounting concepts and procedures. The accounting cycle: nature of accounts and techniques of recording, classifying, summarizing, and analyzing basic financial data. Accounting for the formation and operation of business enterprises. *F W Sp; $20.00*

BUAC 102 Accounting 2 (4) Application of fundamental accounting techniques for cash, long term investments, notes and accounts, inventory methods, plant and equipment, and liabilities. Introduction to manufacturing operations, cost methods, and management's need of cost data. *W Sp Su; preq. BUAC 101; $20.00*

BUAC 103 Accounting 3 (4) Reporting and analyzing financial data. Financial statement introduction, analysis, and interpretation to meet the needs of modern management. Introduction to accounting techniques applicable to parent and subsidiary companies and departmental and branch operations. Budgeting as an aid to management and the importance of income tax considerations in financial decisions. *Sp Su; preq. BUAC 102; $20.00*

BUAC 110 Payroll Records/Accounting (4) A basic course in the maintenance of personnel and payroll records as required by the Fair Labor Standards Act and the various federal and state laws covering the withholding and payment of payroll related taxes. *Sp Su; preq. BUAC 101 or 201; $30.00*

BUAC 201 Financial Accounting Principles (4) An introduction to the concepts and principles underlying financial accounting theory. The study includes the accounting equation and its application to the business entity. Procedures and concepts in accumulating and reporting financial information are developed. (Not open to students who have completed BUAC 101 and 102.) *F W; preq. sophomore standing; $20.00*

BUAC 203 Managerial Accounting (4) A study of the financial information needs of management for decision making. Includes the development of financial statements for manufacturing entities, the study of the components of unit cost, variable costing, and cost-volume-profit analysis. *W Sp; preq. BUAC 201; $20.00*

BUAC 215 Tax Accounting (4) Current income tax law and regulations related to business and individual income tax reporting. Practice in preparation of tax returns of businesses and individuals. *Sp Su; preq. BUAC 103 or 203; $20.00*

BUAC 221 Cost Accounting 1 (4) Introduction to cost accounting systems and methods. Cost concepts, classifications, and measurement techniques in relation to their importance in determination, planning, and control. Job order and process cost accounting methods. *F; preq. BUAC 103 or 203; $20.00*

BUAC 222 Cost Accounting 2 (4) Estimating, planning, and controlling the costs of processes and projects. Standard cost accounting procedures and the analysis of variances. Cost and profit responsibility reporting to management. Uses of cost and profit data in project selection, product pricing, and other functions of management. *W; preq. BUAC 221; $20.00*

BUAC 231 Intermediate Accounting 1 (4) A more advanced treatment of accounting theory; determination of income realization and cost expiration. Primary emphasis is on asset accounts in order listed on the balance sheet. *F; preq. BUAC 103 or 203; $20*

BUAC 232 Intermediate Accounting 2 (4) Continuation of BUAC 231 with emphasis on the balance sheet sections dealing with investments, fixed assets, and liabilities. *W; preq. BUAC 231; $20.00*

BUAC 233 Intermediate Accounting 3 (4) Continuation of BUAC 232 with detailed study of the owner's equity section of the balance sheet and the financial statements presentation and analysis. *Sp; preq. BUAC 232; $20.00*

BUAC 250 Accounting Projects 1 (1-4) A special course designed to permit the accounting student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. The special projects course will enable the accounting student to apply the accounting theory as covered in other courses. *Not regularly offered; preq. departmental permission (see accounting advisor).*

BUAC 261 Accounting with D. P. Applications 1 (4) Application of basic accounting procedures to the microcomputer. Emphasizes applications to the IBM microcomputer system. *Not regularly offered; preq. BUAC 103 and BUIS 101*

BUAC 299 Special Topics 1 (1-4) Opportunity for accounting students to continue their study of accounting in specialized areas under the supervision of an instructor with expertise in those areas. *Not regularly offered; preq. departmental permission (see accounting advisor); see special note on page 105; $20.00*

BUAC 305 Governmental Accounting (4) A basic introduction to the accumulation and use of accounting information in non-profit organizations. General principles applying to budgets and funds are examined rather than specific application. An especially useful course for nonaccounting (and accounting) students who will be employed in governmental units where budgeting and accounting are required. *W Su; preq. BUAC 231 or 103 or 203 and permission; $20.00*

BUAC 311 Accounting Projects—Advanced (1-4) A special course designed to permit the advanced accounting student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. The special projects course will enable the accounting student to apply the accounting theory as covered in other courses. *Not regularly offered; preq. BUAC 233 and departmental permission.; $20.00*

BUAC 330 Industrial Accounting (4) Study of the use of data by management in planning and controlling business operations. Emphasis on the solution of problems confronting management by the use of accounting information in analytical form. Not recommended for associate degree accounting majors. *W; preq. BUAC 103, 203, or permission; $20.00*

BUAC 360 Systems Accounting (4) A course in accounting information systems principles and applications. The application of accounting principles to computerized environment, including transaction processing and internal controls, revenue and expenditure cycle applications, software systems, and computer security. *F; preq. BUIS 101 and BUAC 103 or 203; $30.00*

BUAC 410 Health Care Accounting/Administration (4) The use of accounting information in planning and controlling the operations of health care organizations. Budgeting and the specialized cost accounting applications of health care organizations are included. *Not regularly offered; preq. BUAC 103 or 203; $20.00*

BUAC 435 Auditing (4) Independent audits, professional ethics, legal liability, internal control, auditing standards, work sheet applications and procedures. Concern is given to audit evidence, the auditor's approach and techniques, summary reports, statistical sampling, and role of advisory services to management. *Sp; preq. BUAC 222 and 233*

BUAC 499 Special Topics—Advanced (1-4) Opportunity for the advanced accounting student to continue the study of accounting in a specialized area of accounting under the supervision of an instructor with expertise in the area. *Not regularly offered; preq. departmental permission (see accounting advisor); see special note on page 105; $20.00*

BUAI 101 Introduction to Automated Information Systems (4) A study of computer history, systems, concepts, applications, and social implications. Laboratory activities include basic microcomputer operation and introduction to popular software packages. *Su F W*

BUAI 103 Computer Applications (4) Hands-on study in the use of microcomputer software packages, including word processing, spreadsheets, data base management, business graphics, data communications, and integrated packages. *Su F W Sp; preq. BUAI 101 or BUIS 101*

BUAI 299 Special Topics in Automated Information Systems 1 (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUAI 310 Data Base Management (4) Data base system design, implementation, and access using a relational data base and fourth generation programming language. Laboratory project required. *Su F Sp; preq. BUAI 103 or BUIS 204 or advisor permission for BUOA majors.*

BUAI 320 - BUFI 310

BUAI 320 Systems Analysis and Design (4) The study and methodology of how computer information systems are developed and implemented successfully. Discussion of the role of the systems analyst in contrast to the programmer analyst. CASE tools and structured analysis and design techniques are studied. *F; preq. BUAI 103 or BUIS 204*

BUAI 430 Information Systems Development Project (4) The use of microcomputers and applications software to design, construct, and implement a complete operational information system, including organizing and loading the data base and use of the system to generate appropriate outputs. *Not regularly offered; preq. BUAI 310 and 320*

BUAI 499 Special Topics in Automated Information Systems 2 (1-4) Opportunity for the advanced student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUBA 490S Senior Seminar (4) Provides an opportunity for students to place their chosen field of study in an interdisciplinary context with intellectual, ethical, and historical perspectives. The seminar focuses on the synthesis and integration of various concepts by applying them to the analysis and solution of problems chosen in the context of their academic disciplines. Oral and written presentations of the seminar paper are required. *Su F W Sp; preq. senior standing and 44 general education program hours*

BUFI 101 Principles of Banking and Finance (4) Monetary standards, commercial and central banking. Federal Reserve functions and statements, monetary and income theory, problems of monetary and fiscal stabilization, international payments, and the International Bank and Monetary Fund. *F*

BUFI 102 Introduction to Commercial Lending (4) An overview of the commercial lending function. Four sections cover commercial lending overview, the lending process, portfolio management, and regulation and business development. Specific contents include the commercial loan customer, types of commercial loans, the loan decision process, cost analysis, control and profitability, and the regulatory and legal environment. *W*

BUFI 106 Principles of Bank Operations (4) Basic course stating a history of banking, developing of Federal Reserve System; three main duties, safekeeping, transfer of funds, lending. Examination and governmental examination. Field work and problems concerning the operation of commercial bank and savings and loan institutions. *Sp*

BUFI 205 Installment Credit (4) Procedures, forms, government regulations, delinquency and collections, interest rates, background of installment credit. *W*

BUFI 240 Personal Finance (4) Takes the student through the topics of financial planning, budgeting, housing, transportation, insurance, investments, retirement, and estate planning. *F*

BUFI 245 Principles of Finance (4) A study of the forms of business organization, cash flow projections, budgeting and financial planning, and analysis of financial statements. *F Su; preq. BUAC 102 or 201, ECON 101 and 102*

BUFI 250 Introduction to Investments (4) A study of the various types of investments, including stocks, bonds, mutual funds, commercial paper, options, and commodities. Particular emphasis is given to return and risk in developing investment strategies. *Sp; preq. BUFI 245*

BUFI 299 Special Topics in Finance (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUFI 301 Principles of Insurance (4) Basic insurance course includes the nature of risk; the legal environment; life, health, income, property liability, business risk, government, and international insurance. *W*

BUFI 310 Money and Banking (4) Cross-listed as ECON 310. Development of banking and the role of the Federal Reserve System in the U.S. Analysis of monetary policy for purpose of stabilization. *Sp; preq. ECON 101 and 102*

BUFI 311 Financial Statement Analysis (4) A detailed study involving the analysis and interpretation of financial information contained in financial reports of various entities, including measurements of the firm's profitability, solvency, and degree of safety. *Not regularly offered; preq. BUAC 103 or 203*

BUFI 315 Financial Institutions (4) An integrated and comprehensive analysis of financial markets and institutions emphasizing financial intermediaries and their operation in the markets. *Sp; preq. ECON 102 and BUAC 102 or 201*

BUFI 345 Managerial Finance (4) An analysis of financial information for the purpose of facilitating the planning, organizing, and controlling functions of management. Includes financial statement analysis, budgeting, concepts of present and future value, cash flow analysis, and capital budgeting decisions. *F Su; preq. ECON 101 and 102, BUAC 103 or 203, and MATH 150*

BUFI 350 Investments (4) A study of various investment alternatives and the general and specific information that must be considered before thought is directed toward specific industries and businesses. Included is the study of the tools and sources needed for analysis in making wise investment decisions. *W; preq. ECON 102 and BUAC 102 or 201 and BUFI 345*

BUFI 481 International Finance (4) A survey of the institutions, methods, instruments, and procedures involved in international finance, including the nature of the foreign money market, foreign legal and tax environment, and foreign subsidiary operations. *Not regularly offered; preq. BUFI 345*

BUFI 499 Special Topics in Finance 2 (1-4) Opportunity for the junior or senior student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUHE 202 Personal and Community Health (4) Cross-listed as HPER 202. Fundamentals, practices, and appreciation of healthful living. Designed to incorporate the principles of scientific health information and promote desirable attitudes and practices in individuals, parents, and teachers. *Su F W Sp*

BUHE 203 Human Nutrition (4) Cross-listed as HPER 203. A study of nutrients, including sources, composition, function, and metabolism in the human body. The human life cycle is considered in planning appropriate diets. *Su F W Sp*

BUHE 227 First Aid (4) Cross-listed as HPER 227. Provides information and practical experience dealing with hemorrhaging, traumatic shock wounds, respiratory failure, serious illnesses, transportation of the sick and injured, cardiopulmonary resuscitation, splinting of broken bones, hypothermia, specific injuries, choke-saving, poisoning, burns, heat illnesses. Students are certified in CPR (infant and adult) through the American Heart Association. *F W Sp*

BUHE 310 Orientation to Health Care Systems (4) Cross-listed as AHNR 310. A broad orientation to the health services industry. Segments of the health services industry are identified and described with historical background, functions, interrelationships, and future roles of each. *Not regularly offered; required for health management concentration; see advisor*

BUHE 311 Health Record Principles (4) Cross-listed as AHNR 311. Study of the health record, including definition, standards for content, and format. Also studied are the interactions of the health care professionals contributing to, utilizing, and analyzing health record data. *Not regularly offered; see advisor*

BUHE 312 Health Care Personnel Management (4) Cross-listed as AHNR 312. Principles of health care personnel recruitment, selection, and management. Characteristics of the professional health care worker are discussed. Legal responsibilities, collective bargaining, continuing education, and training are covered. *Not regularly offered; see advisor*

BUHE 360 Drugs/Substance Abuse (4) Cross-listed as HPER 360, PSYC 360, and SOCI 360. An in-depth study of alcohol, tobacco, and other drugs and how chemical dependency on these drugs can affect individual performance and behavior. *Su F W Sp*

BUHE 410 Patient Care in Long-Term Health Care Facilities (4) Cross-listed as AHNR 410. An overview of the total medical and social care required for residents of long-term health care facilities. The student is oriented and exposed to the various aspects required of the administrator and institution to provide for the total care of the individual. Topics include pharmaceutical services, disease process and recognition, biological aging, and psychology of patient care, patient assessment, care planning, and nutrition. *Not regularly offered; see advisor*

BUHE 411 Administration in Long-Term Care Facilities (4) Cross-listed as AHNR 411. The role and responsibility of management as applied to a long-term health care facility. The expectations for the administrator are identified and discussed relative to ethical practices, licensure, state and federal agency requirements, and financial management. *Not regularly offered; see advisor*

BUHE 420 Problems in Health Care Management and Policies (4) Cross-listed as AHNR 420. A seminar course. Health care management problems are studied and recommendations offered for the resolution of those problems. *It is recommended that this problems and policy course be taken as the last course in the 24-hour health management concentration. Not regularly offered; see advisor*

BUHE 430 Health Care Finance and Reimbursement (4) Cross-listed as AHNR 430. Financial aspects of health care management, including income projections, budgeting, and analysis of financial statements. Reimbursement plans and types of health insurance are investigated. *Not regularly offered; preq. BUAC 101 and 102; see advisor*

BUHE 451 Internship in Health Management/Education (1-6) Cross-listed as AHNR 451 and EDUC 451. Health care management/education experience is obtained in selected institutions or agencies related to the student's health management/education interest and ability. Written reports are required. Restricted to students who have completed a minimum of 60 hours in the business core and 24 hours of the health management concentration with a minimum GPA of 3.5 in those areas. *Not regularly offered; preq. approval from the chairperson of the business department*

BUIS 101 Introduction to Computer Information Systems (4) Computer theory presented via lectures as well as practical hands-on experiences in a work setting. Introduction to topics such as computer history, hardware, software, and business applications. Instruction in the use of computer software, including the DOS operating system, word processing, spreadsheets, data base management, and beginning BASIC programming. *Su F W Sp; $30.00*

BUIS 103 BASIC Language 1 (4) Introduction of topics such as principles of computer programming, flowcharts, pseudocode, and algorithm development. Students learn beginning advanced concepts in the BASIC language and write functional programs in a hands-on work environment. *Su F W Sp; preq. BUIS 101; $30.00*

BUIS 104 BASIC Language 2 (4) Advanced BASIC programming techniques. Students learn how to optimize file creation and access. *F W Sp; preq. BUIS 103; $30.00*

BUIS 105 COBOL Programming 1 (4) In-depth study of the COBOL language. Use of files on disks, print routines, terminals, and documentation. Many problems are assigned to move theory into practice. *F; preq. BUIS 101; $30.00*

BUIS 106 COBOL Programming 2 (4) A deeper study of COBOL. More complex problems using tables and various utility programs available from the manufacturer; new instructions and different ways of using them. *W; preq. BUIS 105; $30.00*

BUIS 201 C Language (4) Introduction to Microsoft QUICK C programming. Engineering and business programs are assigned and programmed. Arrays and pointers are introduced and mastered. *Su F W Sp; preq. one computer language course or sophomore standing; $30.00*

BUIS 202 Computer Operations Management (3) Personnel policies, computer management procedures, equipment acquisition, and management of resources related to data processing. Basic management principles to effectively manage a computer system, computer personnel, and resources. *W Sp; preq. two programming languages and sophomore standing; $30.00*

BUIS 203 Business Computer Projects (4) Research projects are assigned on both an individual and group basis. Students learn to function in a group setting as they conduct research related to the assigned topics. Theoretical systems concepts are explored in the classroom. A formal presentation is required. *W; preq. sophomore standing; $30.00*

BUIS 204 Microcomputer Applications (4) Advanced topics and techniques of several popular business application software packages. Word processing, spreadsheets, and data base management tools are utilized. *W; preq. BUIS 101; $30.00*

BUIS 205 Business Data Systems and Communications (3) A study of modern data communication systems, including theory of telecommunications and communications software. Emphasis on networking and LANs. Laboratory project. *Sp; preq. one computer language and sophomore standing; $30.00*

BUIS 206 Fortran 77 (4) A basic course in FORTRAN, including FORTRAN arithmetic, formats, loops, arrays, program flow charting, testing, debugging, and documentation. The student is assigned several programs to solve statistical mathematics and business problems. *Not regularly offered; preq. one computer language; $30.00*

BUIS 207 PASCAL Language (4) An introduction to the programming language PASCAL. Some knowledge of basic algebra is helpful. Use of Input/Output statements, loops, subprograms, arrays, and files. This course is recommended for the natural science degree. *Sp; $30.00*

BUIS 208 RPG II Language (4) A computer language normally used to produce reports for management. All rules of programming apply, but various forms are required to produce output. *Sp; preq. sophomore standing; $30.00*

BUIS 299 Special Topics in Data Processing (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105; $30.00*

BULA 101 Introduction to Legal Assisting (4) Practical introduction to the career of paralegalism. Describes the drafting, digesting, interviewing, investigating, and research skills required to be an effective paralegal or legal assistant. *Su F W*

BULA 212 Real Estate Law for Legal Assistants (4) Provides the essential substantive and practical skills necessary for a legal assistant to participate effectively in real estate transactions. Introduces real property concepts and examines the component parts of a real estate transaction, including entering into the purchase contract, providing a legally sufficient description of the property, preparing the deed, addressing the property's state of title, and conducting the closing. *Su W; preq. BULA 101*

BULA 251 Legal Research and Writing 1 (4) Employs a step-by-step approach in introducing students to the legal system, interpreting court opinions and applying opinions in legal writing. Emphasis is on the study of court opinions through "key fact" identification and using these facts in the application process. *Su F W Sp; preq. BULA 101 and ENGL 111S; $10.00*

BULA 252 Legal Research and Writing 2 (4) A thorough overview of legal research and writing techniques. Covers information on citing cases, finding case law, and interpreting statutes. Instructs students in computer-assisted legal research, using LEXIS. *Su F W Sp; preq. BULA 251; $30.00*

BULA 255 Environmental Law for Legal Assistants (4) Introduction to the National Environmental Policy Act, the Commerce Clause and its impact upon environmental law, the Clean Air Act, and the Clean Water Act. Environmental protection based upon economic incentives, the penalties of noncompliance, risk assessment, risk management, common law remedies, and preservation by laws restricting the development of land owned by private individuals. Students obtain a working knowledge of the basic legal principles utilized in environmental law. *Not regularly offered; preq. BULA 101*

BULA 261 - BULA 273

BULA 261 Tort Law: Personal Injury Litigation (4) Presents an overview of tort law oriented to paralegals. Specific skill assignments in research analysis, drafting, investigation, and interviewing. Students can relate the law outlined in the book to the specific law of a particular state. *F Sp; preq. BULA 101*

BULA 262 Introduction to Civil Litigation (4) An introduction to the legal system of dispute resolution in noncriminal matters. Focuses on the process of civil litigation rather than on substantive legal issues. Explains the paralegal's role in interviewing clients, drafting pleadings and pretrial motions, conducting discovery, and preparing for trial. Contains examples of actual documents drafted by paralegals. *F Sp; preq. BULA 101*

BULA 263 Introduction to Contracts and Restitution (4) Introduces the laws of contracts and restitution with emphasis on applying the concepts presented to contract analysis and formation. Chapters present the rules of law, examples of how the rules apply to facts, and problems that help students apply the rules. Cases are examined to show how the courts apply the rules. *F Sp; preq. BULA 101*

BULA 264 Computer Application and the Law (4) Provides students and legal professionals with the minimum knowledge about computers that they will need to work efficiently in today's automated law practice. *Su F W Sp; $30.00*

BULA 265 Family Law (4) Comprehensive overview of family law for the nonlawyer. Practice-oriented text teaches students the skills and techniques in investigation and analysis and includes detailed coverage of child custody, contract cohabitation, property division, and support enforcement laws. *F W; preq. BULA 101*

BULA 266 Wills, Trusts, and Estate Administration (4) A paralegal course in probate or estate administration. Contains updated tax laws and tax forms affecting wills and estates. *F Sp; preq. BULA 101*

BULA 267 Legal Assisting Practicum (4) Students are placed in businesses where their acquired skills can be utilized and tested. This training is closely supervised by the instructor and consists of 160 hours of "hands-on" experience. *F W Sp; preq. 24 credit hours of BULA, including BULA 252; 2.0 cumulative grade point ratio in all coursework and in BULA; and permission of instructor.*

BULA 268 Law Firm Procedure and Management (4) A "how-to" guide for handling all of the administrative functions and routine legal matters in a law office as efficiently and economically as possible through the proper use of non-lawyers, so that the lawyer may free his/her time for the handling of challenging legal tasks. *Not regularly offered; preq. BULA 101*

BULA 269 Criminal Law/Criminal Procedure (4) Basic elements of criminal law and procedure dealing with the interpretation and recognition of the use of the criminal code. Assistance with all aspects of the pretrial through posttrial process. This includes investigations, motions, preparation, and research. Research assignments expand the student's skills in this area. *F W Sp; preq. BULA 101*

BULA 270 Evidence (4) Introduces the importance of obtaining evidence through fact investigation and develops skills in discovering and organizing facts for use in litigation. *W Sp; preq. BULA 101*

BULA 271 Legal/Medical Terminology and Applications (3) Introduction to the proper procedures for preparing medical reports, clinical reports, and various types of legal documents. An extensive list of medical and legal terms is utilized. This course is structured around the microcomputer. *Not regularly offered; preq. BULA 269*

BULA 272 Ethics for the Legal Assistant (4) This course gives the student a look at the ABA Code and Rules of Professional Conduct, accepted nationally as the ethical expectations for legal professionals; the case law that has developed on the Codes and Rules; and standards aimed specifically at legal assistants. *F Sp; preq. BULA 101*

BULA 273 Debtor/Creditor Law (4) An introduction to the general provisions of the Bankruptcy Code, administration of a bankruptcy case, liquidation, reorganization, preliminary considerations necessary prior to commencing a bankruptcy case, and various remedies afforded to the debtor and creditor. *Not regularly offered; preq. BULA 101*

BULA 299 Special Topics in Legal Assisting (1-4) Individual or small-group study, under the supervision of an instructor, of topics not otherwise available to students. *Not regularly offered; preq. BULA 101; see special note on page 105; $10.00*

BULW 250 Business Law 1 (4) An introduction to the legal environment of business based on the uniform commercial code, including the forms and classifications of law, an overview of the court systems, court procedure, social forces and the law, torts and crimes, and the principles of contract law. *F W Sp*

BULW 260 Business Law 2 (4) Includes the study of the law covering sales, agency and employment, commercial paper, personal property, and bailments. *W Sp; preq. BULW 250*

BULW 270 The Legal Environment of Business (4) An examination of the creation and evolution of principles and rules of law, emphasizing an understanding of the court system and court procedure, the role of administrative agencies and government regulations, and the study of criminal, tort, and the substantive law of contracts. *Sp*

BULW 299 Special Topics in Legal Environment (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUMG 101 Introduction to Business (4) A survey course of the basic functions of American business with an emphasis on the responsibility of business as a vital segment of society. Introduction to the American economic system and the role of profits as the motivating force behind U.S. business activity. (Not open to juniors and seniors.) *F W Sp*

BUMG 210 Management Concepts (4) An introductory course in management concepts, organization, and principles with a detailed analysis of the management functions of planning, organizing, staffing, directing, and controlling. Communications, decision making, and motivation are emphasized as integral concepts in performing the management functions. *F W Sp*

BUMG 225 Organization and Operation of Small Business (4) A course designed to provide the basics of small business: getting started, financial recordkeeping, cash flow management, computers, human resource management, marketing, pricing, advertising, and promotion. *F*

BUMG 235 Personnel Management (4) The philosophy, principles, and methods of personnel management stressing human resource planning, recruiting, selection, placement, training, evaluation, wage and salary administration, and benefit programs. *W Sp*

BUMG 240 Labor Relations (4) Topics related to collective bargaining, contract or labor agreements, workers' compensation laws, apprentice training, and jurisdictional disputes. *W; preq. BUMG 210 or permission*

BUMG 242 Business Communications (4) Principles and techniques of effective letter writing, letter mechanics, writing of personal business letters, including application letters, methods of writing business reports and letters, and internal and external reports as a means of communication. *F W Sp; $30.00*

BUMG 285 Enterprise Management and Strategy (4) An integrative course that enables students to demonstrate the capacity to synthesize and apply the knowledge and skills acquired from the various disciplines in business, social sciences, and humanities; to analyze case problems; and to develop and effectively communicate a comprehensive business project. *Sp; preq. 60 hours completed toward the associate degree, including BUAC 102 or 203, BUMK 210, BUMG 210, 242, and BUFI 245*

BUMG 290 Seminar in Small Business Problems (4) A course designed to acquaint the student with actual small business problems; structured through the Small Business Institute of the Small Business Administration and classroom case studies. *Not regularly offered; preq. BUMG 225*

BUMG 299 Special Topics in Small/General Business (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUMG 310 Management Principles (4) A study of the fundamental principles of management emphasizing the managerial functions, basic concepts of systems, decision making processes, organizational theory and behavior, and its effect on management. *F; preq. BUAC 203, ECON 101, and 102*

BUMG 312 Purchasing and Materials Management (4) A complete exposition of the purchasing/materials management function in all types of profit and not-for-profit organizations. Emphasizes the purchasing decision process and the management of that activity. *Not regularly offered; preq. BUMG 310*

BUMG 320 Data Analysis (4) Computer assisted statistical analysis using SPSS or current statistical application software as a research tool. In-depth use of computer applications for research, emphasizing statistical procedures, graphic design, and interpretation of results. Applications appropriate to business, social and physical sciences, psychology, and education. Special projects to suit student's needs. *W; preq. any one of the following courses: MATH 150, 201, 250 or BUMG 355 (Suggestion: This course should be taken before BUMG 330.); $30.00*

BUMG 330 Organizational Communication (4) A study of the communication demands and skills relevant to the student's future role as a business or professional person. Organizational communication focuses on principles and techniques involved in organizing ideas, writing effective business letters and reports, and oral communication. Applications with computer assisted statistical analysis and graphic design used to enhance business reports. *F Sp; preq. junior standing; preq. MATH 150 or BUMG 320; $30.00*

BUMG 331 Business Ethics (4) Cross-listed as PHIL 331. Examination of the relationship between economic and moral constraints. *Su F*

BUMG 332 Managerial Economics (4) Cross-listed as ECON 332. Use of economic theory and decision making techniques in business management. Production and consumer theory, applied price theory, pricing of final products, theory of profits, profit management, capital budgeting, cost and demand analysis theory to provide a solid foundation of economic understanding for use in managerial decision making. *Not regularly offered; preq. ECON 101, 102, and MATH 201.*

BUMG 335 Human Resource Management (4) Principles and practices of recruiting, selecting, training, developing, compensating, and maintaining a productive employee group through systematic human resource management planning consistent with government regulations. Includes attention to grievance and disciplinary procedures and collective bargaining. *Not regularly offered; preq. BUMG 310 or permission*

BUMG 340 International Business (4) Introduces students to international business by exploring a broad spectrum of business activities. Competitive strategy provides the unifying theme. *F*

BUMG 355 Quantitative Methods in Business (4) A study of the quantitative tools and techniques applied to business decision-making. The primary tool investigated is the linear regression model. Includes forecasting, multiple regression, qualitative variables, and the analysis of residual patterns. Also explores the linear programming model. Models are explained graphically, calculated manually, and then explored more fully on the computer. *F Sp; preq. MATH 131 and 150 and BUAI or BUIS 101; $30.00*

BUMG 370 Operations Research 1 (4) Cross-listed as MATH 370. An introduction to the general nature, history, and philosophy of operations research. A study of the theory of linear programming, the simplex algorithm, and applications. A series of special linear programming problems, such as optimal assignment, transportation, transshipment, network flow, minimal spanning trees, shortest path, PERT methods, and traveling salesperson. *F 1996; preq. MATH 230 or BUMG 355 or instructor consent*

BUMG 371 Operations Research 2 (4) Cross-listed as MATH 371. A continuation of BUMG 370. Dynamic programming and integer programming are studied (or finished if started in BUMG 370). Stochastic models of operations research such as markov chains, queuing theory, and simulation are studied. *Sp 1996; preq. BUMG 370 and MATH 250 or instructor consent*

BUMG 385 Production/Operations Management (4) An overview of production and operations management, including procedures and techniques generally employed in both manufacturing and nonmanufacturing organizations. Topics include forecasting, line balancing, quality control, PERT, MRP inventory systems, layout planning, and capacity planning. Extensive use is made of computers. *Su W; preq. BUMG 355; $30.00*

BUMG 410 Business Simulation (4) Explores the analysis of business problems using computer simulations. Outcomes resulting from various inputs are projected and interpreted to aid in decision making. *Su W; preq. BUMG 355 and MATH 131; $30.00*

BUMG 480 Business and Society (4) A case-oriented course designed to study the social problems facing business organizations. Topics include culture, law, ethics, social norms, corporate and business relations, and models of human value. *Not regularly offered; preq. BUMG 310, senior standing, and business major*

BUMG 485 Business Policy and Strategy (4) A case-oriented course designed to develop skills in the integration of interdisciplinary areas as applied to problems in business. Includes both written and oral presentation of case problems. *W Sp; preq. BUFI 345 and BUMG 385*

BUMG 499 Special Topics in Management (1-4) Opportunity for the junior or senior student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUMK 103 Introduction to Retailing (4) Principles and methods of retail management, including organization, policy making, location, operation, selling services, records, inventory, expense control, insurance, and the coordination of a retail business. *Sp; preq. BUMK 210*

BUMK 210 Marketing Concepts (4) A study of marketing fundamentals, consumption, consumer behavior, retailing, wholesaling structures, the functions performed in marketing, marketing policies, and a critical appraisal of the field of marketing. *F W*

BUMK 220 Salesmanship (4) Basic concepts of personal selling at both the industrial and retail level, including preparation for selling, sales processes, and an introduction to sales management. Emphasis on retail selling, with a discussion of career opportunities. *W; preq. BUMK 210 or 310*

BUMK 225 Marketing Case Studies (4) Discussion of marketing problems in a group situation. Problems include marketing management, production planning and development, marketing research, industrial buying behavior, market segmentation, price objectives, advertising, and international marketing environment. *F; preq. BUMK 210 or 310; Not open to students who have credit for BUMK 400.*

BUMK 235 Advertising (4) A study of the principles of advertising, including the history and development of advertising, its relation to the marketing effort of the firm and to consumers and society in general, and the major groups of media used by the advertiser. *Sp; preq. BUMK 210 or 310*

BUMK 239 Practical Business Applications (1-4) Student participates in an off-campus work experience with a business specializing in the student's area of interest. One credit hour is awarded for a minimum of **seven scheduled clock hours** of such activity **per standard work week.** *Not regularly offered; preq. advisor permission*

BUMK 299 Special Topics in Retailing/Sales/Advertising (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

BUMK 310 - BUOA 215

BUMK 310 Marketing Principles (4) A study of the marketing principles, concepts, strategies, and analytical methods used by organizations to market products, services, and ideas in dynamic environments. Emphasis on identifying marketing opportunities, defining target groups, developing appropriate products, promotion distribution, and pricing strategies. *W*

BUMK 315 International Marketing (4) Directed at developing skills to make marketing decisions in a global context. This includes finding new markets, customizing products for the demands of new markets, determining needs, channels of distribution, pricing strategies, and segmentation. *Not regularly offered; preq. BUMK 310*

BUMK 320 Sales Management (4) The principles and practices of planning, organizing, motivating, and controlling the sales force. Selection, training, compensation, analysis of sales potentials, and costs are also covered. *Not regularly offered; preq. BUMK 310 or permission of instructor*

BUMK 325 Marketing Research (4) Techniques involved in the collection, tabulation, and analysis of marketing information. Includes statistical procedures and their marketing application, brand positioning, and market segmentation using marketing research techniques. *Not regularly offered; preq. BUMK 310 and MATH 150; $30.00*

BUMK 400 Marketing Management (4) A strategic focus on marketing management with a solid application of basic marketing concepts. Concentrates in the areas of decision making, competitor analysis, formulating a marketing plan, forecasting, and planning. *Not regularly offered; preq. BUMK 310*

BUMK 499 Special Topics in Marketing (1-4) Opportunity for the junior or senior student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. BUMK 310 and instructor permission; see special note on page 105.*

BUOA 108 Beginning Document Processing (4) A study of the touch system of keyboarding and the ten-key numeric keypad at the microcomputer as well as an introduction to WordPerfect word processing software. *Su F W Sp; $30.00*

BUOA 109 Intermediate Document Processing (4) Continuation of BUOA 108 with application of basic keyboarding techniques to the production of letters, memorandums, outlines, tabulated reports, and manuscripts on the microcomputer using WordPerfect software. *W; preq. BUOA 108; $30.00*

BUOA 110 Advanced Document Processing (4) Continuation of BUOA 109 with advanced production jobs using realistic business simulations. Advanced features of WordPerfect software are introduced. *Sp; preq. BUOA 109; $30.00*

BUOA 111 SuperWrite 1 (4) Introduction to reading and writing of SuperWrite, an alphabetical writing system, and the development of transcription skills which include vocabulary development, spelling, punctuation, and grammar. *W; $30.00*

BUOA 112 SuperWrite 2 (4) Continuation of BUOA 111 designed to perfect SuperWrite theory, phonetics, word families, abbreviations, and penmanship. Students are encouraged to raise speed and accuracy levels. *Sp; preq. BUOA 111; $30.00*

BUOA 130 Records Management (4) Designed to emphasize the principles and practices of effective records management for manual, automated, and computer records systems. The ARMA alphabetic indexing rules are applied. *F; $30.00*

BUOA 214 Microcomputer Office Practice (4) This course consists of applying WordPerfect 6.0 for Windows keyboarding and document processing skills to "real work" to be accomplished in a variety of office simulations. The work will be completed at the computer using WordPerfect 6.0 for Windows software. *F; preq. BUOA 110 and 222; $30.00*

BUOA 215 Lotus 1-2-3 (4) An introduction to Lotus 1-2-3. *Su W; preq. keyboarding skills and basic knowledge of microcomputers; $30.00*

BUOA 217 Office Computer Applications (4) Continuation of BUOA 222 using the office application features of WordPerfect 6.0 for Windows. *F; preq. BUOA 222; $30.00*

BUOA 221 Word Processing 1 (4) Word processing concepts and skills are presented to the person with no previous training in word processing. WordPerfect 6.0 for Windows software is used. *W; preq. keyboarding skills; $30.00*

BUOA 222 Word Processing 2 (4) Continuation of BUOA 221 with more advanced applications of the WordPerfect 6.0 software. *Sp; preq. BUOA 221; $30.00*

BUOA 230 Desktop Publishing 1 (4) An introduction to the PageMaker 5.0 desktop publishing software program. *W; preq. basic knowledge of microcomputers*

BUOA 231 Desktop Publishing 2 (4) Continuation of BUOA 230, with more advanced applications of the PageMaker 5.0 desktop publishing software program. *Sp; preq. BUOA 230*

BUOA 241 Office Administration 1 (4) Introduction to the responsibilities and opportunities of an office administration position encompassing a variety of secretarial duties. Lab work is completed on a microcomputer. *F; preq. BUOA 110 and 222; coreq. BUOA 214; $30.00*

BUOA 242 Office Administration 2 (4) A continuation of BUOA 241, including assisting with travel arrangements, planning meetings, presenting business data, and handling financial procedures. *W; preq. BUOA 222 and 241; $30.00*

BUOA 243 Office Administration 3 (4) An executive secretarial simulation allowing students to work in a fictitious company using the executive and administrative skills they have attained in their office administration classes. *Sp; preq. BUOA 222 and 242; $30.00*

BUOA 244 Medical/Legal Office Administration (4) Introduction to the proper procedures for preparing medical reports, clinical reports, general medical documents, and various types of legal documents using a microcomputer. An extensive list of medical and legal terms and their correct usage in documents is emphasized. *W; preq. BUOA 222 and 241; $30.00*

BUOA 250 Office Administration Internship (1-4) Student participates in on-the-job work experience which allows the utilization of office administration skills. One credit hour is awarded for a minimum of seven scheduled clock hours of work per standard work week. *Not regularly offered; preq. internship availability and approval; completion of at least 4 quarters of the office administration program with a "B" average in all BUOA classes; advisor permission*

BUOA 299 Special Topics in Office Administration (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105; $30.00*

BURE 101 Real Estate Mathematics Applications (3) Designed to provide the mathematical skills and background necessary for a real estate salesperson, broker, appraiser, or property manager. Topics include commissions, points, mortgage interest and principal, real estate taxes, prorating, investment analysis, and percentage leases. *Not regularly offered*

BURE 210 Real Estate Principles and Practices (4) Introduction to real estate economics and administration. Includes elementary physical, legal, locational, and economic characteristics of real estate; real estate markets; and national, regional, and local economic influences on real estate values. Serves as a preparation for securing a license. *F*

BURE 212 Real Estate Law (4) Includes the law of agency as applied to real estate brokers and salesmen, law of fixtures, estates (including leases), conveyancing of real estate, real estate managers, license laws of Ohio, zoning, cooperatives, and condominiums. *Sp*

BURE 213 Real Estate Finance (4) Includes the nature and characteristics of mortgage loans, government influence on real estate finance, the mortgage market, and the effects of monetary and fiscal policies on real estate financing. Concepts and measurements of value, cash flow, leverage, and tax shelters are emphasized. *W*

BURE 214 Real Estate Appraisal (4) Emphasizes the methodology of appraising urban real property and the theory underlying appraisal techniques. In-depth study of market comparison, penalized cost of replacement, and income capitalization. A term project provides practical experience in applying these techniques. *Sp*

BURE 215 Real Estate Brokerage (4) Basics of real estate economics, brokerage, and administration. Designed for the professional development of real estate personnel and for those who are not in the real estate business but who wish to increase their general knowledge. *Not regularly offered*

BURE 299 Special Topics in Real Estate (1-4) Opportunity for the student to work on special projects under the supervision of an instructor with expertise in the area of the student's project. *Not regularly offered; preq. instructor permission; see special note on page 105.*

CHEM 101 Fundamental Chemistry (4) A course designed for students with an inadequate background in chemistry or students who have not had high school chemistry. Topics and material presented are intended to increase student's familiarity with the periodic table, chemical processes, and chemical calculations. *Su F W Sp; preq. one year of high school algebra or MATH 101*

CHEM 121 Introduction to General Chemistry 1 (4) An introductory course in fundamental concepts of chemistry for nonscience majors. Topics include atomic structure, compound formation, chemical equations, stoichiometry, and inorganic nomenclature. Credit allowed for only one of these introductory courses: CHEM 101, 121, or 141. Recommended for students requiring only one year of chemistry. *F W; preq. one year of high school chemistry or CHEM 101 or successful completion of MATH 130; 3 lec. 3 lab; $20.00*

CHEM 122 Introduction to General Chemistry 2 (4) An introduction to gases, the properties of solutions, reactions in solution, acids and bases, equilibrium, oxidation-reduction reactions. Credit not allowed for both CHEM 122 and 142. *W Sp; preq. CHEM 121 or permission; 3 lec. 3 lab; $25.00*

CHEM 141 General Chemistry 1 (4) An introduction to chemistry through the study of fundamental chemical concepts, inorganic nomenclature, periodic classification, mole concept, stoichiometry with problem solving, ionic reactions, gas laws, and thermochemistry. Credit not allowed for both CHEM 121 and 141. *Preq. one year of high school chemistry or CHEM 121 and placement in MATH 130; 3 lec. 3 lab; $25.00*

CHEM 142 General Chemistry 2 (4) An introduction to atomic structure, chemical bonding, molecular geometry, properties of liquids and solids, solutions, and acid-base theories. *Preq. CHEM 122 or 141 and MATH 130 or above; 3 lec. 3 lab; $25.00*

CHEM 143 General Chemistry 3 (4) An introduction to chemical thermodynamics, kinetics, chemical and ionic equilibria, oxidation-reduction reactions, equivalence, and electrochemistry. *Preq. CHEM 142 and MATH 131 or above; 3 lec. 3 lab; $25.00*

CHEM 200 Introduction to Organic Chemistry (4) A course in fundamental organic chemistry. The study of the major functional groups: saturated and unsaturated hydrocarbons, alcohols and ethers, aldehydes and ketones, carboxylic acids, amines, carboxylic acid derivatives. The organic chemistry of carbohydrates, lipids, and proteins. *Sp; preq. CHEM 121 or 141; 3 lec. 3 lab; $25.00*

CHEM 240 Introduction to Environmental Science (4) Cross-listed as NTSC 240. Survey of the nature and scope of environmental problems. Emphasis on the physical, biological, and human aspects of environmental science. *F; preq. sophomore standing with coursework in the basic sciences, BIOL 151, CHEM 143, or GEOL 201; 3 lec. 2 lab*

CHEM 305 Organic Chemistry 1 (4) A course for science majors wishing to acquire a sound knowledge of classical and modern organic chemistry. Credit not allowed for both CHEM 200 and 305. *F; preq. or coreq. CHEM 143; 3 lec. 3 lab; $25.00*

CHEM 306 Organic Chemistry 2 (4) Continuation of CHEM 305. *W; preq. CHEM 305; 3 lec. 3 lab; $25.00*

CHEM 307 Organic Chemistry 3 (4) Continuation of CHEM 305 and 306. *Sp; preq. CHEM 306; 3 lec. 3 lab; $25.00*

CHEM 323 Quantitative Analysis (5) An introduction to methods of chemical analysis by classical, gravimetric, and volumetric techniques. Emphasis on solution equilibria and stoichiometric calculations. *Preq. CHEM 143 and MATH 132; 3 lec. 6 lab*

CHEM 325 Instrumental Analysis (5) An introduction to methods of chemical analysis by spectrophotometric, spectrographic, chromatographic, and electrometric techniques. *Preq. CHEM 223; 3 lec. 6 lab; $25.00*

CHEM 331 Introduction to Physical Chemistry (4) Survey of thermodynamics, kinetics, gas laws, quantum mechanics, and spectroscopy. *Preq. PHYS 213 or permission*

CHEM 341 Introduction to Inorganic Chemistry (4) Survey of periodic table, bonding theories, etc. *Preq. CHEM 307; preq. or coreq. CHEM 331*

CHEM 350 Literature and Information Retrieval (2) A course in the use of printed indexes, computerized databases, and standard references for chemical information retrieval. Development of search strategies and assessment of retrievals are covered. Concepts introduced in lecture are reinforced through library assignments, including an assisted online search of chemical abstracts. *Preq. or coreq. CHEM 307*

CHEM 411 Biochemistry (4) Cross-listed as BIOL 411. General principles of the structural and functional properties of carbohydrates, lipids, nucleic acids, and proteins. This course can be counted as a concentration area in biology or chemistry. *Preq. CHEM 307; 4 lec.*

CHEM 421 Environmental Chemistry 1 (4) Topics include the atmosphere, stratospheric ozone, tropospheric chemistry, indoor air quality, and natural waters. *Preq. CHEM 143 or by permission; 3 lec. 3 lab*

CHEM 422 Environmental Chemistry 2 (4) Topics include acid rain, drinking water, sewage and waste disposal, chlorine and chlorinated organic compounds, and metals in the environment. *Preq. CHEM 143 or by permission; 3 lec. 3 lab*

CHEM 432 Physical Chemistry 1 (4) Topics include equilibrium, liquids, solids, spectroscopy, etc. Application of experimental principles to lecture theory. A bridge course between chemistry and physics. *Preq. CHEM 331; 3 lec. 3 lab; $25.00*

CHEM 433 Physical Chemistry 2 (4) Topics include thermodynamics, kinetics, quantum mechanics, and areas of recent research advances (e.g. semiconductors). *Sp; preq. CHEM 432; 3 lec. 3 lab; $25.00*

CHEM 485 Senior Project (1-4; maximum 4) In-depth study of a selected topic in chemistry, culminating in the preparation of a senior paper. *F W Sp; preq. senior standing and instructor permission; $15.00*

CHEM 490 Seminar in Chemistry (1-4; maximum 4) Study of a specific advanced topic in chemistry. *Preq. junior or senior standing and instructor permission*

CHEM 495 Undergraduate Research (1-4; maximum 9) Independent chemistry investigation under the direction of a faculty member. A written report is required. *Preq. senior standing, 2.75 grade point average in chemistry, and instructor permission*

CHEM 499 Special Topics in Chemistry (1-4) The study of topics not otherwise available to students.

DTHY 101 Radiology 1 (2) Didactic instruction in dental radiology. Topics include: characteristics of radiation, components and functions of the x-ray machine, and x-ray production. Emphasis on exposure factors and their effects on radiographs, effects of radiation exposure, and radiation protection. Dental x-ray films and film processing are also covered. *W*

DTHY 102 - DTHY 205

DTHY 102 General and Oral Histology and Embryology (3) Study of the development of tissues and structures from a histological and embryological basis. Emphasis on development of tissues of the teeth and the periodontal supporting structures. *W; preq. BIOL 101*

DTHY 103 Nutrition (3) The principles of basic human nutrition with emphasis on nutritional diets and their relation to general and oral health. The study of valid nutritional information and healthful food selection. *F*

DTHY 111 Oral Anatomy 1 (3) A study of tooth form, function, and occlusion, including the supporting tissues of the teeth and oral environment. Emphasis on dental vocabulary, terminology, and the relationship of the permanent and deciduous dentition to clinical dental hygiene. *F*

DTHY 112 Oral Anatomy 2 (2) Detailed study of the anatomy of the head and neck. Topics include facial bones, muscles of the head and neck, nerve supply, and blood supply. Detailed study of the topographical and functional anatomy of the oral cavity and pharynx. *W; preq. DTHY 111*

DTHY 113 Radiology 2 (2) Continuation of DTHY 101. Emphasis on radiographic technique through lecture and lab experiences. Lab experiences include bisection of the angle and paralleling techniques as well as extra-oral radiographs on training models. Students process and mount film, as well as learn to recognize processing and technical errors, normal anatomical landmarks, and pathology. *Sp; preq. DTHY 101; $15.00*

DTHY 121 Clinical Dental Hygiene 1 (4) Introduction to the profession and history of dental hygiene. The principles of preventive dentistry regarding etiology of deposits, caries, inflammation, and oral physiotherapy methods. Aseptic techniques are outlined. Basic instrumentation principles are demonstrated on typodonts followed by demonstration on partners. *F; $25.00*

DTHY 122 Clinical Dental Hyiene 2 (4) Continuation of DTHY 121. Clinical skills include intra/extra oral examinations, dental/periodontal charting, scaling and polishing techniques, periodontal probing, and fluoride techniques. Skills are transferred from typodont to partner. *W; $25.00*

DTHY 123 Clinical Dental Hygiene 3 (4) Continuation of DTHY 122. Techniques for dental hygiene care are performed in clinical patient treatment. Advanced skills include desensitization techniques, instrument sharpening, sequencing and planning patient treatment, and methods of motivating to prevent oral disease. *Sp; $10.00*

DTHY 201 General and Oral Pathology (3) An introduction to pathology. Discussion of processes of inflammation, necrosis, retrograde changes, and wound healing. Etiologies, diagnosis, treatment, and prognosis of oral lesions. Pathology of diseases affecting teeth and their supporting structures. *F; preq. BIOL 101 and 162*

DTHY 202 Periodontics (3) A study of the periodontal supporting structures of the teeth. Etiologies and classifications of periodontal disease are discussed. The treatment of periodontal disease is discussed in relation to the etiologies. *Sp*

DTHY 203 Dental Materials (3) Didactic and laboratory instruction on the physical properties of materials used in dentistry. Basic principles of the preparation and use of certain restorative materials, impression materials, and laboratory procedures, including chemical sealants, preliminary impressions, and study models. *Su; $20.00*

DTHY 204 Pharmacology and Anesthesiology (3) Drugs and anesthetics used and encountered in dentistry. Discussion of the origin, physical and chemical properties, effects on body systems, indications and contraindications for use, and methods of administration and elimination. *W; preq. AHNR 103 or CHEM 121*

DTHY 205 Dental Health Education (3) Analysis of goals for the development of dental health education programs. Major emphasis is on preparation and use of lesson plans and instructional materials for teaching groups. Involves classroom instruction of dental health in public schools. *Su*

DTHY 206 Public Health (3) An introduction to the broad field of public health with emphasis on dental public health. A basic approach for designing and implementing a public dental health program to promote dental health and prevent dental diseases in the community. *W*

DTHY 220 Oral Microbiology/Immunology (3) A study of general microbiology as applied to oral disease and immunity. An in-depth study of ecology of the oral flora in health and disease. Applied microbiology principles are used in topics of sterilization and asepsis. *Sp; preq. BIOL 101 and 162*

DTHY 224 Clinical Dental Hygiene 4 (5) Continuation of DTHY 123. Techniques and procedures of dental hygiene care and services performed in the clinic atmosphere as they would be in practice. Lecture topics concern medical emergencies in the dental office. *Su; $15.00*

DTHY 225 Clinical Dental Hygiene 5/Special Needs (5) Continuation of DTHY 224. Dental hygiene clinical practice includes applied nutrition as it relates to current concepts in preventive dentistry for the dental hygienist. *F; $15.00*

DTHY 226 Clinical Dental Hygiene 6/Preventive Dentistry and Jurisprudence (5) Continuation of DTHY 225 with emphasis on prevention and trial state board patients. Ethics, jurisprudence, state laws, malpractice, and professional organizations are discussed as they relate to the dental hygiene profession. Career placement is investigated. *W; $15.00*

DTHY 227 Clinical Dental Hygiene 7/Career Management (5) Continuation of DTHY 226. Complete dental hygiene care involving the use of advanced skills and techniques learned in previous dental hygiene courses. Special needs patients are discussed. Selected topics through seminars and lectures are presented to aid professional growth. *Sp; $15.00*

DTHY 290 Seminar in Advanced Periodontics (1-3) Current concepts regarding nonsurgical treatment of periodontal disease. Major emphasis is placed on assessment of root planing techniques and maintenance and care of patients with periodontal disease. *Su; preq. DTHY 202 or permission of the program director*

ECON 101 Principles of Macroeconomics (4) An introduction to the elementary principles of macroeconomics. Includes a study of the economic system and an analysis of national income concepts, fiscal and monetary policies, and economic growth. *Su F W Sp*

ECON 102 Principles of Microeconomics (4) An elementary analysis of the principles of microeconomics. Includes a study of consumer behavior, different types of products and resource markets, and an analysis of certain economic problems. *F W Sp*

ECON 301 Intermediate Microeconomics (4) A study of the economic theories of the consumer and the firm. Analysis of price and output behavior under various product and market structures and resource market analysis. *W even years; preq. ECON 101 and 102*

ECON 302 Intermediate Macroeconomics (4) National income analysis; fiscal and monetary policies for economic stabilization. *W odd years; preq. ECON 101 and 102*

ECON 310 Money and Banking (4) Cross-listed as BUFI 310. Development of banking and the role of the Federal Reserve system in the U.S. Analysis of monetary policy for purpose of stabilization. *F odd years; preq. ECON 101 and 102*

ECON 320 History of Economic Thought (4) Evolution of economic thought and methods, with emphasis on the theories and ideas of the mercantilists, the physiocrats, the classicals, the neoclassicals, the Marxists, the Keynesians, and other schools of thought. *Not regularly offered; preq. ECON 101 and 102*

ECON 326 Economic History of the U.S. (4) Cross-listed as HIST 326. Analysis of the changes in the economic structure and development of the U.S. from colonial days to the present. Includes a survey of American economic life and the role of entrepreneurship in economic development. *F even years; preq. ECON 101 and 102*

ECON 332 Managerial Economics (4) Cross-listed as BUMG 332. Use of economic theory and decision making techniques in business management. Production and consumer theory, applied price theory, pricing of final products, theory of profits, profit management, capital budgeting, cost and demand analysis theory to provide a solid foundation of economic understanding for use in managerial decision making. *Not regularly offered; preq. ECON 101, 102, and MATH 201.*

ECON 350 Labor Economics (4) Economic analysis of labor markets. Topics include labor supply and the derived demand for labor, human capital theory, labor market structures, trade unions, discrimination, and public policy toward labor. *Not regularly offered; preq. ECON 101 and 102*

ECON 405 Economic Development (4) Analysis of economic problems and prospects for development in general and of less developed nations in particular. *Offered as demand indicates; preq. ECON 101 and 102*

ECON 411 Comparative Economic Systems (4) An analysis of the different economic systems: capitalism, socialism, communism, and mixed systems. Survey of the differences and similarities of the economic institutions among these systems. *Sp odd years; preq. ECON 101 and 102*

ECON 425 Public Finance (4) Economic analysis of government finance theory and practice. Topics include the role of government in the allocation of resources and the distribution of income, the selection of alternate expenditure and tax schemes and their effects on the private sector, and public choice theory. *Not regularly offered; preq. ECON 101 and 102*

ECON 450 International Trade (4) Theoretical framework of international trade; problems and policies for free trade; roles of international institutions. *Sp even years; preq. ECON 101 and 102*

ECON 480 Econometrics (4) Economic analysis using linear regression techniques. Emphasis is on particular problems facing applied econometric researchers and practical solutions. Computer applications are included throughout the course. *Not regularly offered; preq. ECON 101 and 102 and MATH 250*

ECON 499 Special Topics in Economics (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Repeatable for credit. *Preq. ECON 101 and 102*

EDUC 110 The Teacher as an Inquiring Professional 1: Strategies for Observation and Reflection (2) An introduction to an explicit concept of teaching. The cycle of plan/act/observe/reflect is developed. An introduction to norms, conventions, expectations, and rewards for teachers. The distinctive nature, scope, sequence, and demands of Shawnee State University's program are outlined. *F W Sp; $25.00*

EDUC 150 Educational Communication (2) Focuses on the ability to communicate in written and oral format on current educational topics. Diagnostic or formative evaluations assess strengths and weaknesses. Frequent feedback provides opportunity to make adjustments. Offered through the Center for Teacher Education in support of the English department initiative for writing across the curriculum. Supports the required Teacher Education Essay Examination. *Su F W Sp*

EDUC 210 The Teacher as an Inquiring Professional 2: Strategies for Action Research (2) Continuation of the plan/act/observe/reflect cycle. Basic elements of action research are introduced by having students validate observations and data collection with one another in inquiry teams. *F W Sp; preq. EDUC 110; $25.00*

EDUC 220 Social/Physical/Intellectual Growth and Development (3) Designed to bring prospective teachers face-to-face with their own development. It explores patterns of behavior, both verbal and nonverbal, which developed within the student's families-of-origin. Also explored are personality types, cognitive development, and life span development, all with thought regarding how these affect the teaching process. *F W Sp; preq. EDUC 110*

EDUC 230 Instructional Media, Technology, and Computers (2) A study of how media can be used both instructionally and to observe and reflect on practice. Operation of media, production of instructional aids, and selection of media appropriate to particular instructional strategies and objectives. *F W Sp; preq. EDUC 110; $15.00*

EDUC 240 Foundations and Competing Epistemologies 1 (2) Examines the history of education in the U.S. as well as contemporary views of the relationship between school and society. *F W Sp; preq. EDUC 110; $25.00*

EDUC 295 Independent Study (1-4) Exploration of special topics not included in the standard curriculum. *F W Sp; $25.00*

EDUC 310 The Teacher as an Inquiring Professional 3: Measurement, Diagnosis, and Evaluation (3) Examines a wide range of diagnostic, formative, and summative evaluation techniques to be used as an integral part of the teaching/learning process. The emphasis is on selection and utilization of appropriate evaluation for individual learners. *F W Sp; preq. admission to teacher education program; $25.00*

EDUC 312 Literacy Foundations (4) Designed for inservice teachers who are already teaching in classrooms and are pursuing the Center for Teacher Education's Reading Endorsement. Integrated approach to the teaching of literacy (oral language, reading, writing, and literature). Introduction to literacy acquisition with a focus on interdisciplinary methods. Inquiry and teaching practice focus on reading.

EDUC 320 Interdisciplinary Teaching Methods 1: Literacy and Social Studies (7) Incorporation of the general knowledge base for teaching. Problem solving and inquiry are emphasized in literacy and social studies. Content-specific and general methods, patterns of instruction, and diagnostic techniques are used in a laboratory context and practiced in field experiences. Inquiry and reflective activities focus planning and action on the moral and ethical intentions and consequences of classroom thinking, actions, and conditions. *F W SP; preq. admission to teacher education program; to be taken concurrently with EDUC 420; $25.00*

EDUC 321 Advanced Developmental Reading (4) Designed to provide preservice teachers with the foundational knowledge of reading process, emergent literacy, and the principles underlying effective, holistic literacy instruction.

EDUC 322 Teaching of Writing for Elementary Educators (4) This process-oriented course is designed to provide preservice and/or inservice teachers with in-depth treatment of the theoretical and practical knowledge base on the teaching of writing to children in elementary school settings. Grounded in current child development and literacy theories, this course builds on the foundational principles of literacy acquisition.

EDUC 323 Adolescent Literature (4) A survey and methods course designed to give secondary and middle-school level preservice teachers experience in the range, quality, genres, and styles of literature suitable for use in classrooms. The course also offers experience in curriculum design, instructional deliveries, evaluation, and recordkeeping, as well as field-based practice with students in grades seven through twelve. *$25.00*

EDUC 324 Critical Reading in the Content Areas (4) Final content class to complete the Teacher Education Reading Endorsement. Designed to acquaint preservice and inservice teachers with the elements of critical reading, the process of reading content material, and methods of teaching and supporting learners in reading content material.

EDUC 325 Instructing Adults (3) Cross-listed as AHNR 325. Study of adult learning needs and participation patterns. Teaching styles and techniques best suited to adults are analyzed and demonstrated.

EDUC 327 Methods of Teaching in Health and Occupations (3) Cross-listed as AHNR 327. The subject matter and teaching methodologies of health instruction in classrooms, laboratories, and community settings are analyzed and demonstrated.

EDUC 340 - EMTP 120

EDUC 340 Foundations and Competing Epistemologies 2 (2) Examines the ethical dimensions of teaching. Foundational knowledge regarding ethics is used to discuss moral issues which commonly occur in schools. Methods of teaching moral education in the classroom are also explored. *F W Sp; preq. EDUC 240 and admission to teacher education program; $25.00*

EDUC 350 Computers in Instruction (4) Focuses on the skills needed for classroom teachers to effectively use computers as a tool to enhance the instructional process. Prepares student to use basic computer applications—word processing, database, spreadsheet, graphics during instruction; examines a variety of software packages for use in the classroom; uses advanced applications—scanning, telecommunications, CD ROM, presentation software, desktop publishing with students; and explores a wide range of options for using computers in the classroom. *Su F W Sp; $20.00*

EDUC 402 Community Health Education (3) Cross-listed as AHNR 402. Philosophy of community health education with emphasis on historical, conceptual, and legal precepts.

EDUC 420 Interdisciplinary Teaching Methods 2: Science and Mathematics (7) Incorporation of the general knowledge base for teaching. Problem solving and inquiry are emphasized in science and mathematics. Content-specific and general methods, patterns of instruction, and diagnostic techniques are used in a laboratory context and practiced in field experiences. Inquiry and reflective activities focus planning and action on the moral and ethical intentions and consequences of classroom thinking and actions. *F W Sp; preq. admission to teacher education program and MATH 110S, 120, and 121; to be taken concurrently with EDUC 320; $25.00*

EDUC 450 Directed Teaching and Seminar (15) A cumulative experience of ten weeks in area schools which includes a weekly seminar, both topical and process-oriented. *F W Sp; preq. admission to the teacher education program and admission to student teaching; $125.00*

EDUC 451 Internship in Health Management/Education (1-6) Cross-listed as AHNR 451 and BUHE 451. Health care management/education experience is obtained in selected institutions or agencies related to the student's health management/education interest and ability. Written reports are required. Restricted to students who have completed a minimum of 60 hours in the business core and 24 hours of the health management concentration with a minimum GPA of 3.5 in those areas. *Not regularly offered; preq. approval from the chairperson of the business department*

EDUC 461 Research Problems in Health and Recreational Education (3) Cross-listed as AHNR 461. Exploration of research methodologies, issues, and problems peculiar to health professions.

EDUC 495 Special Topics (2-4) Cross-listed as AHNR 495. Provides students an opportunity to gain additional knowledge or experience in a specific area or field.

EMTP 101 First Aid and CPR (2) Cross-listed as HPER 101. Includes the American Red Cross Standard or National Safety Council first aid course related to bleeding control, obstructed airway management, splinting and bandaging techniques, and other emergency care procedures. Also includes the American Red Cross or American Heart Association adult CPR course. American Red Cross or National Safety Council first aid certification and Red Cross or American Heart Association adult CPR certification are granted upon successful completion of course. *Su F W Sp; $5.00*

EMTP 102 CPR (1) Cross-listed as HPER 102. Techniques of cardiopulmonary resuscitation for adults, children, and infants. American Red Cross or American Heart Association CPR certification is granted upon successful completion of this course. *Su F W Sp; $5.00*

EMTP 110 Emergency Victim Care (10) The Ohio Basic Emergency Medical Technician training course which provides the framework upon which all other skills and knowledge are developed. Principles of emergency care, CPR, vital signs, patient handling, endotracheal intubation, automatic defibrillation, and patient medication administration techniques are included. *Su F W Sp; preq. advisor approval*

EMTP 120 EMS Systems (3) Introduction to pre-hospital emergency medical systems, including EMS history, types of systems, medical control, dispatch, quality assurance, communications systems, and record keeping. *Offered on demand; preq. advisor approval*

EMTP 130 Major Incident Response (2) Provides the student with the theoretical and practical foundations necessary to manage multiple casualty situations in the prehospital environment. *Offered on demand; preq. advisor approval*

EMTP 210 Paramedic Skills 1 (5) Expansion of basic skills and knowledge gained in the EMTA-Basic course in the areas of shock and fluid therapy, anatomy and physiology, patient assessment, and respiratory emergencies. Advanced skills include IV therapy, esophageal intubation, MAST, and automatic defibrillation. Includes DOT Paramedic Program Division 1 (Prehospital Environment, Sections 1-4) and Division 2 (Preparatory, Sections 1-5) and the administration of subcutaneous epinephrine for allergic reactions to insect stings. *F; preq. Ohio certified EMT-A; six months EMT-A experience*

EMTP 211 Paramedic Skills 1 Lab (1) Laboratory and clinical experience which correlate with EMTP 210 Paramedic Skills 1. *F; $10.00*

EMTP 212 Paramedic Skills 1 Clinical (1) Hospital and field clinical experiences for EMTP 210. *F*

EMTP 215 Advanced EMT Defibrillation (4) Prehospital diagnosis and treatment of various forms of sudden cardiac death. Focuses on prehospital defibrillation. Includes cardiovascular anatomy and electrophysiology, cardiopulmonary resuscitation, assessment and management of cardiac arrest, including electrical defibrillation. Successful completion allows the Ohio certified Advanced EMT to perform defibrillation. *F; preq. Ohio certified EMT-A; six months EMT-A experience*

EMTP 220 Paramedic Skills 2 (3) Emphasizes gaining access to, rescuing, and transporting a patient. Recognition and control of certain hazards, such as explosive material, downed electrical wires, toxic gases, and radiation. Use of radio equipment, protocols, and procedures for the transfer of information to the supervising physician. Includes DOT Paramedic Program Division 1 (Prehospital Environment, Sections 5-6). *F; preq. EMTP 210 or equivalent concurrently; $20.00*

EMTP 230 Paramedic Skills 3 (8) Intensive emergency coronary care emphasis. Topics include pathophysiology, symptomatology, and emergency treatment of coronary artery disease, MI, angina pectoris, congestive heart failure, and other cardiac emergencies. Introduction to the general groups of drugs and the classification of each. Therapeutic effects, indications, contraindications, correct dosage, and side effects of specific drugs used in cardiac emergencies. Includes DOT Paramedic Program Division 2 (Preparatory, Section 5), Division 4 (Medical, Sections 1 and 2), and the American Heart Association Advanced Cardiac Life Support Provider course. *W; preq. EMTP 210, 211, 212, and 220 or equivalent*

EMTP 231 Paramedic Skills 3 Lab (1) Laboratory and clinical experiences which correlate with EMTP 230 Paramedic Skills 3. *W; $10.00*

EMTP 232 Paramedic Skills 3 Clinical (1) Hospital and field clinical experiences for EMTP 230. *W*

EMTP 240 Paramedic Skills 4 (8) Builds advanced skills and knowledge in the areas of medical emergencies, trauma emergencies, obstetric/gynecologic emergencies, pediatrics, and neonatal transport. Emphasis placed on clinical and on-squad experience. Includes DOT Paramedic Program Division 3 (Trauma), Division 4 (Medical, Sections 3-11), Division 5 (OB/Gyn/Neonatal), and Division 6 (Behavioral). *Sp; Preq. EMTP 230, 231, and 232 or equivalent*

EMTP 241 Paramedic Skills 4 Lab (1) Laboratory and clinical experiences which correlate with EMTP 240 Paramedic Skills 4. *Sp; $10.00*

EMTP 242 Paramedic Skills 4 Clinical (1) Hospital and field clinical experiences for EMTP 240. *Sp*

EMTP 250 Advanced Emergency Procedures (3) Didactic and laboratory instruction in advanced emergency procedures, such as nasotracheal intubation, cricothyrotomy, intraosseous infusion, external cardiac pacing, and other procedures. *Offered on demand; preq. advisor approval*

EMTP 260 - ENGL 115S

EMTP 260 EMS Field Studies (3) Course relates field clinical experience of student to theory. Utilizes case review, discussion, and lecture for integration of theory with practice. *Offered on demand; preq. advisor approval*

EMTP 270 EMS Management (3) Course develops knowledge and skills relative to management of an emergency medical service. *Offered on demand; preq. advisor approval*

EMTP 295 Special Topics in EMS (1-4) Individual or small group study, under the supervision of an instructor, of topics not otherwise available to students. *Offered by arrangement*

ENGL 095 Basic Writing 1: Mechanics (4) Provides intensive practice with the basics of written expression: grammar, punctuation, usage, spelling, and sentence structure. Emphasis on correct use of standard English. Also focuses on basic summary and paragraph writing. *Su F W Sp*

ENGL 097 Reading Development 1 (4) Initial reading course in developmental education. Major focus is on comprehension and vocabulary improvement, adaptability of reading rate, and test-taking skills for standardized tests. Includes, but is not limited to, recognition of patterns of organization and text structure, metacomprehension, aids to reading textbooks, strategies for building vocabulary, and test taking. Recreational and journal reading are required. *Su F W Sp*

ENGL 098 Reading Development 2 (4) Second level reading course in developmental education. Major focus is on increased comprehension and vocabulary growth in content area reading. Includes, but is not limited to, identification and use of three levels of comprehension; use of three-stage reading plans, which include pre-reading, reading, and post-reading strategies; identification and writing main ideas through summarizing textbook material; becoming metacomprehensive readers; building general and specialized vocabulary. Reading fiction and nonfiction is required. *Su F W Sp*

ENGL 099 Basic Writing 2: Paragraphs and Essays (4) Provides practice in the process of writing and revising paragraphs and short essays. Standard organizational patterns for paragraphs and essays are required with an emphasis on the correct use of standard English. *Su F W Sp*

ENGL 105 Information Access (1) Prepares the student to find information using the Library's print and electronic indexes and bibliographies. The student formats a bibliography using a topic of his or her choice. *F W Sp*

SPECIAL NOTE: The university placement/assessment test is prerequisite to enrolling in ENGL 111S. Students completing developmental courses are required to pass not only the course itself; but also the course exit exam before enrolling in English 111S. Those students who enter Shawnee State University with an English subject ACT score of 22 or higher or the SAT equivalent, will be permitted to register for ENGL 111S without taking any English placement test. ENGL 111S, 112S, and 115S **must** be taken in sequence, beginning with 111S. **This composition sequence is a prerequisite for advanced coursework in English (including the civilization and literature series).**

ENGL 111S Discourse and Composition[1] (4) An introduction to discourse in both public and academic settings. *Su F W Sp; preq. placement or the appropriate developmental course(s), which may include ENGL 095, 097, 098, 099, and 100; $5.00*

ENGL 112S Composition and Research[1] (4) An introduction to the relationship between research and composition. *Su F W Sp; preq. ENGL 111S; $5.00*

ENGL 115S Composition and Literature (4) An introduction to the relationship between literature and composition. *Su F W Sp; preq. ENGL 112S; $5.00*

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[1] In keeping with the general education program's commitment to computer literacy (see *Catalog* p. 66), several sections of this course use computers in the teaching of composition.

ENGL 120 Vocabulary Expansion (2) A non-developmental course intended primarily to enhance the vocabulary skills of students with a reasonable range of existing vocabulary. *F Sp*

ENGL 121 Technical Writing (3) A course which stresses clarity in technical communications with emphasis on the improvement of writing style and the mastery of exact organization. Types of writing include reports (formal and informal), proposals, resumes, and specifications. Because of the textbook and specific writing assignments, this course is not open to liberal arts students. *Su F W Sp; preq. sophomore standing in a technical program*

ENGL 200 Introduction to Literature (4) An analysis of selected literary works which aims to develop reading and interpretive skills and to familiarize students with the language of literary study. *F*

ENGL 203 Introduction to Drama (4) Modern dramatic forms are analyzed in an attempt to define the genre. *Offered on demand*

ENGL 210 Introduction to Fiction (4) A study of forms and techniques of the novel, novella, and short story. *Offered on demand*

ENGL 211 Survey of English Literature 1 (4) Survey of the development of English literary traditions from the Medieval Period through the eighteenth century. *F*

ENGL 212 Survey of English Literature 2 (4) Survey of the development of English literature beginning with the Romantics and moving into contemporary writers and works. *W*

ENGL 222 Business Writing (4) A study of writing skills essential to the business world with special emphasis on the practical application of those skills to "real world" writing tasks. *Offered on demand*

ENGL 225S Civilization and Literature 1 (4) Cross-listed as HIST 225S. This course is an interdisciplinary introduction to the major thoughts important in the development of western civilization. *Su F W Sp*

ENGL 226S Civilization and Literature 2 (4) Cross-listed as HIST 226S. An interdisciplinary introduction to the major thoughts important in the development of American civilization. *Su F W Sp*

ENGL 227S Civilization and Literature 3 (4) Cross-listed as HIST 227S. An interdisciplinary introduction to the major thoughts of various non-western civilizations. *Su F W Sp*

ENGL 232 Creative Writing (Poetry) (3) A poetry writing course in which conventional, blank, and free verse, as well as techniques of poetic expression are taught. *F Sp*

ENGL 240 Screenwriting (3) An introduction to the elements of screenwriting. Students develop a screen adaptation of a published fictional work as well as study important distinctions between visual and linguistic art forms. *Offered on demand*

ENGL 245 Creative Writing (Fiction) (3) An introduction to the elements of fiction writing. Students critique their own manuscripts as well as study selected works of published writers. *Sp*

ENGL 251 Survey of American Literature 1 (4) Study of major works and major authors from the Colonial Period through American Romanticism. *F*

ENGL 252 Survey of American Literature 2 (4) Study of major works and major authors from the Age of Realism to the twentieth century. *Sp*

ENGL 273 Modern American Poetry (4) Study of themes and forms prevalent in modern American poetry. *Offered on demand*

ENGL 275 American Film History (4) Cross-listed as HIST 275. Chronological study of the influence of American history upon American film, and vice versa. Students become acquainted with the work and themes of some of America's significant film directors and major genres of American popular film. *F and on demand*

ENGL 280 Introduction to American Studies 1 (4) Interdisciplinary study of American culture. *Offered on demand*

ENGL 281 Introduction to American Studies 2 (4) Interdisciplinary study of American culture. *Offered on demand*

ENGL 299 Topics in English (1-4) Study of selected topics not otherwise available. *Offered on demand*

ENGL 300 Children's Literature (4) Readings in literature that appeals specifically to elementary students. *Sp*

ENGL 301 Shakespeare 1 (4) Intensive study of the tragedies and histories. *F*

ENGL 302 Shakespeare 2 (4) Intensive study of the comedies and problem plays. *Sp*

ENGL 311 Major English Authors (Before 1800) (4) A variable content course which focuses on major authors for the purpose of carefully analyzing their works and detailing their development as writers. *F Sp*

ENGL 312 Major English Authors (After 1800) (4) A variable content course which focuses on major authors for the purpose of carefully analyzing their works and detailing their development as writers. *Offered on demand*

ENGL 315 Theory and Practice in Composition (4) Study of varied methods and strategies for teaching composition with special attention to classroom application for teachers. *W*

ENGL 321 The English Novel (4) A variable content course which examines the emergence and development of the English novel. *Offered on demand*

ENGL 322 Modern English Drama (4) Study of the developments in English theatre in the 20th century. *Offered on demand*

ENGL 332 Poetry Workshop (3) An advanced poetry writing course with a major emphasis placed on critiquing the writing of the students in the class for the sake of successfully marketing their work. *W*

ENGL 341 Literature of Initiation and Experience (4) Study of literary works which detail growth and development of character. *Offered on demand.*

ENGL 342 Women in Literature (4) Study of works by and about women. *W*

ENGL 343 Black Authors (4) Study of works about the Black experience. *Offered on demand*

ENGL 344 Literature of Appalachia (4) Exploration of southern Appalachian experience in literature. Includes works by authors past and present who are themselves products of the region or who have focused on the region in their prose or poetry. *Sp*

ENGL 346 River Literature (4) Study of literary works in which rivers are central factors influencing experience. *Offered on demand*

ENGL 349 Regional American Literature (4) A variable content course of literary works which are distinct to a region and which provide a social perspective unique to a particular time and place. *Offered on demand*

ENGL 351 Major American Authors (4) Intensive study of one or two major authors to provide a detailed understanding of works, thought, and literary development. *Sp*

ENGL 360 Introduction to Language and Lingusitics (4) Cross-listed as LING 270. An introduction to the fundamental properties and processes of the world's languages. A review of the major systems and features which constitute language. A discussion of language change, typology, and aspects of language acquisition. *F Sp*

ENGL 362 Patterns of English (4) Cross-listed as LING 362. A survey of various components of English phrase, clause, and sentence structure and an examination of questions of usage. *W Sp; suggested preq. ENGL 360*

ENGL 365 History of English (4) Cross-listed as LING 365 and HIST 365. A survey of the patterns and events which have shaped the English language from the time of the Anglo-Saxon to the present. *W; suggested preq. ENGL 360; This course does not fulfill any history course requirements of the history major.*

ENGL 371 The American Novel (4) A variable content course which examines the emergence and development of the American novel. *Offered on demand*

ENGL 380 Fundamentals of Rhetoric (4) Study of both ancient and modern theories of rhetoric. *Offered on demand.*

ENGL 381 Fundamentals of Criticism (4) Study of both ancient and modern theories of criticism. *Offered on demand*

ENGL 383 The English Teacher and Society (4) Analysis of the role of the English teacher in modern society, of the philosophies which underlie various methods of English teaching, and of the rationales for choosing various texts and methods. *W*

ENGL 399 Topics in Literature (1-4) Study of topics not otherwise available. *Offered on demand*

ENGL 411 16th Century Renaissance Literature (4) Study of the major works of selected authors such as More, Sidney, Spenser, Marlowe, Shakespeare, Shelton, Wyatt, Surrey, and others. *Sp*

ENGL 421 17th Century Poetry and Prose (4) Study of the major works of selected authors such as Bacon, Carew, Cowley, Donne, Herrick, Jonson, Marvell, Webster, and Milton. *W*

ENGL 441 The Romantics (4) Study of the poetry and prose of major Romantic writers, including Blake, Wordsworth, Coleridge, Shelly, Byron, and Keats. *Offered on demand*

ENGL 446 The Victorians (4) Study of English poetry and prose from 1830 to 1900. *Offered on demand*

ENGL 449 Native American Literature (4) Study of works written by Native American writers. *Sp*

ENGL 460 Topics in Linguistics (4) Senior seminar in selected topics in linguistics: linguistics and literature, social aspects of language, psychological aspects of language, varieties of English, English as a second language, and Black English (including Pidgin and Creole). Can be taken more than once when different themes are offered. *Offered on demand; preq. ENGL 360 and 365*

ENGL 461 19th Century American Literature (4) Intensive study of major authors and works of the 19th century. *F*

ENGL 471 20th Century American Literature (4) Intensive study of major authors and works of the 20th Century. *W*

ENGL 490S Senior Seminar (4) Provides an opportunity for students to place their chosen field of study in an interdisciplinary context with intellectual, ethical, and historical perspectives. The seminar focuses on the synthesis and integration of various concepts by applying them to the analysis and solution of problems chosen in the context of their academic disciplines. Oral and written presentations of the seminar paper are required. *Su F W Sp; preq. senior standing and 44 general education program hours*

ENGL 495 Independent Study (4) Independent investigation of literary topics under the direction of a faculty member. *Offered on demand*

ENGL 499 Topics in Literature (1-4) A seminar course in selected topics in literature. Specific topic chosen by the instructor. *W Sp*

ESL 91 Elementary English 1 (4) Development of elementary listening, comprehension, speaking, reading, and writing skills in English. Laboratory exercises are used to reinforce these skills. *Offered on demand*

ESL 92 - ETCA 120

ESL 92 Elementary English 2 (4) Continuation of ESL 91. *Offered on demand; preq. ESL 91*

ESL 93 Elementary English 3 (4) Continuation of ESL 92. *Offered on demand; preq. ESL 92*

ESL 94 Intermediate English 1 (4) Development of intermediate oral communication skills in English, but with increased emphasis in reading and writing. May be taken concurrently with ESL 93. *Offered on demand; preq. ESL 93 or satisfactory score on ESL assessment test*

ESL 95 Intermediate English 2 (4) Continuation of ESL 94. *Offered on demand; preq. ESL 94 or satisfactory score on ESL assessment test*

ESL 96 Intermediate English 3 (4) Development of advanced communicative skills in English. May be taken concurrently with ESL 97, 98, and 99. *Offered on demand; preq. ESL 95 or satisfactory score on ESL assessment test*

ESL 97 Advanced English 1 (4) A follow-up to ESL 96. A course emphasizing oral proficiency and applied grammatical concepts. Improvement of speed and comprehension in reading through conscious analysis of paragraph structure and recognizing the progressive development of ideas. May be taken concurrently with ESL 96, 98, and 99. *Offered on demand; preq. ESL 96 or satisfactory score on ESL assessment test*

ESL 98 Advanced English 2 (4) Training in the fundamental skills, including grammar, usage, organization, and development. For international students, includes idiomatic expressions and problems common to non-native speakers of English. Utilizes methodologies appropriate for international students. Designed to prepare international students for Discourse and Composition. *Offered on demand; preq. ESL 96 or satisfactory score on ESL assessment test*

ESL 101 English for International Students (Equivalent to ENGL 111S) (4) Review of sentence structure, mechanics and usage, paragraph development, and short essay organization. For international students, includes reading and analysis of prose models and work on other English fundamentals. Emphasis on revising for clarity, coherence, and organization. Utilizes methods appropriate for ESL students. *Offered on demand*

ETCA 101 Introduction to CADD (3) Hands on experience using industrial standard hardware and software for computer aided drafting. Students learn to set up, edit, and output drawings using the latest in CADD technology. Introduction to file management techniques and the disk operating system (DOS). All classes focus on the use of AutoCAD® unless otherwise stated. *F W Sp; coreq. ETEG 101 or CADD faculty approval; 2 lec. 3 lab; $25.00*

ETCA 102 Mechanical Drafting with CADD (3) Students further develop and refine skills in operating a CADD workstation. Additional commands and more advanced techniques are introduced involving typical 2-D mechanical drafting and design techniques. *W; preq. ETCA 101 or advisor approval; 2 lec. 3 lab; $25.00*

ETCA 103 CADD Menu Customization (3) Students develop symbol libraries and icons to be used with student developed tablet and screen menus. *W; preq. ETCA 101 or CADD faculty approval; 2 lec. 3 lab; $25.00*

ETCA 104 Advanced Drafting with CADD (3) Advanced drafting and CADD concepts to include surface design and development and advanced descriptive geometry techniques. *Sp; preq. ETCA 102 or CADD faculty approval; 2 lec. 3 lab; $25.00*

ETCA 105 3-D Modeling with CADD (3) Wireframe modeling, surface modeling, and solid modeling are taught with an emphasis on mechanical parts design. Students gain an appreciation for the capabilities and limitations of each modeling technique. *Sp; preq. ETCA 101 or CADD faculty approval; 2 lec. 3 lab; $25.00*

ETCA 120 Introduction to CADKEY® (3) Introduction to 3-D modeling concepts using alternate CADD package(s) to help the student progress into the design of plastics mold cavities. *Sp; preq. or coreq. ETEG 101; 2 lec. 3 lab; $40.00*

ETCA 150 Computer Aided Machining (3) Introduction to Computer Aided Machining (CAM), intended for students having no prior CAM experience. The course focuses on the creation and editing of tool path geometry, display control, file manipulation, verification of data, output of hardcopy, and generation of CNC code. *Preq. ETCA 101 or CADD faculty approval; $25.00*

ETCA 201 Small Building Design with CADD (3) Introduction to architectural drafting through the design of a residential structure. Students create the drawings necessary to complete a typical set of house plans. Topics include, but are not limited to, design techniques, floor plans, foundation plans, elevations, wall sections, window and door schedules. *Sp; preq. ETCA 103; 2 lec. 3 lab; $25.00*

ETCA 202 Piping Drawings with CADD (3) Representation of piping in single and double line diagrams, isometric and orthographic diagrams. Design of pipe flanges given the size of pipe and the operating pressure. Template layouts for cutting pipe to form turns of various angles. *F; preq. ETCA 103; 2 lec. 3 lab; $25.00*

ETCA 203 Welded Parts Design with CADD (3) Welding processes and procedures are covered to the extent necessary to make production weldment drawings. Delineating weld symbols is emphasized. *F W; preq. ETCA 103; 2 lec. 3 lab; $25.00*

ETCA 204 Casting and Mold Design with CADD (3) Completion of a set of plans giving the specifications a foundry would need to manufacture a part. The plans include: a pattern drawing with gates, a core box drawing, the casting drawing of the part, and machined part drawing. *W Sp; preq. ETCA 103; 2 lec. 3 lab; $25.00*

ETCA 205 LISP Programming (3) A wide range of design problems are solved using LISP programming, subsequent to a thorough study of LISP functions, variable naming conventions, entity access, and device access. A variety of existing LISP routines and student written routines are analyzed. *F; preq. ETCA 103 or CADD faculty approval; 2 lec. 3 lab; $25.00*

ETCA 220 Intergraph MicroStation (3) An introductory course on the methods and techniques of using Intergraph MicroStation. Students develop skills in both 2-D drafting and 3-D design. *W; preq. ETCA 101 or CADD faculty approval; $25.00*

ETCA 230 Rendering and Animation (3) Advanced techniques in rendering and animating 3-D CAD models for presentation graphics. Animated "fly-bys" and "walk-throughs" allow the operator to view the CAD model as though walking through it or flying past it. Rendering techniques include the use of AutoDesk's 3-D Studio. *Sp; preq. ETCA 105 or CADD faculty approval; $25.00*

ETCA 250 Solid Modeling (3) In-depth instruction in solid modeling using constructive solid geometry and Boolean operations. Students create solid models and calculate mass properties to solve mechanical design problems. *Sp; preq. ETCA 105; $25.00*

ETCA 299 Special Topics in CADD (1-5) Offered as an elective for CADD students. Covers topics of special interest. *Preq. instructor permission*

ETCO 110 Computer Software and DOS (2) Computer hardware and software concepts and fundamentals, including operating systems (DOS), the use of Windows and integrated applications software for word processing, spreadsheeting, and data bases. *F W Sp; $25.00*

ETCO 115 Computer Programming for Technology (3) Utilization of computer hardware, a high level programming language, algorithms, and flowcharting to develop modular and structured programs for engineering technology applications. The emphasis of the laboratory work is to develop, debug, execute, and document BASIC language programs. Some knowledge of algebra is necessary. *F W Sp; coreq. ETCO 110; 2 lec. 3 lab; $25.00*

ETCO 202 Statics and Strength of Materials (4) A study of the principles of torque and displacement in a wide variety of gearing applications along with the analysis of forces or loads acting upon the system. Analysis of stress and strain, strength of materials, friction, torsion, and moment of inertia. *F; preq. PHYS 201 or faculty approval; 3 lec. 3 lab; $25.00*

ETCO 210 Occupational Safety and Health Management (3) Industrial safety, occupational health issues, accident prevention, working conditions, provisions and policies of OSHA. Compliance with OSHA regulations. Course includes OSHA 10-Hour General Industry Voluntary Compliance Card. *F Sp; preq. sophomore standing and GPA of 2.0 or faculty approval*

ETCO 220 Hydraulics and Pneumatics (3) A study of the functions of various hydraulic and pneumatic components and methods of combining them to build complex systems. Emphasis on understanding the physical properties of fluids and gases and their use for power transmission and for control. *W Sp; preq. MATH 131, PHYS 201, or faculty approval; 2 lec. 3 lab; $25.00*

ETCO 225 Industrial Management (3) Understanding the attributes and skills necessary to be an effective team builder, communicator, supervisor, or manager. Prepares the student for leadership positions in industrial and high technology organizations. *F W; preq. sophomore standing and GPA of 2.0 or faculty approval*

ETCO 230 Introduction to Robotics (3) Introduction to applications in industry. Emphasis on types, classifications, types of motion, economic impact, and safety. *Sp; preq. ETCO 220 and ETEM 110; 3 lec. 2 lab; $30.00*

ETCO 490S Senior Seminar (4) Provides an opportunity for students to place their chosen field of study in an interdisciplinary context with intellectual, ethical, and historical perspectives. The seminar focuses on the synthesis and integration of various concepts by applying them to the analysis and solution of problems chosen in the context of their academic disciplines. Oral and written presentations of the seminar paper are required. *Su F W Sp; preq. senior standing and 44 general education program hours*

ETEC 102 Structured Programming with C (3) An introduction to the software development process through a modern block-structured language such as Pascal. Computer problem solving and program debugging strategies, data abstraction, modularity, parameter passing, and elementary data structures. *W; preq. ETCO 110 and 115; 2 lec 3 lab; $25.00*

ETEC 103 Data Structures with C (3) Fundamentals of computer data structures. Linked lists, stacks, and queues. Recursion and recursively-defined data structures. Tree structures. Advanced methods for searching and sorting, including hashing techniques. Introduction to complexity analysis. *Sp; preq. ETEC 102; 2 lec. 3 lab; $25.00*

ETEC 199 Special Topics (1-14) Individual or small group study, under the supervision of an instructor, of topics otherwise not available to students. *Preq. advisor approval*

ETEC 211 Assembly Language Programming 1 (3) Machine representation of numeric and non-numeric data, basic CPU architecture, instruction sets, addressing methods, arithmetic operations with integer and floating point data, subroutines, and basic input and output techniques. *F; preq. ETCO 115; 2 lec. 3 lab; $25.00*

ETEC 212 Assembly Language Programming 2 (3) Continuation of ETEC 211. Advanced input and output techniques, techniques for interrupt handling, subroutine linkage of separately assembled modules, and drivers for custom built interfaces. *W; preq. ETEC 211; 2 lec. 3 lab; $25.00*

ETEC 241 Microprocessor Circuits 1 (3) The study of small microprocessor based systems. Simple busses, timing, memory systems, and decoding. Techniques for interfacing MSI, LSI, and VLSI chips to system busses. Lab emphasis on expanding and interfacing to a microprocessor based system. *W; preq. ETEC 211; 2 lec. 3 lab; $10.00*

ETEC 242 Microprocessor Circuits 2 (3) Continuation of ETEC 241. PLD, EPROM, and EEPROM uses and programming. Basic I/O techniques, signal conditioning and interfacing to the physical world. Lab emphasis on interfacing transducers such as temperature sensors and motors to a microprocessor based system. *Sp; preq. ETEC 241; 2 lec. 3 lab; $10.00*

ETEC 250 Computer System Integration with Novell (4) Hardware and software integration techniques for stand alone and networked computer systems. Lecture covers motherboards, floppy drives, hard drives, video boards, network adaptor cards, cabling and network system software. Lab emphasis on assembling and integrating a networked computer system. *F; preq. ETCO 110 and 115; 2 lec. 6 lab*

ETEC 275 Systems Programming (3) A study of computer systems software and its role in modern computing systems. Operational and design details of assemblers, compilers, and linking loaders. Command language programming in modern operating systems. User interface design. *Sp; preq. ETEC 212; 2 lec. 3 lab; $25.00*

ETEC 280 Applications Programming with C (3) Application design techniques, graphical user interfaces, object module libraries and linking, software testing. Lab emphasis on designing and building a complete GUI based software application. *W; preq. ETEC 103 and 211; 2 lec. 3 lab; $25.00*

ETEC 299 Special Topics (1-14) Individual or small group study, under the supervision of an instructor, of topics otherwise not available to students. *Preq. advisor approval*

ETEC 315 Computer Architecture (3) Focus on advanced microprocessor architectures. Lecture topics include internal microprocessor architectures, advanced busses, system components, system interconnect and comparative microprocessor evaluation. Lab emphasis on building advanced microprocessor based systems. *W; preq. ETEC 242; 2 lec. 6 lab; $10.00*

ETEC 320 Embedded Systems (3) The use of microprocessor and microcontroller based subsystems as control components of a larger system or product. Lab emphasis on building and programming an embedded system. *Sp; preq. ETEC 315; 2 lec. 6 lab*

ETEC 351 Networking and Communications 1 (3) Interfaces from a computer system to external devices which support asynchronous and synchronous communications, flow-control paths, data transfer, packets, and physical interfaces. *F; preq. ETEC 241 and 280; 2 lec. 3 lab*

ETEC 352 Networking and Communications 2 (3) A study of the ISO model protocols, logical connections and services, streams and datagrams, LANs, internetworking, routing, and servers. *W; preq. ETEC 351; 2 lec. 3 lab*

ETEC 361 Advanced Circuit Analysis 1 (3) Application of calculus to the modeling of systems. Mathematical approach to initial conditions. Introduction to (and application of) integral-differential equations to modeling of circuits and systems. Frequency domain analysis and Laplace transforms are introduced as an analysis tool. Application of PSPICE, BASIC, and/or 'C' computer programming to modeling of different systems. *F; preq. ETEM 112 and MATH 202; 2 lec. 3 lab; $25.00*

ETEC 362 Advanced Circuit Analysis 2 (3) Application of Laplace transforms to system differential equations in the time and frequency domains with sinusoidal and complete harmonic signals. Topics include transfer functions, frequency response, and BODE plots, transients in DC/AC networks, initial conditions, mesh analysis, superposition, the Initial and Final Value Theorems and the Shifting Theorem. A laboratory component is directed at demonstrating the transient effects of both AC and DC stimulus. *W; preq. ETEC 361; 2 lec. 3 lab; $25.00*

ETEC 371 Realtime Operating Systems 1 (3) The study of realtime multiprocessing operating systems, processes and process states, concurrent programming, low level interprocess communications and synchronization, operating system service calls, and hardware interrupts. Lab emphasis on programming multiple process software applications using a realtime operating system. *F; preq. ETEC 275; 2 lec. 3 lab; $25.00*

ETEC 372 Realtime Operating Systems 2 (3) Continuation of ETEC 371. High level interprocess communication, synchronization, and advanced operating system service calls. Detailed kernal analysis and modification. Lab emphasis on modifying and expanding a realtime operating system kernal and advanced methods of programming multiple process software applications using a realtime operating system. *W; preq. ETEC 371; 2 lec. 3 lab; $25.00*

ETEC 373 Advanced Operating Systems with UNIX (3) A study of advanced operating systems using UNIX. File systems, processes and process development, remote access using FTP and Telnet and overall system management. *Sp; preq. ETEC 103; 2 lec. 3 lab; $25.00*

ETEC 399 Special Topics (1-14) Individual or small group study, under the supervision of an instructor, of topics otherwise not available to students. *Preq. advisor approval*

ETEC 421 Digital Control Systems 1 (3) A study of the methods used to implement control theory concepts on digital machines. Analog vs. digital machines, open and closed loop systems, block diagrams, PID control algorithms. Lab emphasis on controlling physical devices using computer based control algorithms. *F; preq. ETEC 320 and 362; 2 lec. 6 lab*

ETEC 422 Digital Control Systems 2 (3) A study of the methods used to implement control theory concepts on digital machines extending the competencies gained from ETEC 421. Includes analog vs. digital machines, open and closed loop systems, block diagrams, and PID control algorithms. Lab emphasis is on controlling physical devices using computer based control algorithms. *W; preq. ETEC 421; 2 lec. 6 lab*

ETEC 430 Database Systems (3) A study of database management systems including the design, implementation, and maintenance of databases, applications, and programming techniques. Including the logical and physical representations of hierarchical, simple, and complex data and file relationships and their application in the major data models with a focus on the relational model. *F; preq. ETEC 371 or advisor approval; 2 lec. 3 lab; $25.00*

ETEC 477 Concurrency (3) Principles of concurrent programming. Synchronization and interference. Data parallel algorithms and barriers. The mutual exclusion problem. Semaphores, monitors, and conditional critical regions. Synchronous and asynchronous message passing. Remote procedure call and rendezvous. Exploration of popular process interaction paradigms. *Sp; preq. ETEC 372; 2 lec. 3 lab; $25.00*

ETEC 480 Compiler Design and Implementation (3) Application of finite state automata as regular expressions to programming language design and analysis of the use of context-free grammars as a formal device for language syntax. Techniques of lexical analysis and parsing (top-down and bottom-up), symbol table management, code generation, and error handling. *W; preq. ETEC 275 and 280; 2 lec. 3 lab; $25.00*

ETEC 483 Software Engineering (3) An introduction to models and issues concerned with the development of high quality software including the life-cycle models, requirements analysis, specification and design techniques, implementation, documentation, configuration management, reliability, verification and validation, and maintenance. *F; preq. ETEC 280; 2 lec. 3 lab; $25.00*

ETEC 491 Design Laboratory 1 (4) A capstone experience in computer engineering technology involving the application of hardware and software components. The student demonstrates computer engineering technology competence by using the deductive method to apply computing concepts from the computer engineering program to an applications design project under the guidance of a faculty mentor. *W; preq. senior standing; 1 lec. 9 lab; $10.00*

ETEC 492 Design Laboratory 2 (4) Continuation of ETEC 491. *Sp; preq. ETEC 491; 1 lec. 9 lab; $10.00*

ETEC 495 Topics in Computing (3) A survey of contemporary developments in computer technology focusing on emerging hardware, software, and integrated systems. Discussions of new communications technology, architectures, processors, and applications guide the student in planning for future career decisions. *W; preq. senior standing or advisor approval; 2 lec. 3 lab; $25.00*

ETEC 499 Special Topics (1-14) Individual or small group study, under the supervision of an instructor, of topics otherwise not available to students. *Preq. advisor approval*

ETEG 101 Engineering Drawing 1 (3) A basic course for students who have had little or no experience in engineering drawing. Develops fundamental principles through actual experience in both freehand sketching and scaled machine drawings. Includes orthographic, multiview drawings, geometric constructions, dimensioning practice, sectional views, and auxiliary views. *F W Sp; 2 lec. 3 lab; $25.00*

ETEG 102 Engineering Drawing 2 (3) Application of basic principles to solve practical engineering problems. Surface design and development and applied descriptive geometry are used to determine the relationship between points, lines, and surfaces in spaces. *W; preq. ETEG 101 or advisor approval; 2 lec. 3 lab; $25.00*

ETEG 103 Engineering Drawing 3 (3) Advanced drafting course. Includes detail and assembly drawings, parts lists, thread details and specifications, gear details, classes of fit and tolerances, and geometric dimensioning and tolerancing. *Sp; preq. ETEG 102 or instructor approval; 2 lec. 3 lab; $25.00*

ETEG 105 Blueprint Reading (2) Fundamentals in reading and interpreting engineering drawings, blueprints, and schematics (pneumatic, hydraulic, electrical, and electronic). Using drawings to understand specification sheets, installation details, and to develop bills-of-material. Recognizing and understanding standard drawing symbols and terminology. *F W; 2 lec.; $25.00*

ETEG 299 Special Topics in Engineering Drawing (1-5) Offered as an elective for engineering drawing students. Covers topics of special interest. *Preq. instructor permission*

ETEM 101 Electro Concepts (4) A course in the concepts of electricity and electronics. Introduction to concepts of Ohm's Law, resistance, capacitance, inductance, power, and energy. Study of reactance, impedance, phasors, and power factors. DC and AC rotating machines are surveyed. Elementary solid state electronics. This course is not for electro-mechanical or electrical/computer majors and is not applicable toward an associate degree. *Offered upon sufficient demand.*

ETEM 110 Introduction to Electricity/Electronics (4) Fundamental principles of DC and AC electricity. An introduction to motors, generators, relays, and transformers. An introduction to electronics with emphasis on process control applications, including PLCs. Not for electromechanical or electrical/computer majors. *W; preq. MATH 130 or equivalent or EM faculty approval; 3 lec. 3 lab*

ETEM 111 Electrical Fundamentals 1 (DC) (4) An introductory course in the study of electricity. Basic definitions of energy and electricity are introduced which lead to studies of resistance, Ohm's Law, series and parallel circuits, magnetism, simple meters, inductance, and capacitance. Direct current effects only. *F; coreq. MATH 130 or equivalent or EM faculty approval; 3 lec. 3 lab; $30.00*

ETEM 112 Electrical Fundamentals 2 (AC) (4) Simple inductance-resistance and capacitance-resistance transient circuits; studies of alternating current fundamentals, phasor algebra, AC circuit analysis, power factor, and resonance. *W; preq. ETEM 111 or EM faculty approval; 3 lec. 3 lab; $30.00*

ETEM 115 Electromechanical Devices (3) An introduction to devices where both electrical and mechanical principles are utilized. Includes DC motors and generators, 3-phase circuits, transformers, induction motors, alternators, and synchronous motors. *W; coreq. ETEM 112 or EM faculty approval; 2 lec. 3 lab; $40.00*

ETEM 121 Electronics 1 (3) Introduction to discrete, bipolar solid state electronic devices and basic electronic circuits, including small signal amplifiers, transistor biasing, equivalent circuits, electronic unregulated DC power supplies, and special solid state devices. *Sp; preq. ETEM 112 or EM faculty approval; 2 lec. 4 lab; $25.00*

ETEM 122 Electronics 2 (3) Continuation of ETEM 121. Frequency response; decibels; cascaded, feedback, power, and field effect amplifiers; unijunction transistors; control circuits; four-layer devices; op amps; and regulated DC power supplies. *F; preq. ETEM 121 or EM faculty approval; 2 lec. 3 lab; $25.00*

ETEM 130 - ETIN 201

ETEM 130 Electromechanical Drawing (2) The study of mechanical drawing of both electrical and electronic circuits and components using electrical and electronic symbols. Includes power distribution, logic diagrams, printed circuits, schematics, and pictorial views. *Sp; preq. ETEG 101 or EM faculty approval; coreq. ETCA 101; 1 lec. 3 lab*

ETEM 201 Electromechanical Systems (3) An introduction to systems which use both electrical and mechanical principles. Thermal, hydraulic, pneumatic, vacuum, magnetic, and optic systems are utilized to stress the coordinated combination of previously learned concepts. *F; coreq. ETEM 122 or EM faculty approval; 2 lec. 3 lab; $25.00*

ETEM 208 Automation Fundamentals (3) A study of electromechanical open and closed loop analog and digital systems. The microcomputer and programmable logic controller are used to interface a variety of input and output transducers to build complete automatic control systems. Emphasis on understanding interfacing feedback signals to process control. *W; preq. ETEM 115, 122, and 201; coreq. ETCO 220 and ETEM 211; 2 lec. 3 lab; $40.00*

ETEM 209 Robotics (3) A survey course in Robotics which studies types of industrial robots, control schemes, and applications. *W; coreq. ETEM 208, ETEM 211, ETCO 220, or EM faculty approval; 2 lec. 3 lab; $30.00*

ETEM 211 Electronic Logic Circuits 1 (4) An introduction to solid state, integrated electronic logic. Practical applications of Boolean algebra, logic gates, binary pulse circuits, number systems, and computer arithmetic. *W; preq. ETEM 121 or EM faculty approval; 3 lec. 3 lab; $25.00*

ETEM 212 Electronic Logic Circuits 2 (4) Continuation of ETEM 211. Integrated circuit applications which include combinational and sequential logic, printed circuits, counters, registers, decoders, signal converters, and an introduction to microcomputers. *Sp; preq. ETEM 211 or EM faculty approval; 3 lec. 3 lab; $25.00*

ETEM 215 Electromechanical Design (3) Designed to provide the time and opportunity for students to work on the design, fabrication, assembly, and testing of electromechanical devices or systems. Promotes independent study, initiative, and creativity by requiring the student to develop the design with minimal staff supervision. *Sp; preq. ETEM 201 and 211; coreq. ETEM 212; 1 lec. 6 lab; $25.00*

ETEM 220 Technical Presentations (2) Encompasses all of the principles which have been considered previously in the program. Electromechanical systems are analyzed and presented by the student. A thorough understanding of the applied principles is required. *Sp; preq. sophomore standing and electromechanical faculty approval; 1 lec. 3 lab*

ETIN 103 Industrial Electricity (3) Designed to familiarize the student with the National Electrical Code and practices used in industry to install electrical conductors, switching equipment, and overload protection and equipment. Course study includes motors, generators, and machine controls. *Sp; preq. ETEM 111 and 112; 2 lec. 3 lab; $30.00*

ETIN 111 Industrial Electronics (3) Designed to familiarize the student with industrial electronic circuits, including amplifiers, DC power supplies, and integrated circuits. *Sp; preq. ETEM 111 and 112; 2 lec. 3 lab; $30.00*

ETIN 120 Process Instrumentation (4) Introduction to measurement and control systems for temperature, pressure, and fluid flow. Dynamic response characteristics of instruments and calibration methods. Introduction to transducers, transmitters, controllers, and control systems. Both electrical and pneumatic systems are included. *Sp; 3 lec. 3 lab; $30.00*

ETIN 185 Instrumentation Internship (6) Eleven weeks of supervised work experience in industry which relates directly to the student's field of study. Supervisory visits by the instructor are coordinated with periodic evaluations by the industry to critique the performance of the student. *40 lab*

ETIN 201 Instrumentation Electronics (4) Designed to familiarize the student with the electronic equipment and devices found in electronic instrumentation. High voltage power supplies, amplifiers, input and output transducers, recording devices, ultrasonics, synchros, telemetering, remote control, and optical electronics are included. *F; preq. ETIN 111; 2 lec. 5 lab; $30.00*

ETIN 202 Programmable Controllers 1 (4) Introduction to basic industrial control circuits and schemes using the programmable controller as a control device. Instruction on the proper methods of programming the controller for the desired scheme. *F; preq. ETIN 111; 2 lec. 5 lab; $30.00*

ETIN 203 Programmable Controllers 2 (4) A continuation of ETIN 202, including more advanced control using the controller as a programmable controller. Proper methods of interfacing the programmable controller to the controlled device and peripheral devices. *W; preq. ETIN 111; 2 lec. 5 lab; $30.00*

ETIN 221 Instrument Fundamentals (4) Designed to provide the student with a knowledge of instruments. Introduction to the field, ship and industrial safety, care and use of hand and power tools, soldering techniques, reading and interpreting instrumentation drawings, measurement and control devices, final control elements, and standards and calibration. *F; preq. ETIN 120; 3 lec. 3 lab; $30.00*

ETIN 223 Measurement Principles (4) Industrial methods of measuring pressure, temperature, and flow with various types of measuring devices. The theory of operation of manometers, thermometers, strain gauges, and other precision measuring equipment. *Sp; preq. ETIN 201 and 221; 3 lec. 3 lab; $30.00*

ETIN 224 Industrial Control (4) Introduction to basic industrial control circuits and schemes. Pneumatic, hydraulic, electrical, and electronic control. *W; 3 lec. 3 lab; $30.00*

ETIN 225 Distributive Control Systems (4) The procedures of using and configuring a distributive process control system. The student is required to implement the control system. *Sp; preq. ETIN 224; 3 lec. 3 lab; $30.00*

ETIN 251 Biomedical Instrumentation (4) Study of cardiovascular instruments; pacemakers; defibrillators; and respiratory, ultrasound, and other life-supporting and lifesaving instruments. *Offered upon sufficient demand; 3 lec. 2 lab; $30.00*

ETIN 252 Techniques and Devices for Electronic Troubleshooting (4) Instructs the student in procedures for finding malfunctioning cards and components in electronic instruments. Test equipment is used to find the malfunctioning components. *Offered upon sufficient demand; preq. ETIN 210 and 251; 3 lec. 2 lab; $30.00*

ETIN 253 Internship 1 Work in Hospital (3) Students work in a hospital with biomedical personnel, under the direct supervision of the hospital. *Offered upon sufficient demand; preq. ETIN 252; coreq. ETIN 251; 1 lec. 14 lab; $30.00*

ETIN 261 Instrumentation for Circulatory Systems (3) Study of instruments used in the circulatory system—acoustic, ultrasonic, electronic, and radiologic devices. *Offered upon sufficient demand; preq. ETIN 252; 2 lec. 2 lab; $30.00*

ETIN 262 Bio Voltages (3) Study of the origin and usefulness of ECG, ERG, and EEG. *Offered upon sufficient demand; preq. ETIN 251; 2 lec. 2 lab; $30.00*

ETIN 263 Internship 2 Work in Hospital (3) Continuation of ETIN 253. Safety testing, preventive maintenance, inspection, troubleshooting, and repair of biomedical equipment under the supervision of the hospital clinical engineer or department supervisor. *Offered upon sufficient demand; preq. ETIN 253; 1 lec. 14 lab; $30.00*

ETIN 299 Special Topics in Instrumentation (1-5) Offered as an elective for instrumentation students. Covers topics of special interest. *Preq. instructor permission*

ETPL 100 Plastics Manufacturing (3) An introductory overview of the different plastic resins, processing methods, and terminology. Lectures cover different types of plastic, identification tests, polymerization, molecular growth, and processing methods. Laboratory experiences in extrusion, injection, thermoforming, compression, and other molding and fabricating operations. *F; 2 lec. 3 lab; $40.00*

ETPL 200 Injection Molding (4) Basic topics in the processing of thermoplastic resins. Hands-on operation of injection molding machines and introduction to principles of injection molding processing of thermoplastics. *Sp; preq. ETPL 100 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 205 Extrusion/Blow Molding (4) Continuation of ETPL 200. Basic topics in processing; study of the extrusion and blow molding processes of thermoplastic resins. *F; preq. ETPL 200 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 210 Thermoforming/Finishing (4) Continuation of ETPL 100 and ETPL 205. Basic topics in the thermoforming area and the study of industrial manufacturing methods not encountered in the previous courses. Includes printing, cementing, electroplating, metallizing, hot stamping, polishing, engraving, machining, and other decorating and finishing processes. *W; preq. ETPL 205 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 215 Thermosetting Processes (4) Study dealing with processing of thermoset materials. Hands-on operation of thermoset molding machines and introduction to principles of processing thermoset resins. *Sp; preq. ETPL 210 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 230 Properties of Polymeric Materials (4) Basic design considerations in use of polymeric materials. Because of applications-oriented approach, the reasons for using designs and polymers are presented. Extensive usage of tables on properties and shapes. *F; preq. ETPL 100, CHEM 200, or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 240 Testing of Plastics (3) Study of testing materials and the mechanical, thermal, electrical, optical, weathering, flammable, and environmental characteristics of plastic resins. ASTM experiments and written technical reports on the property changes of plastics under various conditions. Introduction of statistical quality control methods as related to material testing. *F; preq. ETPL 100, MATH 130, or plastics faculty approval; 2 lec. 3 lab; $40.00*

ETPL 290 Machine Tools (3) The basics of metal chip making technology. Topics include safety, measurements, bench work, drilling, tuning, shaping, planing, milling, and grinding. Properties and uses of ferrous and non-ferrous alloys, cutting fluids, welding, and foundry practices. Laboratory experiences include chip making processes and tooling methods. *F; preq. sophomore standing or plastics faculty approval; 2 lec. 3 lab; $40.00*

ETPL 300 Plastics in Society (2) Study of current trends in policy formation in the plastics industry, including problem solving processes and procedures. Topics include recycling, waste management, public policies, and landfills. *F; preq. ETPL 100; $40.00*

ETPL 310 Plant Layout and Material Handling (3) Principles of plant layout and materials handling, including utilization of workers, materials, and machines for efficient application of all resources. CADD exercises as related to P.L. development. *F; preq. ETCA 120 or plastics faculty approval; 2 lec. 3 lab; $40.00*

ETPL 320 Production Cost Analysis (3) Understanding the fundamentals of production cost accumulation systems, methods engineering, work measurement, and manufacturing cost control. *Sp; preq. ETPL 100, MATH 132 or equivalent, or plastics faculty approval; $40.00*

ETPL 330 Material Science (3) Introduction to a broad field of materials, including metals, ceramics, and wood. Emphasis on their nature and behavior to provide a basis for comparison used in the development of new markets for polymers. *F; preq. ETPL 230 or plastics faculty approval; 2 lec. 3 lab; $40.00*

ETPL 400 Statistical Process/Quality Control 1 (4) Study of probability and statistical theory and the relationships of these concepts to applications in a production environment through statistical process/quality control. *F; preq. MATH 132 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 405 Statistical Process/Quality Control 2 (4) Study of the methods used on SQC and SPC, including X bar and R charts (variables), p and np charts (attributes), interpretation of charts, Pareto analysis, Histograms and curve fitting, and Demming's fourteen points for quality. Lab sessions focus on computer analysis of statistical production data. *W; preq. ETPL 400 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 410 Applied Statistical Experimentation (4) Study of the methods used in formalized design of experiments. Develops ability to construct, conduct, and analyze a statistically sound experiment. Taguchi's, Plackett's, and Burman's methodologies are studied. Orthoganal arrays, variance, and experiment structure are explored through the use of two software packages designed specifically for D.O.E. *Sp; preq. ETPL 405 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 420 Plastics Part Design (3) Study of thermoplastic and thermoset part designs. Assigned projects develop an understanding of design parameters. Emphasis is placed on combining several areas of knowledge to design a plastic part. *F; preq. ETPL 230, 330, ETCA 120, or plastics faculty approval; 2 lec. 3 lab; $40.00*

ETPL 425 Mold Design and Analysis 1 (4) Development of a mold using the part designed by the student in ETPL 420. Design and analysis of thermoplastic injection molds, extrusion dies, and blow molding using Moldflow Design and Analysis and Cadkey programs. Includes geometric dimensioning, cams, and other special techniques. May include hot runner systems. *W; preq. ETPL 420 or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 430 Mold Design and Analysis 2 (4) Continuation of ETPL 425. Development of a mold using the part designed by the student in ETPL 420. Design and analysis of thermoplastic injection molds using Moldflow Design and Analysis programs. *Sp; preq. ETPL 425; 3 lec. 3 lab; $40.00*

ETPL 440 Advanced Manufacturing Techniques (3) Develops the student's ability to recognize and distinguish the following production disciplines: MRP, MRP II, JIT, CIM, MPS, capacity planning, and scheduling. *F; preq. ETPL 215, 310, 320, or plastics faculty approval; $40.00*

ETPL 450 Advanced Processing 1 (4) A detailed study of the various theories of processing and polymer rheology. Theoretical aspects of material transfer, melting mechanisms, and part formation. *W; preq. ETPL 215, 330, or plastics faculty approval; 3 lec. 3 lab; $40.00*

ETPL 455 Advanced Processing 2 (4) Continuation of ETPL 450. Integration of previously acquired processing knowledge with the theoretical knowledge acquired in ETPL 450. *Sp; preq. ETPL 450 or plastics faculty approval; 3 lec. 3 lab*

ETPL 460 Composites (3) Provides a unified view of the composite industry. Topics include: raw materials, curing agents, fillers, various fiber reinforcements, and the various processing methods. *F; preq. ETPL 330 or plastics faculty approval; 2 lec. 3 lab; $40.00*

ETPL 470 Senior Project (4) Provides knowledge necessary to construct a basic plastic mold developed in ETPL 420. Lab experience involves interpretation of tool prints, materials, and processing used in the actual construction of this plastic mold. *F; preq. ETPL 290, 420, 425, and 430 and senior standing; 2 lec. 6 lab; $40.00*

ETPL 499 Special Topics in Plastics (1-5) Offered as an elective for plastics students. Covers topics of special interest. *Preq. instructor permission*

ETRO 211 Robotic Interfacing (4) Study of hardware and software for interfacing programmable controllers, microprocessors, and computer control to a robotic arm with interaction of peripheral machines and equipment. *Offered upon sufficient demand; preq. ETEM 209 or ETCO 230; 3 lec. 3 lab; $30.00*

ETRO 212 Robotic Maintenance & Servicing (4) Instruction in servicing and troubleshooting robotic and peripheral automated systems. Emphasis on mechanics, hydraulics, and associated electrical and electronics. *Offered upon sufficient demand; preq. ETRO 211; 3 lec. 3 lab; $30.00*

ETRO 213 Robotic Applications (4) Advanced study and training in high technology robot operations and applications with emphasis on continuous and controlled path robots, programmable logic control systems, and production systems and operation. Extended practice in off-line programmable set-up, adjustment, and operation of robotic work cells and materials handling systems. *Offered upon sufficient demand; preq. ETRO 212; 3 lec. 3 lab; $30.00*

FREN 111 Elementary French 1 (4) Beginning course of a three-quarter, first-year sequence. Basic grammatical concepts and patterns. Emphasis is on development of reading, listening, comprehension, speaking, and writing skills. *Su F W Sp; $5.00*

FREN 112 Elementary French 2 (4) Continuation of FREN 111. *W Sp; preq. FREN 111; $5.00*

FREN 113 Elementary French 3 (4) Continuation of FREN 112. *Sp; preq. FREN 112; $5.00*

FREN 211 Intermediate French 1 (4) An intensive review of grammar and sentence structure and introduction to selected readings in French literature. Oral expression is stressed. *Offered on demand; preq. FREN 113; $5.00*

FREN 212 Intermediate French 2 (4) Continued intensive review of grammar. Sight translation is stressed. Conversational drills include advanced idiomatic expressions. *Offered on demand; preq. FREN 211 or instructor approval; $5.00*

FREN 213 Intermediate French 3 (4) Advanced vocabulary and sentence structure are stressed. Emphasis is on writing and free composition. *Offered on demand; preq. FREN 212 or instructor approval; $5.00*

GEOG 125 World Geography (4) Concerns world's regions and nations, resource use, cultural groups, and political patterns. Designed to develop an understanding of world affairs and the applications of geography in general. *F Sp*

GEOG 130 Economic Geography (4) Systematic survey of locational economic patterns and their interrelationships. *F W*

GEOG 201 Cultural Geography (4) Impact of various cultures on landscape, distribution of cultural traits, ecological adaptations, and cultural areas throughout the world. *F Sp*

GEOG 225 Physical Geography (4) Systematic survey of earth-sun relationships, land forms, climate, soils, and natural vegetation. *Su W*

GEOG 230 Urban Geography (4) Study of city function, patterns, and past and current problems confronting the city, including planning, zoning, housing, and urban renewal. *Offered as demand indicates.*

GEOG 242 Geography of Ohio (4) Detailed regional study of physical background, settlement, and economic development. *Offered as demand indicates.*

GEOG 243 Geography of Appalachia (4) A study of Appalachia from a geographical approach, including a detailed examination of physical aspects (climate, soil, vegetation, minerals, and water resources), historical development both past and present, settlement patterns, and economic patterns of the region. *Offered as demand indicates.*

GEOG 299 Special Topics in Geography (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Separate courses, repeatable for credit. *Preq. GEOG 101, 125, 130, or 201*

GEOG 310 Medical Geography: Geography of Life or Death (4) Relationship between disease and the physical and socio-economic environ. Topics include disease ecology, historical patterns of cholera and plague, tropical disease, weather and health, cancer and heart disease in the U.S., hunger and the environment, distribution of resources, and introduction to facilities location planning. *Su alternate years, Sp*

GEOG 311 Air Pollution (4) Examination of air pollutants and their social and economic impacts, control strategies, and air pollution planning. *Su alternate years, W*

GEOG 350 Regional Geography: Geography of North America (4) The U.S. and Canada studied from a geographical perspective, including detailed examination of climate, soil, vegetation, minerals, water resources, historical development, settlement patterns, and economic aspects of the region. *W*

GEOG 351 Regional Geography of the Middle East (4) The Middle East — a cradle of civilization, birthplace of three world religions, crossroads, oil resource area, site of persistent conflict since WWII. The course addresses these aspects within the context of regional geography. *Sp*

GEOG 399 Special Topics in Geography (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

GEOG 404 Transportation Geography and Management (4) Examination of the geography of transport routeways and the geographic factors governing their evolution and use. Various modes (e.g. rail, water, highway) are discussed in terms of facilities, environmental impacts, rate structures, and commodities shipped. Decision processes of shippers, carriers, and government are examined. *F alternate years; preq. one course in GEOG or ECON*

GEOG 499 Special Topics in Geography (1-4) Individual or small-group study, under supervision of instructor, of topics not otherwise available to students. Separate courses are repeatable for credit. *Preq. GEOG 125, 130, or 201.*

GEOL 111 Rocks, Minerals, and Fossils (4) Introduction to earth materials. Strong emphasis on laboratory identification of rocks, minerals, and fossils. Lecture topics include several key earth processes and important geologic theories. Course includes laboratory assignments and a field trip to fossil localities near Portsmouth. *3 lec. 2 lab; $5.00*

GEOL 112 Environmental Geology (4) Analysis of complex interaction between Earth and man. Emphasis on natural hazards such as floods, earthquakes, volcanic eruptions; waste disposal; and groundwater, mineral, and energy resources. Course includes laboratory assignments and a field trip. *3 lec. 2 lab; $5.00*

GEOL 201 Physical Geology (4) Introduction to earth materials and the processes that shape the Earth's surface. Emphasis on important earth processes such as volcanism, weathering, glaciation, and earthquakes; and theories which have modified our explanation of geologic phenomena. Course includes laboratory assignments and a field trip to Hocking Hills. *3 lec. 2 lab; $5.00*

GEOL 202 Historical Geology (4) The history of the Earth and its inhabitants. Emphasis on major physical and biological events that have profoundly affected the Earth, on causal mechanisms of geological events, and on the theories that have changed our interpretation of the Earth's history. Course includes lecture, lab, and field trip to localities in southern Ohio. *Preq. GEOL 201 or instructor permission; 3 lec. 2 lab; $5.00*

GEOL 290 Seminar in Geology (1-4) Discussion of advanced topics in geology.

GEOL 295 Independent Study (1-4) Independent geology investigation, under the direction of a faculty member.

GEOL 299 Special Topics in Geology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

GEOL 301 Invertebrate Paleobiology (4) An introduction to major groups of invertebrates that are commonly preserved in rocks. Emphasis on preservation, morphology, collection, and geological and biological significance of invertebrate micro- and mega-fossils. *Preq. GEOL 202 or instructor permission; 3 lec. 2 lab; $5.00*

GEOL 303 Sedimentary Rocks (4) Advanced study of siliciclastic and carbonate rocks. Emphasis on interpretation of depositional environments of sedimentary rocks by using modern analogues. *Preq. GEOL 202 or instructor permission; 2 lec. 2 lab*

GEOL 390 Seminar in Geology (1-4) Discussion of advanced topics in geology.

GEOL 401 Field Methods (4) Study and use of the essential methods of field observations, description, and mapping. Course consists of lecture and detailed field projects in the Portsmouth area.

GEOL 485 Senior Project (1-4) In-depth study of a selected topic in geology, culminating in the preparation of a senior paper. *Preq. junior or senior standing; $15.00*

GEOL 490 Seminar in Geology (1-4) Discussion of advanced topics in geology. *Preq. junior or senior standing*

GEOL 495 Independent Study (1-4) Independent geology investigation, under the direction of a faculty member. *Preq. junior or senior standing*

GEOL 499 Special Topics in Geology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. *Preq. junior or senior standing*

GOVT 101 National Government (4) An analysis of the constitutional basis and development of American politics in light of classical democratic theory and contemporary practices; emphasis on the structures, processes, and functions of the national government. *F*

GOVT 199 Special Topics in Government (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Repeatable for credit. *Offered by arrangement*

GOVT 240 Contemporary Political Ideologies (4) A survey of political thinking, movements, and regimes. Examines the relationship between political visions and the shaping of attitudes, beliefs, and political practice. *Infrequently offered*

GOVT 250 Introduction to Political Science (4) This course, required for all social science majors, explains the fundamentals of the field of political science and offers introductory treatments on the four sub-fields of the discipline (i.e., political theory, comparative politics, international relations, and American government). *F W Sp*

GOVT 299 Special Topics in Government (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Repeatable for credit. *Offered by arrangement*

GOVT 310 United States Foreign Policy (4) The conceptual bases underlying the development of post-World War II foreign policy, its changing concerns, and its various modes of policy implementation in selected cases and geographic areas (e.g., the Cold War, the Third World, and North/South issues.) *Offered as demand indicates*

GOVT 320 Third World Politics (4) The individual and collective study of the causes of development and underdevelopment, crisis politics, and the prospects for the future of nations in Asia, Latin America, and Africa. *W*

GOVT 330 Mass Media Politics (4) A study of the globalization of the media and its effects on local, national, and international politics; economics; and socialization processes in the United States and other nations. *W*

GOVT 340 European Politics (4) Examines the historical, political, and economic realities of selected nations from an individual and a cross-national perspective with additional attention to the current European Economic Community's supranational integration development process. *Offered as demand indicates*

GOVT 350 National Policy Issues (4) Study of the politics of policy formation and implementation by the national government in selected areas (e.g., foreign policy, welfare, political economy, and environment.) *W; preq./coreq. GOVT 250*

GOVT 370 Global Politics (4) Emphasis on international conflict and cooperation, interdependency, and the increasing importance of economic and transnational relations in the contemporary world. A critical examination of a variety of analytic concepts concerning types of international systems and political behavior. *Offered as demand indicates; preq./coreq. GOVT 250*

GOVT 399 Special Topics in Government (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Repeatable for credit. *Offered by arrangement*

GOVT 401 State of the World (4) A critical analysis of the relationship between humans and their physical environment at the local, regional, and global level. Surveys issues, identifies problems, and examines actual and possible solutions pertinent to this relationship by utilizing an interdisciplinary approach incorporating students' backgrounds from previous social science courses. Required course for all social science majors. *Sp F; preq. junior standing*

GOVT 420 International Political Economy (4) Historical development of the world economy from 1700s to the present with emphasis on international and transnational actors and institutions, dependency and imperialism, and other selected issues and problems (e.g., trade, debt, and finance). *Infrequently offered; preq. junior standing*

GOVT 499 Special Topics in Government (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Repeatable for credit. *Offered by arrangement; preq. eight hours GOVT*

HIST 111 American History to 1828 (4) Exploration and colonization; political, social, and economic life of the English colonies to 1763; struggle for independence; constitutional development and the Federalist era; Jeffersonian democracy and the War of 1812; rise of Jackson. *F*

HIST 112 American History, 1828-1900 (4) Jacksonian democracy, territorial expansion, growth of sectionalism, Civil War, reconstruction, impact of expanded Industrial Revolution. *W*

HIST 113 American History Since 1900 (4) Progressive movement, WWI, Republican prosperity, the Great Depression and the New Deal, WWII and problems of the cold war era, turmoil and reform in the 1960's, crisis of confidence in the 1970's, and renewal in the 1980's. *Sp*

HIST 199 Special Topics in History (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

HIST 201 Ancient History (4) A survey of antiquity from the rise of civilization in ancient Sumeria and Egypt to the end of the Roman empire. *F*

HIST 202 Medieval and Early Modern Europe (4) A survey of European history from the beginning of the Middle Ages to 1789. *W*

HIST 203 Modern Europe (4) A survey of European history from the French Revolution to the present. *Sp*

HIST 225S Civilization and Literature 1 (4) Cross-listed as ENGL 225S. This course is an interdisciplinary introduction to the major thoughts important in the development of western civilization. *Su F W Sp*

HIST 226S Civilization and Literature 2 (4) Cross-listed as ENGL 226S. An interdisciplinary introduction to the major thoughts important in the development of American civilization. *Su F W Sp*

HIST 227S Civilization and Literature 3 (4) Cross-listed as ENGL 227S. An interdisciplinary introduction to the major thoughts of various non-western civilizations. *Su F W Sp*

HIST 260 East Asian History (4) A survey of the history of China and Japan. *Offered on demand*

HIST 275 American Film History (4) Cross-listed as ENGL 275. Chronological study of the influence of American history upon American film, and vice versa. Students become acquainted with the work and themes of some of America's significant film directors and major genres of American popular film. *F and as demand indicates*

HIST 299 Special Topics (1-4) Separate courses repeatable for credit. *Preq. HIST 111, 112, and 113, or HIST 201, 202, and 203*

HIST 301 Formation of the American Nation, 1750-1815 (4) Causes and consequences of the American revolution, Confederation period and establishment of new constitutional order, survival and development of the republic in an unfriendly world, 1789-1815. *Offered on demand; preq. HIST 111 or instructor permission*

HIST 305 From FDR to Reagan (4) A survey of domestic history from the New Deal to the present. The Great Depression and the New Deal, domestic consequences of World War II and the Cold War, reform efforts of the 1960's, Vietnam trauma, exhaustion of liberalism in the 1970's. *Offered on demand; preq. HIST 113 or instructor permission*

HIST 310 Nazi Germany (4) An examination of Adolph Hitler, Nazi ideology, World War II, the concentration camps, and genocide. *Offered on demand*

HIST 320 History of American Foreign Relations (4) A survey of U.S. foreign relations since 1914. World War I and the Versailles Treaty, interwar efforts to avoid the responsibilities of hegemony, World War II diplomacy and the origins of the cold war, Soviet-American conflict in the Third World, Vietnam War and efforts at detente, exhaustion of the cold war in the 1980's, and possible "end of history." *Offered on demand; preq. HIST 113 or instructor permission*

HIST 325 History of Russia (4) An overview of Russian history since the Age of Peter the Great. Emphasis on the period from the Crimean War to the present, examining the ambivalent modernization efforts of the late Empire, the collapse of the autocracy in WWI, and subsequent triumphs and travails of the Soviet Experiment. *Offered on demand; preq. HIST 203 or instructor permission*

HIST 326 Economic History of the U.S. (4) Cross-listed as ECON 326. Analysis of the changes in the economic structure and development of the U.S. from colonial days to the present. Includes a survey of American economic life and the role of entrepreneurship in economic development. *F even years; preq. ECON 101 and 102*

HIST 330 History of Southern Africa (4) A survey of the African and European experiences in southern Africa from the 17th Century to the present. *Offered on demand*

HIST 340 MesoAmerica Before Columbus (4) Cross-listed as ANTH 340. Survey of MesoAmerican settlement prior to the arrival of the Europeans, including origins of the first hunters and gatherers, development of agriculture, Olmec and Zapotec civilizations, rise and fall of Teotihuacan, and settlement and influence of Mayans, Toltecs, and Aztecs up to the arrival of the Spanish. *F*

HIST 365 History of English (4) Cross-listed as ENGL 365 and LING 365. A survey of the patterns and events which have shaped the English language from the time of the Anglo-Saxon to the present. *W Sp; suggested preq. ENGL 360 or LING 270; This course does not fulfill any history course requirements of the history major.*

HIST 371 Islamic Religion, Culture, and Civilization (4) Cross-listed as ANTH 371. Survey of the cultural legacy of Islam through an integrated look at the religion, social customs, economic practices, arts, and literature. May be used to meet only one GEP requirement. *W*

HIST 399 Special Topics in History (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

HIST 401 History of Medicine (4) An in-depth survey of the history of medicine from antiquity to the modern era. Topics include shamanism and magical methods of healing, exorcism, Chinese acupuncture, classical Greek medicine, and the rise of modern dentistry, obstetrics, surgery, and psychiatry. *F*

HIST 410 Intellectual History 1 (4) Part one of a course examining humanity's ideas about the cosmos, the earth, and the human species. Topics in this course include creation myths, the history of astronomy, concepts of the afterlife, and the ideas about "imaginary places" (from Atlantis to Shambala). *W*

HIST 411 Intellectual History 2 (4) Topics in this course include the history of geology and ideas about the earth, "creation of man" legends and the ideology of Darwinism, "the devil, the Antichrist, and perceptions of evil," ideas about "imaginary creatures" (from unicorns to vampires), and scientific theories about the "end of the world." *Sp*

HIST 420 Middle East in Modern Times (4) An examination of recent conflicts and turmoil in the Middle East through the following sequence: concise overview of Middle East history, relationships between today's turmoil and the development of nationalism and emergence of nation-states, specific conflicts like the Soviet invasion of Afghanistan, Arab-Israeli conflict, and the Gulf war. *Offered on demand*

HIST 499 Special Topics in History (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Separate courses repeatable for credit. *Preq. HIST 111, 112, and 113, or HIST 201, 202, and 203*

HPER 100 Dance: Concert and Recreational (1) Demonstration of various forms of dance and appreciation of their development. *Su F W Sp*

HPER 101 First Aid and CPR (2) Cross-listed as EMTP 101. Includes the American Red Cross Standard First Aid Course related to bleeding control, obstructed airway management, splinting and bandaging techniques, and other emergency care procedures. Also includes the American Red Cross Adult CPR course. American Red Cross Standard First Aid certification and Red Cross Adult CPR certification are granted upon successful completion of course. *Su F W Sp; $5.00*

HPER 102 CPR (1) Cross-listed as EMTP 102. Techniques of cardiopulmonary resuscitation. American Red Cross or American Heart Association CPR certification is granted upon successful completion of this course. *Su F W Sp; $5.00*

HPER 103 Introduction to Human Nutrition (2) Study of nutrients, nutritional diets, deficiencies, and the role of nutrition in promoting health. *F*

HPER Physical Education Activities (1) Basic rules and fundamentals for each of the following activities. Special emphasis on strategies, team, and individual play. An appreciation of each of the activities is developed to carry over into later life.

HPER 104 Beginning Table Tennis
HPER 105 Archery *F W Sp*
HPER 111 Basketball *W Sp*
HPER 113 Billiards *F W Sp*
HPER 115 Bowling *F W Sp*
HPER 116 Gymnastics *Su F W Sp*
HPER 117 Volleyball *F W Sp*
HPER 119 Walleyball *Su F W Sp*
HPER 120 Beginning Golf *Su F Sp*
HPER 121 Intermediate Golf *Sp*
HPER 122 Handball *F*
HPER 124 Softball *Sp*
HPER 125 Soccer *Su F Sp*
HPER 130 Beginning Racquetball *Su F W Sp*
HPER 131 Intermediate Racquetball *F W Sp*
HPER 132 Advanced Racquetball *Sp*
HPER 140 Beginning Tennis *Su F Sp*
HPER 141 Intermediate Tennis *Su Sp*
HPER 142 Advanced Tennis *Su Sp*
HPER 149 Badminton *F*
HPER 150 Swimming *Su F W Sp*
HPER 151 Intermediate Swimming *Su F W Sp*
HPER 152 Life Saving *Su F W Sp*
HPER 153 Advanced Life Saving *Su F W Sp*
HPER 154 Life Guard Training *Su F W Sp*

HPER 155 - HPER 228

HPER 155 **Advanced Swimming** *Su F W Sp*
HPER 156 **Fitness Swimming** *F*
HPER 157 **Swimmercize** *F W Sp*
HPER 158 **Diving** *F Sp*
HPER 159 **Water Volleyball** *Sp*
HPER 160 **Dance** *F W Sp*
HPER 162 **Yoga** *Su F W Sp*
HPER 162 **Advanced Yoga** *Su F W Sp*
HPER 165 **Beginning Gymnastics** *F*
HPER 170 **Karate** *Su F W Sp*
HPER 171 **Judo** *Sp*
HPER 172 **Women's Self Defense** *F W Sp*
HPER 180 **Jogging** *Su F Sp*
HPER 181 **Skiing** *W*
HPER 182 **Orienteering** *F Sp*
HPER 183 **Rock Climbing** *F Sp*
HPER 184 **Caving** *F Sp*
HPER 185 **Backpacking** *F Sp*
HPER 186 **Cycling** *Su F Sp*
HPER 187 **Conditioning and Weight Training** *Su F W Sp*
HPER 188 **Conditioning and Weight Training/Nautilus** *Su F W Sp*
HPER 189 **Horseback Riding**
HPER 190 **Beginning Scuba** *F*
HPER 191 **Scuba—Open Water** *W*
HPER 197 **Canoeing** *Sp*

HPER 200 Introduction to Recreation (3) A study of the general concepts of recreation, including definitions, history, legal basis, current development, and present importance of recreation in our society. Management and administration of parks and recreation organizations. Laboratory introduction to a number of recreation experiences. *3 lec. 3 lab*

HPER 201 Introduction to Sports Management (3) An introduction to the various aspects of athletics, intramural, and recreation administration. *F*

HPER 202 Personal and Community Health (4) Cross-listed as BUHE 202. Fundamentals, practices, and appreciation of healthful living. Designed to incorporate the principles of scientific health information and promote desirable attitudes and practices in individuals, parents, and teachers. *Su F W Sp*

HPER 203 Human Nutrition (4) Cross-listed as BUHE 203. A study of nutrients, including sources, composition, function, and metabolism in the human body. The human life cycle is considered in planning appropriate diets. *Su F W Sp*

HPER 220 Introduction to Athletic Training (3) Introduction to prevention, treatment, care, and rehabilitation of athletic injuries. *Su F W Sp; coreq. HPER 222 for students in athletic training concentration.*

HPER 222 Practicum Sportsmedicine (2) Study of strapping and taping techniques, construction of orthotics and orthopedic appliances, and fitting protective equipment commonly used in the profession of sportsmedicine. *Su F W Sp; coreq. HPER 220 for students in athletic training concentration.*

HPER 227 First Aid (4) Cross-listed as BUHE 227. Provides information and practical experience dealing with hemorrhaging, traumatic shock wounds, respiratory failure, serious illnesses, transportation of the sick and injured, cardiopulmonary resuscitation, splinting of broken bones, hypothermia, specific injuries, choke-saving, poisoning, burns, heat illnesses. Students are certified in CPR (infant and adult) through the American Heart Association. *F W Sp; $4.00*

HPER 228 Law and Liability in Sports (4) Designed to provide information concerning the role of law in sport and physical activity for those who must deal with and manage a variety of legal concerns on a routine basis. *F W*

HPER 235 Orientation to Recreation Employment (1) Resume writing, job application, interviewing, contact follow-up, letter writing, job hunting strategies, and potential employers. *On demand; 1 lec. 1 lab*

HPER 236 Field Experience in Recreation (2-6) Supervised work experience while gaining skills and knowledge in the field of recreation. *F*

HPER 239 Athletic Officiating—Football (3) Rules, mechanics, and procedures in officiating. Practice under actual game conditions. State certification upon successful completion of state examination. OHSSA fee for certification and books.

HPER 240 Athletic Officiating—Basketball (3) Rules, mechanics, and procedures in officiating. Practice under actual game conditions. State certification upon successful completion of state examination. OHSSA fee for certification and books.

HPER 241 Athletic Officiating—Baseball (3) Rules, mechanics, and procedures in officiating. Practice under actual game conditions. State certification upon successful completion of state examination. OHSSA fee for certification and books.

HPER 242 Athletic Officiating—Volleyball (3) Rules, mechanics, and procedures in officiating. Practice under actual game conditions. State certification upon successful completion of state examination. OHSSA fee for certification and books.

HPER 245 Introduction to Coaching (2) Introduction to high school interscholastic athletics, including history, structures, job opportunities, and contemporary programs.

HPER 250 Recreation Leadership (4) Lectures, discussion, and group dynamics in social recreation, including games, sports skills, dance, arts and crafts, nature studies, setting up various types of tournaments, and practical work in community organizations.

HPER 251 Clinical and Field Experiences in Athletic Training (3) Practical experience in the field and clinical setting. Student trainers perform duties and techniques relevant to the field of athletic training under the supervision of the certified/licensed athletic trainer. Due to the nature of this course, a maximum of 36 credit hours is permitted. Grades are based on the completion of 135 hours per quarter. A grade of pass/no-credit is given. *Su F W Sp; preq. or coreq. HPER 220 and 222*

HPER 252 Youth and Sports (3) Exploration of opportunities, controversies, organization, safety, values, rules, leadership, benefits, and settings of youth sports programs.

HPER 255 Aquatic Recreation Leadership (4) Study of water-related recreational facilities such as marinas, swimming areas, and fishing. Consideration is given to boating laws, boat operation and safety, and all forms of water recreation. *F W Sp; 2 lec. 6 lab*

HPER 260 Outdoor Recreation (4) Several aspects of outdoor recreation, including concepts of feasibility, interpretation, and personal recreation equipment use and care. Laboratory exercises. *Coreq. HPER 200 or permission of instructor; 2 lec. 6 lab*

HPER 261 Foundations of Physical Exercise (2) Presents scientific information concerning the need for physical activity and a personal fitness prescription. Provides background information on the eleven parts of fitness. Students are shown step-by-step how to work out a lifetime fitness program that meets their needs and interests. *W Sp*

HPER 270 Physical Education for the Elementary Classroom (4) Lab and lecture experience for teaching physical education in the elementary schools. Lab experience revolves around methods of presenting games, self-testing activities, rhythmics, and innovative devices in the elementary grades. Designed for students seeking elementary education certification. *F W Sp; preq. EDUC 110; $25.00*

HPER 281 Administration of Intramural Athletics (4) Organizing and administering a program of intramural sports for all age levels. Designed especially for elementary and secondary teachers. *Preq. Ed. and P.E. majors/minors*

HPER 295 Independent Study (2) Study, observation, and research in selected physical education fields. Under the direction of HPER faculty member. *Su F W Sp; preq. upper division HPER classes*

HPER 320 Advanced Athletic Training (3) Development of competencies in the prevention, treatment, care, and rehabilitation of athletic injuries. *Su W Sp; preq. HPER 220*

HPER 322 Advanced Sportsmedicine 1 (4) Study of techniques in evaluating, preventing, and managing common lower body injuries and illnesses in athletics. *Su W Sp; preq. HPER 222; $25.00*

HPER 325 Rehabilitation of Athletic Injuries (3) Study of principles and procedures of therapeutic exercises. Topics include muscle testing, goniometry, flexibility, and progressive resistance exercises in the rehabilitation of common injuries occurring in athletics. *Su W Sp; preq. HPER 320*

HPER 326 Therapeutic Modalities in Sportsmedicine (3) Theory and therapeutic application of modalities such as cryotherapy, thermotherapy, low and high volt electrical currents, diathermy, intermittant compression, traction, and massage in the rehabilitation of athletic injuries. *Su W Sp; preq. HPER 320*

HPER 340 Coaching of Volleyball (2) Theory of coaching volleyball. Analysis of skills, strategies, methods, duties, and responsibilities.

HPER 341 Coaching of Basketball (2) Theory of coaching basketball. Analysis of skills, strategies, methods, duties, and responsibilities.

HPER 342 Coaching of Football (2) Theory of coaching football. Analysis of skills, strategies, methods, duties, and responsibilities.

HPER 343 Coaching of Track (2) Theory of coaching track. Analysis of skills, strategies, methods, duties, and responsibilities.

HPER 344 Coaching of Softball (2) Theory of coaching softball. Analysis of skills, strategies, methods, duties, and responsibilities.

HPER 352 Sports for the Disabled (3) A presentation of sports programs and assessments that can be made available to the disabled. How to organize and administer such sporting events as competing aquatics, wheelchair basketball, archery, bowling, track and field, softball, and tennis. *W Sp*

HPER 360 Drugs/Substance Abuse (4) Cross-listed as BUHE 360, PSYC 360, and SOCI 360. An in-depth study of alcohol, tobacco, and other drugs and how chemical dependency on these drugs can affect individual performance and behavior. *Su F W Sp*

HPER 366 Aquatics Management (4) A survey of the recreational aquatics environment. Hands on training in filtration systems and their general operation, an understanding of federal and state guidelines and licensor for pool operation and maintenance. Legal aspects of the aquatics area. Staffing requirements and training of aquatics personnel for indoor and outdoor facilities. *F; preq. HPER 392*

HPER 368 Introduction to Sport Law (4) Survey of the legal framework of the athletic environment. The nature of the legal system and law pertaining to sports, including tort law, contractual agreements, and civil law. *W*

HPER 385 Psychology of Sports (3) Offers students the opportunity to learn correct principles and applications of sport psychology. Provides a better understanding of how individuals can enhance peak performance through recent advances in sport psychology. *W Sp*

HPER 386 Sociology of Sport (3) Designed to investigate the role physical education and sports play in the lives of individuals, societies, and countries. Considers the context of sport, focusing on the meaning of what happens in sport, where sport fits—or does not fit—into society and why. *F Sp*

HPER 390 Sports and Fitness Management 1 (4) An advanced study of the facilities required for the recreational environment. An analysis of indoor and outdoor designs and utilization. An overview of the personnel process, staffing requirements, and staff development procedures. A study of activity programming for the recreational environment, including class structure, tournament procedures, proper selection of activities, and equipment needed and its care and storage. *W; preq. HPER 201 and BUMG 310*

HPER 392 Sports and Fitness Management 2 (4) An advanced study of sports marketing strategies for the recreational environment, both internal and external. Promotional guidelines and discussion of promotional activity. Study of the budgetary process, differentiations of budget styles, and implementation of the budgetary process in both the private and public sector. *Sp; preq. HPER 390*

HPER 407 Practicum 1 (4) Practical training in general operation of recreational setting. Includes activity preparation, personnel evaluation, and budget analysis. Also includes an on campus seminar to discuss issues relating to the profession. Summative assessment includes a combination of objective tests, performance checklists, and evaluations by the on-site supervisor. *W*

HPER 420 Physiology of Exercise (4) Study of the physiological response of the cardiovascular, respiratory, endocrine, neural, and muscular systems in the human body during exercise. *Sp; Preq. BIOL 162, 310, and 311*

HPER 422 Advanced Sportsmedicine 2 (4) Study of techniques in evaluating, preventing, and managing common upper body injuries and illnesses in athletics. *Sp; Preq. HPER 222*

HPER 450 Organization and Administration of Sport Programs and Athletics (3) Study of policies, standards, and procedures in the organization and administration of physical education and athletic programs. *F Sp; preq. BUMG 310*

HPER 495 Special Topics (1-4) Study, under the supervision of instructor, of topics not otherwise available to students. *Sp*

HPER 499 Practicum 2 (6) Student works with a current fitness manager to gain insight on program and facility operation, budgetary implementation, and to assist in the daily operation of a fitness facility. This course also includes an on campus seminar to discuss issues relating to the profession. Summative assessment includes a combination of objective tests, performance checklists, and evaluations by on-site supervisor. *Sp; preq. HPER 392, 407, and faculty approval*

JOUR 105 Introduction to Mass Communication (4) Cross-listed as SPCH 105. Introduces all forms of mass communication, including newspapers, magazines, radio/television, book publishing, public relations, advertising, and photojournalism. Begins with an analysis of the communication process and ends with media career opportunities. *Offered on demand*

JOUR 199 Topics in Journalism (4) Study of selected newspaper topics not otherwise available. Includes hands-on experience in various newspaper positions. *Offered on demand*

JOUR 231 News Reporting and Writing (4) Methods of gathering and evaluating news and writing news stories. Practice work includes covering assignments and writing news copy. *Offered on demand; preq. typing proficiency*

JOUR 289 Magazine Feature Writing (4) Writing and marketing free-lance magazine articles of various types, including personal narrative, informative, how-to, historical, personality sketch, investigative, and interpretative. Students learn how to generate ideas, get photos, propose article ideas to editors, and survey regional and specialty magazine markets. *Offered on demand*

JOUR 299 Topics in Journalism (3) Study of various topics in journalism not otherwise available to students. *Offered on demand*

LING 270 Introduction to Language and Linguistics (5) Cross-listed as ENGL 360. An introduction to the fundamental properties and processes of the world's languages. A review of the major systems and features which constitute language. A discussion of language change, typology, and aspects of language acquisition. *F Sp*

LING 362 Patterns of English (4) Cross-listed as ENGL 362. A survey of various components of English phrase, clause, and sentence structure and an examination of questions of usage. *F W; suggested preq. LING 270/ENGL 360*

LING 365 History of English (4) Cross-listed as ENGL 365 and HIST 365. A survey of the patterns and events which have shaped the English language from the time of the Anglo-Saxon to the present. *W Sp; suggested preq. ENGL 360 or LING 270; This course does not fulfill any history course requirements of the history major.*

MATH 099 Fundamental Mathematics (4) A brief review of the fundamentals of arithmetic, including addition, subtraction, multiplication, and division of integers and rational numbers. An introduction to the elementary concepts of basic algebra with emphasis on manipulations of algebraic expressions, solutions to simple equations, graphs, and formula rearrangement. (Does not count toward a degree.) *Su F W Sp; preq. placement*

MATH 101 Basic Algebra (4) A course for students with a good background in arithmetic but little or no background in algebra. Operations with integers, number properties, scientific notation, solving linear equations and inequalities and graphing the solutions on real line, operations with polynomials, laws of exponents, and an introduction to square roots. *Su F W Sp; preq. placement or MATH 099*

MATH 105 Plane Geometry and Algebra (4) A course for students with a good background in algebra but little or no background in geometry. Graphing; logical thinking; problem-solving; measurement; area; perimeter and volume of common geometric figures; properties of lines and polygons; and work at a more advanced level with algebra, including work with geometrically related topics. *Su F W Sp; preq. placement or MATH 101*

MATH 106 Basic Algebra and Geometry Review (4) An accelerated course for students with sound backgrounds in both algebra and geometry who are in need of review. This course surveys the material covered in MATH 101 and MATH 105. Solving linear equations; graphing; operations with exponents, polynomials, rational expressions, and radicals; inequalities; basic properties of measurement, parallel lines, similar triangles, and right triangles; and word problems involving the above topics. *Su, F, W, Sp; preq. placement*

MATH 110S Mathematics Core Course (4) This course addresses questions about the nature and historical development of mathematical thought and knowledge and the impact of mathematics on modern life. The course focuses on problem solving techniques, heuristics, critical thinking, and the collection and interpretation of data. In addition, one or more of the following topics is included: probability, statistical inference, symbolic logic, graph theory, numeration systems, measurement, basic programming, linear programming, and spreadsheet software with business applications. *Su F W Sp; preq. placement or MATH 105 or 106; 3 lec. 1 discussion/activity; $20.00*

MATH 120 Elementary Topics in Mathematics 1 (5) Problem-solving, sets, concepts of logic, binary operations, systems of numeration, number theory, rational numbers, real numbers, measurement, and use of calculators and computers. *Su F W Sp; preq. MATH 110S*

MATH 121 Elementary Topics in Mathematics 2 (5) Basic algebraic work with equations and inequalities in one unknown, systems of equations, metric and nonmetric geometry, coordinate geometry, introduction of statistics and probability, problem-solving, and computer use. *Su F W Sp; preq. MATH 120*

MATH 125 Business Mathematics (4) Emphasis on estimating answers, percentages, reconciliation of a checking account, mark-up, taxes, depreciation, payroll and payroll deductions, inventory evaluation, financial statements, simple and compound interest on investments and loans, and use of calculators. *F W Sp; preq. placement or MATH 101*

MATH 130 Intermediate Algebra (4) Presentation of a variety of techniques for simplifying algebraic expressions, solving equations and word problems, and graphing. Topics include linear functions, right triangle trigonometry and its applications, rational expressions, rational exponents, and quadratic equations. *Su F W Sp; preq. MATH 105, 106, or placement*

MATH 131 College Algebra (4) This precalculus course focuses on functions and their graphs. Students learn the basic properties of linear, polynomial, rational, exponential, and logarithmic functions. Topics also include conditionally defined functions, inverse functions, and operations on functions. Students learn to use functions and graphs as tools for modeling. This course satisfies the quantitative reasoning requirement of Shawnee State University's General Education Program. *Su F W Sp; preq. MATH 130 or placement*

MATH 132 Trigonometry and Analytic Geometry (4) This precalculus course provides an in-depth study of the trigonometric functions, including graphs, equations, identities, and applications. Conic sections are also included. *Su F W Sp; preq. placement or MATH 131*

MATH 150 Principles of Statistics (4) Cross-listed as PSYC 150 and SOCI 150. Introduction to the vocabulary, concepts, formulas, and presentation of statistics as applied to business, education, and science. Topics include measures of central tendency and dispersion, definition of classical probability, probability distributions with emphasis on binomial and normal distribution. Sampling practices and theory, calculator and computer use. This course satisfies the quantitative reasoning requirement of Shawnee State University's General Education Program. *Su F W Sp; preq. placement or MATH 105 or 106*

MATH 201 Calculus 1 (4) This is the first course in the calculus sequence. The main topics are functions, limits, derivatives, and applications. This course satisfies the quantitative reasoning requirement of Shawnee State University's General Education Program. *Su F W Sp; preq. placement or MATH 131*

MATH 202 Calculus 2 (4) Second course in the calculus sequence. The emphasis is on integration. Contents include integration of algebraic functions and applications and differentiation and integration of exponential, logarithmic, trigonometric, and hyperbolic functions. *Su F W Sp; preq. MATH 132 and 201*

MATH 203 Calculus 3 (4) The third course in the calculus sequence. Indeterminate forms, improper integrals, Taylor's Formula and infinite series, plane curves, and polar coordinates. Introduction to vectors. *Su F W Sp; preq. MATH 202*

MATH 204 Calculus 4 (4) The last course in the calculus sequence. The emphasis is on multivariable calculus. Contents include some discussion and applications of vector-valued functions, partial derivatives, multiple integrals, and other topics in vector calculus. *F; preq. MATH 203*

MATH 220 Discrete Mathematics (4) Introduces the student to various topics from discrete mathematics. Topics include logic; induction; sets, binary relations, and functions; graph theory; proofs; combinatorics and finite probability. This course satisfies the quantitative reasoning requirement of Shawnee State University's General Education Program. *Sp; preq. MATH 131*

MATH 221 Discrete Mathematics 2 (4) A continuation of MATH 220. In-depth study of graph theory. Topics include basic counting techniques, recurrence equations, trees and spanning trees, and graphs. *Offered on demand; preq. MATH 220 or instructor consent*

MATH 230 Linear Algebra (5) Solutions to linear systems, matrices and matrix algebra, determinants, n-dimensional real vector spaces and subspaces, linear mappings, diagonalization. Techniques and computational skills emphasized. *W; preq. MATH 132 and 201*

MATH 250 Statistics 1 (4) Introduction of descriptive statistics and probability. Applications of probability distributions with emphasis on binomial, Poisson, and normal distributions. Introduction to internal estimation and hypothesis testing. Calculator and computer use in student project applications. This course satisfies the quantitative reasoning requirement of Shawnee State University's General Education Program. *Su F W Sp; preq. MATH 201 (preferably with a grade of "C" or better)*

MATH 290 Seminar in Mathematics (1-4) Discussion of topics in mathematics.

MATH 299 Special Topics in Mathematics (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

MATH 300 History of Mathematics (4) Survey from Babylonian and Egyptian mathematics to 20th century mathematics with emphasis on development of algebra, geometry, and number theory. *F 1995; preq. MATH 132, 201, or permission*

MATH 301 Ordinary Differential Equations (4) An introduction to ordinary differential equations with emphasis on technique and application. Topics include existence and uniqueness of solutions, first order equations, linear differential equations, and systems. Analytical and numerical methods. *W 1997; preq. MATH 203*

MATH 305 Mathematics Enrichment for the Teacher (4) The use of manipulative models in the classroom. Computer software selection and its integration into the curriculum. Introductory programming. An introduction to mathematics games and how to use them in teaching mathematics to children. *W; preq. MATH 121 or permission; $20.00*

MATH 320 Foundations of Geometry (4) Introduction to axiomatic mathematics through a variety of geometry types, including a consideration of the postulates of Euclid, surface topology, and finite geometry. The development of plane Euclidean and non-Euclidean geometries using appropriate models and the consideration of various geometric configurations. *Sp 1997; preq. MATH 201*

MATH 325 Introduction to Number Theory (4) Selected number systems. Investigation of properties of natural numbers. Topics include proof techniques, prime factorization, Euclidean algorithm, Diophantine equations, congruences, and divisibility. *Sp 1996; preq. MATH 201 and 220*

MATH 335 Intermediate Analysis (4) In-depth study of limits, sequence, series, continuity, mean-value theorem, differentiation, and Riemann integration. *F 1995; preq. MATH 203*

MATH 350 Statistics 2 (4) Applications of experimental design and analysis of variance, nonparametric tests, linear regression and correlation, multiple regression, time series analysis and forecasting, decision theory. Calculator, computer, and statistics software used in student project applications. *W 1996; preq. MATH 250*

MATH 360 Introduction to Probability (4) Classical probability, probability theory, conditions of probability, random variables and distribution, characteristic function, central limit theorem, and Law of Large Numbers. *Sp 1996; preq. MATH 203*

MATH 370 Operations Research 1 (4) Cross-listed as BUMG 370. An introduction to the general nature, history, and philosophy of operations research. A study of the theory of linear programming, the simplex algorithm, and applications. A series of special linear programming problems, such as optimal assignment, transportation, transshipment, network flow, minimal spanning trees, shortest path, PERT methods, and traveling salesperson. *F 1996; preq. MATH 230 or BUMG 355 or instructor consent*

MATH 371 Operations Research 2 (4) Cross-listed as BUMG 371. A continuation of MATH 370. Dynamic programming and integer programming are studied (or finished if started in MATH 370). Stochastic models of operations research such as markov chains, queuing theory, and simulation are studied. *Sp 1996; preq. MATH 250 and 370 or instructor consent*

MATH 410 Modern Algebra 1 (4) Treatment of groups, permutations, subgroups, isomorphisms, homomorphisms, and quotient groups. *F 1996; preq. MATH 230; MATH 335 also recommended.*

MATH 411 Modern Algebra 2 (4) Treatment of rings and fields, subrings, ideals, homomorphisms, isomorphisms, and Galois theory. *W 1997; preq. MATH 410*

MATH 420 Matrix Theory (4) Brief review of Linear Algebra. Matrix functions and applications, including linear programming, inner products, diagonalization, generalized inverses, and applications to differential equations and optimization. Numerical linear algebra. *W 1996; preq. MATH 230 or permission*

MATH 430 Numerical Analysis (5) Polynomial interpolation and approximation, numerical integration and differentiation, numerical solution to differential equations. Computer use emphasized. This course is strongly recommended for those who are interested in or would like to pursue a career in applied mathematics, actuarial or computer sciences. *F 1995; preq. MATH 202 and one computer programming language; MATH 203 and/or 301 are recommended.*

MATH 440 Mathematical Models (4) Construction and analysis of mathematical models and their use in investigation of physical, chemical, biological, engineering, statistical, social, and environmental problems. This analysis is conducted using calculus-based techniques and applicable computer models. *Sp 1997; preq. MATH 202*

MATH 450 Complex Variables (4) Algebra of complex numbers, analytic functions, mappings, Cauchy Integral Theory, Residue theory, and applications. *W 1996; preq. MATH 204*

MATH 460 Real Analysis (4) Topics include set theory, real number theory, compactness, completeness, Lebesque measure and general introduction of metric spaces. *W 1996; preq. MATH 335*

MATH 480 General Topology (4) Concepts of general topological space and metric space, compact and connected spaces, and separation axioms. *Sp 1996; preq. MATH 335*

MATH 490 Advanced Seminar in Mathematics (1-4) Discussion of advanced topics in mathematics.

MATH 495 Undergraduate Research (1-4) Independent mathematics investigation under the direction of a faculty member.

MATH 496 Senior Research Project 1 (1) The first of a two-course sequence, taken near the end of the student's bachelor program. The student's in-depth investigation of a mathematical topic culminates in the presentation of a senior paper. *Su F W Sp; preq. department permission*

MATH 497 Senior Research Project 2 (3) Continuation of MATH 496. *Su F W Sp; preq. MATH 496*

MATH 499 Special Topics in Mathematics (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

MLTC 111 Medical Laboratory Orientation (2) Introduction to the profession of Medical Laboratory Technology, including history, philosophy, development, educational requirements, current trends, and role and responsibilities of the medical lab technicians. Ethics, employment opportunities, certification and licensure, professional organizations, interpersonal relationships, basic medical terminology, as well as the safe handling of potentially infectious materials. *F*

MLTC 112 Basic Laboratory Skills (4) Introduction to basic laboratory procedures and techniques. Emphasis is placed on phlebotomy, microscopy, spectrophotometry, pipetting, use of centrifuges, analytical balances, bookkeeping, lab safety, and basic laboratory instruments. Laboratory mathematics, particularly in solution preparations, dilution, calculation of concentrations, and standard curve are included. *W; preq. BIOL 101 or 151, CHEM 141, and MLTC 111; 2 lec. 6 lab*

MLTC 201 Urinalysis (3) Physical, chemical, and microscopic examination of urine. Theory and applications of various laboratory tests in relation to kidney function. Brief discussion of other important body fluids. *F; preq. BIOL 162 or 310 and 320 and MLTC 112; 2 lec. 3 lab*

MLTC 202 Immunoserology (3) Introduction to basic immunology with emphasis on the principles and applications of serological techniques in diagnostic tests. *Su; Preq. BIOL 162 or BIOL 310 and 320 and MLTC 112; 2 lec. 3 lab*

MLTC 203 Blood Banking (4) Lectures and laboratory procedures in blood banking. Principles of blood grouping and human blood group genetics. Routine procedures for pretransfusion testing, antibody screening, and identification. Donor selection, blood collection, and processing are discussed. Hemolytic diseases of the newborn, preparations of blood components, and their storage and utilization are also introduced. *F; preq. MLTC 202; 2 lec. 6 lab; $10.00*

MLTC 204 Parasitology (1) Introduction to medically important human parasites. Emphasis is on collection, preservation, and laboratory identification. *F; preq. MLTC 112; 1 lec. 2 lab*

MLTC 207 Clinical Microbiology (5) Diagnostic procedures for identification of medically important bacteria, viruses, and fungi. Emphasis is on the morphological, cultural, biochemical, and serological characteristics of various pathogenic bacteria, viruses, and fungi. *Su; coreq. BIOL 350; 3 lec. 6 lab; $10.00*

MLTC 209 Hematology 1 (4) Basic laboratory methods in hematology, including cell counting, hemoglobinometry, and cell morphology. Detailed studies of blood cell maturation and development. *Sp; preq. BIOL 162 or BIOL 310 and MLTC 112; 2 lec. 6 lab; $10.00*

MLTC 210 Hemostasis (2) Study of hemostatic mechanism and hemorrhagic disorders as well as their laboratory evaluations. *Sp; preq. BIOL 162 or BIOL 310 and MLTC 112; 2 lec. 2 lab; $5.00*

MLTC 211 Hematology 2 (3) Continuation of MLTC 209 with emphasis on blood cell abnormalities, including anemias, leukemias, and special procedures in the study of blood diseases. *Su; preq. MLTC 209; 2 lec. 3 lab; $5.00*

MLTC 212 Clinical Chemistry 1 (4) Principles, practices, and techniques of analyses of chemical components in serum, as well as other body fluids, are studied. Instrumentation associated with specific analyses is introduced. Emphasis on the specific chemical reactions and/or analytical principles, sources of error, quality control, practical applications, and theoretical aspects of the above procedures as related to normal and abnormal states. *Sp; preq. MLTC 112 and CHEM 121 and 122 or CHEM 141 and 142; 2 lec. 6 lab; $10.00*

MLTC 213 Clinical Chemistry 2 (4) Continuation of MLTC 212. *F; preq. MLTC 212; 2 lec. 6 lab; $10.00*

MLTC 215 Lab Simulation (3) A simulated laboratory environment is designed for students to participate in performing various tests in chemistry, hematology, urinalysis, blood banking, coagulation, and microbiology. Students are required to organize their work assignments, complete the assignments efficiently, and monitor quality control within established criteria. *W; preq. successful completion of all MLTC coursework below MLTC 215; 9 lab*

MLTC 216 Medical Technology Seminar (1) Issues and trends in Medical Laboratory Technology, government regulations, professional development, employment opportunities, resume writing, and job-seeking skills are discussed. *W; preq. successful completion of all MLTC coursework below MLTC 215*

MLTC 217 Case Studies (1) In conjunction with MLTC 215, students present case studies assigned in MLTC 215 to interpret and evaluate the clinical correlations and significance of the lab data. *W; preq. successful completion of all MLTC coursework below MLTC 215*

MLTC 220 Clinical Practicum 1 (4) Eighteen weeks of internship providing a practical application of the skill and knowledge learned during the previous quarters of the curriculum. Students are assigned to accredited hospital laboratories as trainees. The rotation schedule consists of three weeks in hematology-coagulation, four weeks in chemistry, four weeks in microbiology, four weeks in blood banking, one week in urinalysis, and one week of elective. *W; preq. completion of all required MLTC courses with a minimum of "C" in the lab and lecture portion of each and a minimum GPA of 2.0*

MLTC 221 Clinical Practicum 2 (8) Continuation of MLTC 220. *Sp*

MLTC 225 Special Problems in Med Lab (2) Review of problems and progress during clinical practicum. Students are required to keep a daily log of the scope and degree of activities in the laboratory. The log book is filed with the department at the end of the clinical practicum. Students are also required to participate in laboratory inservice activities (and/or professional meetings if possible). Review exercises during the clinical rotation and a four-day Registry Exam review at the end of the internship are included. *Sp; preq. MLTC 220*

MLTC 226 Special Topics in Med Lab (2) Individualized study of Medical Laboratory Technology in a selected area of interest: laboratory instrumentation, lab management, quality control, laboratory computer, hematology, clinical chemistry, immunology, immunohematology, microbiology, and histology. The selected topic must be approved by the faculty member and the clinical coordinator. The student is required to do library and/or laboratory studies, and a typewritten report on the topic is submitted to the department before the end of the clinical practicum. *Sp; preq. MLTC 220*

MUSI 100 Introduction to Music Theory (3) Developmental theory course used to make up deficiency. Introduction to staff, pitch, rhythmic notations, chords, ear training. *F*

MUSI 101 Music Theory 1 (3) Melodic, harmonic, and rhythmic principles of music and notation. *F; preq. theory placement exam*

MUSI 102 Music Theory 2 (3) Continuation of MUSI 101. *W; preq. MUSI 101*

MUSI 103 Music Theory 3 (3) Continuation of MUSI 102. *Sp; preq. MUSI 102*

MUSI 120 Introduction to Music Literature (4) Development of listening skills for understanding elements of musical style in historical perspective and significance of music as a fine art. *F W Sp*

MUSI 121 Introduction to Baroque Music (3) Study of selected works from Baroque style periods through readings, tapes, recordings, and other media. *Offered on demand; preq. MUSI 120 or permission; non-humanities majors*

MUSI 122 Introduction to Music of the Classical and Romantic Periods (3) Study of selected works from the Classical and Romantic style periods through readings, tapes, recordings, and other media. *Offered on demand; preq. MUSI 120 or permission; non-humanities majors*

MUSI 123 Introduction to 20th Century Music (3) Study of selected works of 20th Century, both traditional and electronic, through readings, scores, tapes, recordings, and other media. *Offered on demand; preq. MUSI 120 or permission; non-humanities majors*

MUSI 160 Fundamentals of Music (3) Principles of notation, meter, major, and minor scales, rhythmic and melodic reading, singing, and keyboard. *F W Sp*

MUSI 161 Music for the Classroom Teacher (3) Methods of teaching elementary music with emphasis on singing, playing instruments, and rhythmic body movements. *F W Sp; preq. MUSI 160 and EDUC 110; $25.00*

MUSI 170 Class Voice (1) Basic techniques of voice production: breathing, diction, projection, tone-color, and interpretation. Repeatable for credit—maximum of six quarters. *F W Sp; preq. music reading must be taken in sequence or by permission*

MUSI 180 College Chorus (2) Repeatable for credit—maximum of three quarters. *F; W Sp; preq. permission of instructor (audition); 4 lab; $5.00*

MUSI 181 College Band (2) Repeatable for credit—maximum of three quarters. *F W; preq. permission of instructor (audition); 4 lab*

MUSI 185 Vocal Ensemble (2) Repeatable for credit—maximum of six quarters. *F W Sp; preq. permission of instructor (audition); 4 lab; $5.00*

MUSI 186 Instrumental Ensemble (2) Repeatable for credit—maximum of six quarters. *F W; preq. permission of instructor (audition); 4 lab*

MUSI 190 Piano Class 1 (1) Study of scales and finger techniques for beginning players. *Su F W Sp; $5.00*

MUSI 191 Piano Class 2 (1) Continuation of MUSI 190. *Su F W Sp; $5.00*

MUSI 192 Piano Class 3 (1) Continuation of MUSI 191. *Su F W Sp; $5.00*

MUSI 220 Music Literature (4) Survey of musical forms, styles, and performance media from Gregorian to present. Humanities majors. *F W Sp*

MUSI 221 Music History and Literature 1 (3) Study of literature and musical styles to 1600. *Offered on demand; preq. MUSI 220 or permission*

MUSI 222 Music History and Literature 2 (3) Study of literature and musical styles 1600-1850. *Offered on demand; preq. MUSI 221 or permission*

MUSI 223 Music History and Literature 3 (3) Study of literature and musical styles 1850 to present. *Offered on demand; preq. MUSI 222 or permission*

MUSI 225 Country and Appalachian Music History 1 (4) Understanding of the history of Appalachian music and the people, locations, and stories that underlie the music. Examines the evolution and influences of Appalachian music. *F*

MUSI 226 Country and Appalachian Music History 2 (4) Continuation and expansion of MUSI 225, including study of ballads, children's songs, dance, and musical families. *W*

MUSI 227 Country and Appalachian Music History 3 (4) Continuation and expansion of MUSI 226, including country and Appalachian music and musicians that have not yet been covered in MUSI 225 and 226. *Sp*

MUSI 230 Music-Theater (3) Participation through production or performance of selected musical theater projects. *Su Sp*

MUSI 270 Intermediate Class Voice (1) Continuation of MUSI 170 series. Repeatable for credit—maximum of six quarters. *F W Sp; preq. permission of instructor*

MUSI 280 Intermediate Chorus (2) Continuation of MUSI 180 series. Repeatable for credit—maximum of three quarters. *F W Sp; preq. permission of instructor; $5.00*

MUSI 299 Topics in Music (1-4) Study of various music topics not otherwise available to students: folk and country, rock forum. Repeatable for credit—maximum of three quarters. *Offered on demand*

MUSI 361 Teaching Music in Elementary Grades (3) Materials and methods for teaching elementary vocal music. *Offered on demand; preq. MUSI 103*

MUSI 370 Applied Voice (1) Repeatable for credit—maximum of six quarters. *F W Sp; preq. music concentration; permission of instructor*

MUSI 371 Applied Piano (1) Repeatable for credit—maximum of six quarters. *Su F W Sp; preq. music concentration; permission of instructor*

MUSI 372 Applied Organ (1) Repeatable for credit—maximum of six quarters. *Su F W Sp; preq. music concentration; permission of instructor*

MUSI 373 Applied Woodwind (1) Repeatable for credit—maximum of six quarters. *Offered on demand; preq. music concentration; permission of instructor*

MUSI 374 Applied Brass (1) Repeatable for credit—maximum of six quarters. *Offered on demand; preq. music concentration; permission of instructor*

MUSI 390 Conducting (3) Conducting basic beat patterns; conducting techniques for choral groups; style and interpretation. *Offered on demand; preq. music concentration or permission*

NTSC 110S Natural Science (4) Requirement for the General Education Program. Course addresses scientific reasoning and methodology. Credit not allowed for both NTSC 110S and PSCI 110S *OR* NTSC 110S and BIOL 110S. *Su F W Sp; $10.00*

NTSC 240 Introduction to Environmental Science (4) Cross-listed as CHEM 240. Survey of the nature and scope of environmental problems. Emphasis on the physical, biological, and human aspects of environmental science. *F; preq. sophomore standing with coursework in the basic sciences, BIOL 151, CHEM 143, or GEOL 201; 3 lec. 2 lab; $22.00*

NTSC 490S Senior Seminar (4) Provides an opportunity for students to place their chosen field of study in an interdisciplinary context with intellectual, ethical, and historical perspectives. The seminar focuses on the synthesis and integration of various concepts by applying them to the analysis and solution of problems chosen in the context of their academic disciplines. Oral and written presentations of the seminar paper are required. *Su F W Sp; preq. senior standing and 44 general education program hours*

OTAT 101 Introduction to Occupational Therapy (4) Cross-listed as OTST 101. Introduction to the profession of occupational therapy, the roles and functions of occupational therapy personnel, the areas of occupational performance, and the theoretical basis of using goal-directed activities. *W; preq. enrollment in OTA program—professional phase*

OTAT 102 Therapeutic Media 1 (3) Introduction to the analysis and therapeutic application of activities. Includes skill development in selected activities, instruction of peers in an activity, and participation in proper care and maintenance of equipment and supplies. *W; preq. enrollment in OTA program*

OTAT 103 Disease Pathology 1 (4) Cross-listed as OTST 103. Discussion of both physical and psychosocial dysfunctions commonly referred to occupational therapy. Includes the symptoms, etiology, and treatments of various diseases. *Sp; preq. OTAT 101/OTST 101, BIOL 101, and AHNR 102*

OTAT 108 Practicum 1 (2) Supervised clinical experience under the direction of qualified personnel in a variety of settings. Emphasis is on developing professional communication skills, learning to accurately document observations, developing an understanding of other health care professionals, and instructing a small group in an activity. See academic requirements of OTA program. *W; preq. enrollment in OTA program*

OTAT 109 Applied Anatomy and Kinesiology (2) Study and application of human anatomy and basic movement principles as used in occupational therapy. *Sp; preq. OTAT 101*

OTAT 110 Group Dynamics (2) Cross-listed as OTST 110. Study of group behavior. Practice in leading groups, observing group interactions, and participating in various types of groups. *Sp; preq. OTAT 101/OTST 101, PSYC 101, and SOCI 101*

OTAT 203 Occupational Therapy Assistant in Developmental Disabilities (6) Study of conditions which interfere with normal growth and development. Introduction to the application of occupational therapy in the treatment of developmental disabilities. Emphasis on the role of the O.T. assistant in treatment of developmental disabilities particularly in the public school setting. *F; preq. OTAT 108, 109, 110, PSYC 101, and 151; $5.00*

OTAT 204 Practicum 2 (3) Similar to OTAT 108 but in different types of settings. *Su; preq. OTAT 108, 109, and 110*

OTAT 205 Therapeutic Media 2 (3) Cross-listed as OTST 205. Analysis, adaptation, and therapeutic application of activities not covered in OTAT 102. *Su; preq. OTAT 101/OTST 101*

OTAT 206 Contemporary Media in Occupational Therapy (2) Cross-listed as OTST 206. Analysis, adaptation, and therapeutic applications of "high-tech" media. Emphasis on computer adaptations, construction of switches, and use of video in patient treatment. *F; preq. Completion of or concurrent with OTAT 205*

OTAT 208 Practicum 3 (3) Supervised clinical experience under the direction of qualified personnel in a variety of settings. Continuation of skill development of OTAT 204 with additional emphasis on case study, treatment planning, and occupational therapy treatment techniques. *F; preq. OTAT 204*

OTAT 209 Occupational Therapy Assistant in Geriatric Program Planning (4) Introduction to and application of occupational therapy in the treatment of older adults. Emphasis is on developing and implementing both activity and rehabilitative programs in agencies serving the elderly. *W; preq. OTAT 210; $5.00*

OTAT 210 Occupational Therapy Assistant in Physical Disabilities (5) Exploration of occupational therapy theories in the evaluation and treatment of physically disabling conditions. Lab emphasis on instruction of activities of daily living, work simplification, energy conservation, and fabrication of orthotic and adaptive devices. *Su; preq. OTAT 109; $30.00*

OTAT 211 OTA Seminar (2) Discussion of the professional roles and responsibilities of the occupational therapy assistant. Includes orientation to licensure, certification, legal and ethical issues, peer review, and other current professional issues. *W; preq. OTAT 208 and 210*

OTAT 212 Occupational Therapy Assistant in Mental Health (4) Exploration of occupational therapy theories in the evaluation and treatment of psychosocial dysfunction. Lab emphasis on the development of observation skills, group dynamics, group leadership, effective communication, and therapeutic use of self. *W; preq. OTAT 208, 210, PSYC 101, 151, and SOCI 101*

OTAT 220 - OTST 413

OTAT 220-221 Clinical Application (8 ea.) Supervised fieldwork placement. Experience in and responsibility for delivery of service to patients/clients. Emphasizes the application of academically acquired knowledge leading to the performance of an entry-level occupational therapy assistant. See academic and clinical requirements of OTA program. *Sp; preq. successful completion of all OTA and other required courses*

OTAT 299 Special Topics in OT (1-3) Provides students an opportunity to gain additional knowledge or experience in a specific area of occupational therapy. *Su F W Sp; preq. admission to OT/OTA program and permission of instructor*

OTST 101 Introduction to Occupational Therapy (4) Cross-listed as OTAT 101. Introduction to the profession of occupational therapy, the roles and functions of occupational therapy personnel, the areas of occupational performance, and the theoretical basis of using goal-directed activities. *W; preq. enrollment in OT program-professional phase.*

OTST 103 Disease Pathology 1 (4) Cross-listed as OTAT 103. Discussion of both physical and psychosocial dysfunctions commonly referred to occupational therapy. Includes the symptoms, etiology, and treatments of various diseases. *Sp; preq. OTST 101; BIOL 101 or 151, and AHNR 102*

OTST 110 Group Dynamics (2) Cross-listed as OTAT 110. Study of group behavior. Practice in leading groups, observing group interactions, and participating in various types of groups. *Sp; preq. OTST 103, PSYC 101, and SOCI 101*

OTST 205 Therapeutic Media 2 (3) Cross-listed as OTAT 205. Analysis, adaptation, and therapeutic application of activities. *Su F; preq. OTST 101*

OTST 206 Contemporary Media in Occupational Therapy (2) Cross-listed as OTAT 206. Analysis, adaptation, and therapeutic applications of "high-tech" media. Emphasis on computer adaptations, construction of switches, and use of video in patient treatment. *F; preq. completion of or concurrent with OTST 205*

OTST 305 Disease Pathology 2 (4) The etiology, clinical course, management, and prognosis of congenital, developmental, acute, and chronic disease processes and traumatic injuries. The effect of such conditions on human functioning throughout the life span. Focus is on neuromuscular, musculoskeletal, and neurological systems. *F; preq. admission to OT program or OTAT 103*

OTST 310 Practicum 1 for OTS (2) Level 1 Fieldwork. The first competency based fieldwork course to develop professional skills in health service delivery. Students gain an appreciation of the role of occupational therapy in health care. Students are assigned to a variety of agencies serving health care needs. *Sp; preq. admission to OT program and OTST 101*

OTST 330 Orthotics (3) Includes theoretical basis and application of orthotics to enhance independent daily living performance in work, play/leisure, and self care. Designing, fabricating, and using orthotic devices. *W; preq. admission to OT program and OTST 206*

OTST 410 OT in Physical Disabilities 1 (4) Theories, approaches, and principles of occupational therapy programming for physical function throughout the life span. Includes theoretical basis, assessment, and treatment to foster age-appropriate skills in daily living activities, work, and play/leisure. Emphasis is on theory and assessment. *W; preq. OTST 305, BIOL 311, and PHYS 201*

OTST 411 OT in Physical Disabilities 2 (4) Continuation of theory application covered in OTST 410, with emphasis on treatment planning, adaptations, prevention, health maintenance, and remediation. *Sp; preq. OTST 410 and BIOL 314*

OTST 412 OT in Mental Health 1 (4) Theories, approaches, and principles of occupational therapy programming for mental health services throughout the life span. Includes theoretical basis, assessment, and treatment to foster age-appropriate skills in daily living activities, work, and play/leisure. Emphasis is on theory and assessment. *W; preq. OTST 305 and PSYC 400*

OTST 413 OT in Mental Health 2 (4) Continuation of theory application covered in OTST 412, with emphasis on treatment planning, adaptation, prevention, health maintenance, and remediation. *Sp; preq. OTST 412 and BIOL 314*

OTST 416 OT in Gerontology (4) Theories, approaches, and principles of gerontic occupational therapy. Theories of aging, normal physiological and psychological changes of aging, specific diseases and conditions, and common problems of the aging population. Includes quality assurance, consultative role of the OTR in nursing homes, and legal issues regarding aging. *Sp; preq. OTST 410 and 412 and BIOL 314*

OTST 420 Practicum 2 for OTS (2) Level 1 Fieldwork. The second competency based fieldwork to develop professional skills in occupational therapy service delivery. Focus on observation, evaluation, and documentation of client abilities. Students are assigned to agencies different from those in OTST 310. *Sp; preq. OTST 410 and 412*

OTST 421 Practicum 3 for OTS (2) Level 1 Fieldwork. The third competency based fieldwork to develop professional skills in occupational therapy service delivery. Focus on treatment planning and implementation. Students are assigned to agencies different from those in OTST 310 and OTST 420. *Su; preq. OTST 411, 413, and 420*

OTST 430 OT in Developmental Disabilities 1 (5) Theories, approaches, and principles of occupational therapy programming for issues related to normal and abnormal patterns of human development. Evaluation, program planning, and treatment application as it pertains to individuals and their families. *Su; preq. OTST 411 and 413, BIOL 314, and PSYC 151*

OTST 431 OT in Developmental Disabilities 2 (4) Continuation of material covered in OTST 430, with emphasis on neurodevelopmental and sensory integration theory and treatment. *F; preq. OTST 430*

OTST 450 Research Designs and Methods in OT (4) Students learn to be consumers of research data, conduct literature searches, examine methods of research design and data collection, and prepare a research proposal related to occupational therapy. *Su; preq. OTST 411, 413, 416, 430, and MATH 150*

OTST 451 Occupational Therapy Management and Program Planning (4) Occupational therapy service management skills. Includes health care trends, quality assurance, and legal issues. Students develop a model for the delivery of occupational therapy services in a selected agency or facility. *F; preq. OTST 430 and BUAI 101 or BUIS 101*

OTST 495 Clinical Application 1 (12) Level 2 Fieldwork. Three months of supervised, in-depth field experience in a selected practice area of occupational therapy. Student is supervised by a Registered Occupational Therapist. *W; preq. successful completion of all required courses in OT curriculum.*

OTST 496 Clinical Application 2 (12) Level 2 Fieldwork. Three months of supervised, in-depth field experience in a practice area different from OTST 495. Student is supervised by a Registered Occupational Therapist. *Sp; preq. OTST 495*

OTST 497 Clinical Application 3 (Optional) (4, 8, or 12) Level 2 Fieldwork. One to three months of supervised, in-depth field experience in a specialty practice area of occupational therapy. Student is supervised by a Registered Occupational Therapist. *Su; preq. OTST 496*

PHIL 100 Introduction to Philosophy (4) An introduction to the varieties of philosophy through selected primary texts from ancient Greece through the present. Presents basic problems, concepts, and methods. *Offered on demand*

PHIL 103 Introduction to Ethics (4) Classic and modern philosophical views of the nature of morality. Recognizing the moral dimension of a choice and reasoning about alternatives. *Offered on demand*

PHIL 105 Rhetoric and Reasoning (4) The use and abuse of language in everyday life, especially in advertising, politics, and education. *Offered on demand*

PHIL 170 Introduction to Formal Logic (4) Deductive and inductive reasoning; translation from natural to formal language; sentential logic, Aristotelian logic, predicate logic; logic and computers. *Offered on demand*

PHIL 280 The Judeo-Christian Tradition (4) How our culture is informed by this tradition. Application to selected contemporary issues. *Offered on demand*

PHIL 282 Old Testament (4) Reading and interpretation of selected portions of the Old Testament. Literary, historical, theological, and philosophical interpretations; relation to the New Testament. *W*

PHIL 283 New Testament (4) Reading and interpretation of selected portions of the New Testament. Literary, historical, theological, and philosophical interpretations; relation to the Old Testament. *Sp*

PHIL 284 Oriental Philosophy (4) The spiritual traditions of Hinduism, Buddhism, Confucianism, and Taoism. *Offered on demand*

PHIL 299 Special Topics in Philosophy (1-5) Individual or small-group study of topics not otherwise available. May be repeated for credit with permission of the instructor. *Offered on demand*

PHIL 300 Philosophy of Film (4) Viewing and discussion of international films to raise moral, aesthetic, and ethical issues. *W, Sp*

PHIL 316 Existentialism (4) The unique individual vs. the crowd; total freedom and unlimited responsibility; creating the self vs. bad faith; the solitary individual before God or the superman who can face the death of God. Primary readings from Kierkegaard and Nietzsche. *Offered on demand*

PHIL 320S Ethics in Public and Private Life (4) Personal, familial, social, and professional value decisions: how to recognize and make them. *Su F W Sp*

PHIL 331 Business Ethics (4) Cross-listed as BUMG 331. Examination of the relationship between economic and moral constraints. *F W*

PHIL 332 Biomedical Ethics (4) Ethical issues in medicine, medical research, and biotechnology: medical models of treatment, relations within the health team, physician-patient relations, death and dying, wellness and illness, informed consent, refusal of treatment; right to health care, experimental treatment, bioengineering of plants, animals, and humans. *F*

PHIL 333 Philosophy and Technology (4) Social and political implications of contemporary information processing, bioengineering, surveillance, and warfare. Rights and responsibilities of technological experts. *Offered on demand*

PHIL 334 Environmental Ethics (4) Theories of the environment; alternative views of our responsibility for the environment; environmental vs. economic values; methods of deciding environmental questions. *Sp*

PHIL 335 Philosophy and Education (4) Theories of teaching and learning from ancient Greece to the contemporary classroom. *Offered on demand*

PHIL 430 Capitalism, Socialism, and Democracy (4) Rights and justice in business; alternative theories of economics; leadership vs. participation. *Sp*

PHIL 470 Symbolic Logic (4) First-order logic; the basics of a formal system; completeness, compactness, undecidability; more powerful logics. *Offered on demand; preq. Two courses in MATH at the 200 level, or two courses in PHIL, or permission*

PHIL 475 Game Theory and Decision Theory (4) Mathematical models of conflict and of decision-making. Competitive games, cooperative games, fair share, agency, and voting. Applications to business, war, surrogates, and committees. *Offered on demand; preq. Two courses in MATH at the 200 level, or two courses in PHIL, or permission*

PHIL 499 Special Topics in Philosophy (1-5) A seminar in selected topics in philosophy. Course content varies from year to year. May be repeated for credit. *Offered on demand*

PHYS 099 Fundamental Physics (4) A course intended for special programs and not considered a prerequisite for the college entry-level physics courses. Students desiring a basic course in physics should refer to PHYS 201. *Offered on demand.*

PHYS 201 Physics 1 (Mechanics) (4) Newton's Laws of Motion. Other appropriate topics may be included. Laboratory and demonstrations related to lecture. *F W; preq. MATH 130 or equivalent; 3 lec. 3 lab; $5.00*

PHYS 202 Physics 2 (Electricity and Magnetism) (4) Basic properties of electric and magnetic fields. Other appropriate topics may be included. Laboratory and demonstrations related to lecture. *Sp; preq. PHYS 201; 3 lec. 3 lab; $5.00*

PHYS 203 Physics 3 (Energy) (4) First and second laws of thermodynamics. Other appropriate topics may be included. Laboratory and demonstrations related to lecture. *W Sp; preq. PHYS 201; 3 lec. 3 lab; $5.00*

PHYS 210 Astronomy (4) Fundamental ideas of astronomy. Topics include the solar system, stars, galaxies, black holes, and the history of ideas about the universe. *3 lec. 3 lab*

PHYS 211 Calculus-Based Physics 1 (4) Introductory survey of mechanics for science and engineering students. Introduces the use of calculus in interpreting physical phenomena. Topics include vectors, kinematics, and Newton's theory of motion. *Preq. or coreq. MATH 201*

PHYS 212 Calculus-Based Physics 2 (4) Introductory survey of thermodynamics for science and engineering students. Introduces the use of calculus in interpreting physical phenomena. Topics include the first and second laws of thermodynamics. *Preq. PHYS 211 or instructor permission; preq. or coreq. MATH 202*

PHYS 213 Calculus-Based Physics 3 (4) Introductory survey of electricity and magnetism for science and engineering students. Introduces the use of calculus in interpreting physical phenomena. Topics include some of Maxwell's equations. *Preq. MATH 202 and PHYS 212 or instructor permission*

PHYS 290 Seminar in Physics (1-4) Discussion of advanced topics in physics.

PHYS 295 Independent Study (1-4) Independent physics investigation under the direction of a faculty member.

PHYS 299 Special Topics in Physics (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

PHYS 390 Seminar in Physics (1-4) Discussion of advanced topics in physics.

PHYS 485 Senior Project (1-4) In-depth study of a selected topic in physics culminating in the preparation of a senior paper. *Preq. junior or senior standing*

PHYS 490 Seminar in Physics (1-4) Discussion of advanced topics in physics. *Preq. junior or senior standing*

PHYS 495 Undergraduate Research (1-4) Independent physics investigation under the direction of a faculty member. *Preq. junior or senior standing*

PHYS 499 Special Topics in Physics (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. *Preq. junior or senior standing*

PSCI 110S Physical Science Core Course (4) Explores the depth and breadth of the physical sciences. Science is presented as a human activity that helps us perceive order in our surroundings, making our world understandable. The relationship between science, society, and current issues is examined. *F W Sp; $5.00*

PSCI 251 Physical Science by Inquiry 1 (4) An inquiry-based (lab-oriented) course in the physical sciences designed primarily for those students who expect to teach the physical sciences (K-12) or those who learn better with a hands-on approach to science. Topics include properties of matter (mass, volume, density, concentration, and solubility) and heat and temperature (calorimetry, phase change, and heat transfer). *6 lab*

PSCI 252 Physical Science by Inquiry 2 (4) A continuation of PSCI 251. Topics include electric circuits (current, voltage, power, energy, d.c. circuits) and light and optics (refraction, reflection, image formation, and color). *6 lab*

PSCI 295 Independent Study (1-4) Independent physical science investigation under the direction of a faculty member.

PSCI 299 Topics in Physical Science (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

PSYC 098 Learning Orientation (4) Techniques for learning definitions, vocabulary, lists, etc. to assist in academic achievement. (The four hours of credit do not apply toward a degree but do apply toward total hours accumulated at the University.)

PSYC 101 Introduction to Psychology (4) A study of the individual in terms of maturational, learning, thinking, emotional, motivational, sensory, and perceptual processes. Required course for all social science majors. *Su F W Sp*

PSYC 105 Career Planning (4) This course helps students explore their values, interests, and skills in relation to careers and choosing a college major. Special emphasis on career counseling. Career exploration on the computer is available. *Su F W Sp*

PSYC 150 Principles of Statistics (4) Cross-listed as MATH 150 and SOCI 150. Introduction to the vocabulary, concepts, formulas, and presentation of statistics as applied to business, education, and science. Topics include measures of central tendency and dispersion, probability applied to joint probability tables and Bayes' Theorem, probability distributions with emphasis on Binomial and Normal, sampling practices and theory, and calculator and computer use. *F W Sp; preq. MATH 101*

PSYC 151 Human Growth and Development (4) Study of the factors affecting human growth and development through the life cycle from infancy to advanced maturity. *F W Sp; preq. PSYC 101*

PSYC 199 Special Topics in Psychology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Separate courses repeatable for credit

PSYC 260 Neurobiology of Behavior (4) Cross-listed as BIOL 260. Basic neurology, neurophysiology, and neuropharmacology, with emphasis on how they relate to human behavior. *Sp; preq. BIOL 110S and PSYC 101*

PSYC 273 Psychology of Human Adjustment (4) An examination of the individual's adjustments and conflicts in modern society. Considers problem-solving strategies and anxiety reducing behavior. Required course for all social science majors. *Su F W Sp; preq. PSYC 101*

PSYC 290 Psychological Tests and Measurements (4) Study of the nature, construction, and use of tests and measurements in education, industry, and government, including aptitude, ability, and achievement tests; attitude and rating scales; and opinion surveys. *Offered as demand indicates; preq. PSYC 101*

PSYC 299 Special Topics in Psychology (1-4) Courses repeatable for credit. *Preq. PSYC 101 and/or permission*

PSYC 300 Theories of Personality (4) Understanding of human personality through examination of psychoanalytic, humanistic, and learning theories and current biologically-based research on personality. *W; preq. PSYC 101*

PSYC 303 Introduction to Social Psychology (4) Cross-listed as SOCI 303. Behavior of the individual as influenced by other individuals, social groups, and culture. Examines group dynamics, leadership, attitude, and group conflict. *Offered as demand indicates; preq. PSYC 101*

PSYC 304 Psychology of Learning (4) Study of learning: classical and instrumental conditioning, discrimination, generalization, verbal, information processing, memory, problem solving, and concept formation. *F; preq. PSYC 101*

PSYC 310 Child Psychology (4) A survey of the course of development during the first 12 years of life, with emphasis on patterns of physical, cognitive, and mental development; parent/child relations; and the influences of TV and divorce on children. *F Sp; preq. PSYC 101*

PSYC 311 Human Sexuality (4) Cross-listed as SOCI 311. An in-depth view of the current status of human sexuality in the U.S. Examines current research; modes of sexual expression and enhancement; physiological, sociological, and psychological basis of human sexuality; sexual variations; and sex ethics. *F*

PSYC 312 Adolescent Psychology (4) Study of major theories of adolescent development and explanation of biological, cognitive, social, emotional, and personality processes. Focus is on recent trends and changes in family relationships, adolescent autonomy, educational and vocational roles, moral development and religion, teenage creativity, depression, substance abuse, eating disorders, runaways, suicide, pregnancy, and parenthood. *Sp; preq. PSYC 101*

PSYC 316 Behavior Problems in Children (4) Analysis of personal and school-related problems of children. Cases of behavior problems with specific intervention techniques. *Sp; preq. PSYC 101*

PSYC 340 Psychology of the Adult (4) Theoretical study of adulthood with an emphasis on the applications of psychological research for a better understanding of later life. Class presentations and discussions cover age-related changes in physical, cognitive, social, and personality development and address issues in adult psychopathology, death, and dying. *Offered as demand indicates; preq. PSYC 101*

PSYC 360 Drugs/Substance Abuse (4) Cross-listed as BUHE 360, HPER 360, and SOCI 360. An in-depth study of alcohol, tobacco, and other drugs and how chemical dependency on these drugs can affect individual performance and behavior. *F W Sp*

PSYC 361 Industrial Psychology (4) Applies social/psychological approach to individual's work behavior. Topics include management approaches to organizational processes resulting in productivity and satisfaction, change, turbulent environment, and psychologist's role. *Offered as demand indicates; preq. PSYC 101 or SOCI 101*

PSYC 375 Educational Psychology (4) Psychological foundations of education with emphasis on learning, transfer, motivation, and evaluation. *F W Sp; preq. PSYC 101*

PSYC 380 Psychology of Exceptional Children and Youth (4) Psychological study of exceptionality, including the physically, socially, and emotionally handicapped, and the intellectually handicapped and gifted. The psychological characteristics of the exceptional children and youth are investigated, and current programs used to help them are identified and evaluated. *Offered as demand indicates; preq. 12 credit hours of PSYC and/or instructor permission*

PSYC 399 Special Topics in Psychology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

PSYC 400 Abnormal Psychology (4) Study of anxiety, mood, psychotic, personality, and psychoactive substance use disorders as well as substance-induced organic mental disorders. Several theories and strategies of psychotherapy are examined during discussion of each disorder. *F W Sp; preq. at least 12 credit hours of PSYC*

PSYC 405 Death and Dying (4) Cross-listed as SOCI 405. Focus on increased ability to deal with one's own mortality; skills for working with terminally ill and their families; understanding the complex social system of death in American society; and moral, ethical, and philosophical issues surrounding death. *F; preq. PSYC 101 or SOCI 101*

PSYC 410 - PTAT 213

PSYC 410 Psychology of Counseling (4) Survey of the basic concepts and theories of counseling: psychodynamic, behavioral, cognitive, and humanistic. Focus is on individual and group counseling, including school, career, family and marriage, mental health, cross-cultural, crisis intervention, and consultation. *Sp; preq. 20 credit hours of PSYC and/or instructor permission*

PSYC 420 Community Psychology (4) Analysis of historical precedents, epidemiology, community resources, primary prevention programs, and the role of psychologists as agents of social change. *Offered as demand indicates; preq. PSYC 101*

PSYC 440 Environmental Psychology (4) Psychological investigation of the relationship between individual behavior and physical environment with analysis of the impact of crowding, noise, temperature, lighting, pollution, and architecture on individual behavior. *Offered as demand indicates; preq. 16 credit hours of PSYC and/or instructor permission*

PSYC 475 Psychological Study of Contemporary Problems (4) In-depth analysis of current issues, problems, and controversies in psychology. *Offered as demand indicates; preq. 24 credit hours of PSYC (senior students in psychology)*

PSYC 499 Special Topics in Psychology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. *Preq. senior standing and permission*

PTAT 111 Principles of Physical Therapist Assistant (3) The purpose, philosophy, history, and development of the physical therapy profession. Includes medical ethics, the function of the American Physical Therapy Association, and the development of the physical therapist assistant (duties, function, legal responsibilities, and limitations). *Preq. admission to PTA program*

PTAT 112 Physical Therapist Assistant Procedures 1 (5) The first of three sequential procedure courses. Basic physiology and theory of heat, hydrotherapy, cold, massage, body mechanics, burns, patient positioning, and traction. Therapeutic application of these modalities. *W; preq. AHNR 102 and PTAT 111; 3 lec. 6 lab*

PTAT 113 Physical Therapist Assistant Procedures 2 (5) Theory and therapeutic application of modalities, such as low and high frequency currents, biofeedback, TENS, Jobst extremity pump, and diathermy. *Sp; preq. PTAT 112; 3 lec. 6 lab*

PTAT 114 Anatomy and Kinesiology (5) Advanced anatomy course designed specifically for the physical therapist assistant. Origin, insertion, function, and dysfunction. *Su; preq. PTAT 113 and BIOL 311; 3 lec. 6 lab*

PTAT 115 P.T. in Physical Dysfunction (3) Discussion of physical dysfunctions commonly referred to physical therapy. Includes symptoms, etiology, and treatments of various diseases. *W; preq. PTAT 111; 3 lec.*

PTAT 116 Neurology for PTA (1) Introduction to the central and peripheral nervous system as it relates to physical therapy. *Sp; preq. PTAT 115; 1 lec.*

PTAT 202 Physical Therapist Assistant Procedures 3 (5) Theory and application of principles of muscle testing and goniometry. Includes study and use of rehabilitation skills relating to prosthetics, orthotics, postural deviations, cardiac conditions, and pre and post partum condition. *F; preq. PTAT 113; 3 lec. 6 lab*

PTAT 212 Clinical Practicum 1 (4) Second experience in clinical setting in which the student performs theories and techniques for patient care under close supervision of a licensed physical therapist. *F; preq. PTAT 114, 115, and 216; 2 lec. 12 clinical*

PTAT 213 Clinical Practicum 2 (4) Intermediate experience in clinical settings performing previously learned theories and techniques under supervision of a licensed physical therapist. *W; preq. PTAT 202, 212, and 231; 2 lec. 12 clinical*

PTAT 214 Clinical Practicum 3 (6) Advanced experience in clinical setting. *Sp; preq. PTAT 213, 232, and 255; 38 clinical*

PTAT 216 Clinical Practicum Seminar (2) Introductory experience in clinical setting. Students perform theories and techniques of patient care under close supervision of licensed physical therapist. Procedures and techniques discussed in seminar. *Su; preq. PTAT 111 and 112; 1 lec. 4 clinical*

PTAT 231 Rehabilitation Procedures 1 (4) The first of two sequential, therapeutic, exercise classes. Exercises for specific joints and orthopedic conditions. Includes joint range of motion, flexibility, coordination, and gait training. *F; preq. PTAT 113; 3 lec. 3 lab*

PTAT 232 Rehabilitation Procedures 2 (4) Rehabilitation skills needed for treatment of central nervous, peripheral nervous, and respiratory systems. Included are stroke rehabilitation, spinal cord injuries, pediatrics, and postural drainage. *W; preq. PTAT 231; 3 lec. 3 lab*

PTAT 235 Physical Therapy Trends and Administrative Procedures (2) Identification of concepts, techniques, and administrative skills used in the efficient operation of physical therapy department. Special emphasis on establishing and maintaining patient records. *F; preq. PTAT 212*

PTAT 255 PTA Seminar (2) Students present case studies of patients treated in their clinical assignments. Special procedures, techniques, and problems encountered are discussed. *Sp; coreq. PTAT 214*

RDLT 101 Radiologic Technology 1 (4) A course designed to acquaint the student with the goals, philosophies, and organizations of the radiography program and the radiology department. Medical ethics, medicolegal considerations, elementary radiation protection, fundamentals of radiographic exposure, and radiographic positioning of the chest and abdomen are covered. *F; preq. admission to radiologic technology program; $14.00*

RDLT 102 Radiologic Technology 2 (4) Concentration on radiographic positioning of the appendicular skeleton with application of theory in the laboratory. Selected clinical experiences reinforce learning and provide the opportunity to apply principles and techniques. *W; preq. RDLT 101; $5.00*

RDLT 103 Radiologic Technology 3 (3) Concentration on radiographic positioning of the axial skeleton with application of theory in the laboratory. *Sp; preq. RDLT 102; $5.00*

RDLT 104 Radiologic Technology 4 (3) Concentration on radiographic procedures using contrast media, radiographic practices for surgery, pediatric radiography, and other specialized areas of radiography. *Su; preq. RDLT 103 and 111*

RDLT 105 Radiologic Technology 5 (3) Continuation of RDLT 104 with emphasis on vascular and neurological examination, including analysis of equipment used. *F; preq. RDLT 104; $14.00*

RDLT 106 Radiologic Technology 6 (3) Examination of advanced radiographic techniques and imaging modalities, quality control, fluoroscopy, image intensifiers, conventional tomography, stereo radiography, xeroradiography, computed tomography, magnetic resonance imaging, ultrasound, and other specialized areas of imaging. *W; preq. RDLT 105*

RDLT 107 Radiologic Technology 7 (3) A series of lectures on pathologic conditions and their impact on the radiographic process. Includes student participation in film evaluation and case studies. *Sp; preq. RDLT 106*

RDLT 108 Radiologic Technology 8 (2) Designed as a self assessment of the independent cognitive areas utilized in the clinical situation. *Su; preq. RDLT 107 and 113*

RDLT 111 Radiologic Physics (4) A study of the fundamentals of matter, electrostatics, electrodynamics, magnetism, rectification, production, and properties of x-rays, x-ray tubes, and x-ray circuitry. *Sp; preq. MATH 130 and RDLT 102 and 200; $5.00*

RDLT 112 Radiobiology and Radiation Protection (3) Lectures on the radiobiological areas of radiation interactions, radiosensitivity, radiation dose/response relationships, early and late radiation effects, radiation protection, and health physics. *W; preq. RDLT 201*

RDLT 113 Radiographic Processing (2) Includes discussions of film characteristics, artifacts, film storage and handling, processing room design and function, methods, principles and chemistry of processing systems, silver reclamation, and quality control. *Sp; preq. RDLT 112 and 201*

RDLT 200 Basic Patient Care (3) Provides knowledge and basic skills necessary for care of the patient. Includes medical and professional ethics, medical terminology, and interpersonal relationships. *W; preq. RDLT 101*

RDLT 201 Radiographic Exposure (4) Lectures on establishing and manipulating radiographic exposure factors and on the proper utilization of accessory devices such as grids, intensifying screens, and beam limitation devices. Concentration is on overall image quality, as well as factors affecting patient exposure. *F; preq. RDLT 104; $10.00*

RDLT 211 Clinical Experience 1 (2) Practical application of radiologic technology principles, positioning, and techniques with emphasis on upper and lower extremity examinations in the radiology departments of affiliate hospitals. Includes film critique sessions. *Sp; preq. RDLT 102*

RDLT 212 Clinical Experience 2 (3) Continuation of RDLT 211 with emphasis on spine and skull examinations. *Su; preq. RDLT 211*

RDLT 213 Clinical Experience 3 (3) Continuation of RDLT 212 with emphasis on urographic, biliary, and gastrointestinal examinations. *F; preq. RDLT 212*

RDLT 214 Clinical Experience 4 (3) Continuation of RDLT 213 with emphasis on gastrointestinal, portable, and advanced bonework examinations. *W; preq. RDLT 213*

RDLT 215 Clinical Experience 5 (3) Continuation of RDLT 214 with emphasis on headwork, surgery, and advanced radiographic examinations. *Sp; preq. RDLT 214*

RDLT 216 Clinical Experience 6 (4) Continuation of RDLT 215 with emphasis on advanced imaging modalities. *Su; preq. RDLT 215*

RDLT 312 Sectional Anatomy (3) This lab-oriented course is designed to introduce students to human anatomy displayed in sections. Emphasis is on anatomical structures visualized in computed tomography, magnetic resonance imaging, and ultrasonography. *Sp; preq. BIOL 162, 310, or instructor permission; 2 lec. 2 lab*

ROCI 485S Reflections on Community Involvement (4) An outgrowth of the purposes and objectives of the University. The series of activities integral to the community involvement course enhances the education of the student, complements the senior seminar, and promotes reflection on the student's obligation to human beings in need and society at large. *(not offered summer quarter)*

RPTT 101 Basic Patient Care (3) Introduction to respiratory therapy as a profession and to basic clinical assessment and care of patients. Professional duties and responsibilities, ethics and liability, and basic patient care skills (patient assessment, record keeping, patient monitoring, pulmonary care techniques) are included. *F; preq. admission to respiratory therapy program; 2 lec. 3 lab; $9.00*

RPTT 102 Cardiopulmonary/Renal Anatomy and Physiology (5) Detailed presentation of the anatomy and physiology of the pulmonary, cardiac, and renal systems. Topics include basic structure and function, system interactions, and basic pathophysiology with emphasis on the pulmonary system. *F; preq. admission to respiratory therapy program*

RPTT 110 Medical Gas Therapy (4) Presentation of topics related to the production, handling, and administration of medical gases, including humidity and aerosol therapy, medical gas therapy, equipment required for their administration, and the indications, contraindications, and hazards of their use. *W; preq. RPTT 100, 101, and 102; 3 lec. 3 lab; $10.00*

RPTT 115 Clinical Application 1 (1) Introduction to the clinical setting, orientation to the hospital, and an opportunity to practice those skills and techniques learned in RPTT 101 and 110. *W; preq. RPTT 100, 101, and 102; 8 clinical*

RPTT 120 Perioperative Care (4) Detailed discussion of respiratory therapy techniques used before and after surgery to minimize complications. Topics include respiratory pharmacology, incentive spirometry, bronchopulmonary drainage, and intermittent positive pressure breathing. *Sp; preq. RPTT 110 and 115; 3 lec. 3 lab; $5.00*

RPTT 121 Airway Management (2) A study of artificial airways, airway obstruction, and defense mechanisms of the lungs. Topics include design, selection, and insertion of artificial airways as well as protective mechanisms of the lungs. *Sp; preq. RPTT 110 and 115; 1 lec. 3 lab*

RPTT 125 Clinical Application 2 (1) Continuation of RPTT 115, with emphasis on the application of skills and techniques learned in RPTT 120 and 121. *Sp; preq. RPTT 110 and 115; 8 clinical*

RPTT 130 Pediatric and Neonatal Respiratory Care (4) Study of the pathology, pathophysiology, diagnosis, and treatment of diseases of the newborn and pediatric patient. Topics include developmental and comparative anatomy and physiology and specific respiratory care considerations required for these age groups. *Su; preq. RPTT 120, 121, and 125*

RPTT 131 Pulmonary Function Testing (2) Study of the methods used for testing the function of the lungs. Topics include the indications and standards for testing, equipment used, interpretation, and quality control systems. *Su; preq. RPTT 120, 121, and 125*

RPTT 132 Arterial Blood Gases/Acid Base (1) Study of the techniques for collecting and analyzing arterial blood samples and detailed discussion of the interpretation of results. Emphasis on acid-base, fluid, and electrolyte balance and regulation. *Su; preq. RPTT 120, 121, and 125*

RPTT 133 Laboratory Procedures (1) Laboratory practice of the skills discussed in RPTT 131 and 132. *Su; preq. RPTT 131 and 132*

RPTT 135 Clinical Application 3 (2) Continuation of RPTT 125, with emphasis on those skills developed in RPTT 131, 132, and 133. *Su; preq. RPTT 120, 121, and 125*

RPTT 200 Pharmacology (3) Study of the general principles of pharmacology, including drug types, methods of administration, dosage, effects, indications, contraindications, and regulation. Drug groups related to respiratory care are emphasized, including bronchodilators, wetting agents, mucolytics, antibiotics, muscle relaxants, and corticosteroids. *F; preq. RPTT 130, 131, 132, 133, and 135*

RPTT 201 Continuous Mechanical Ventilation (6) Study of the therapeutic and diagnostic techniques used for patients receiving mechanical ventilatory support. Topics include the selection process for ventilators, indications and hazards of mechanical ventilation, maintenance of patients, respiratory and hemodynamic monitoring, and weaning of patients from ventilatory support. *F; preq. RPTT 130, 131, 132, 133, and 135; 5 lec. 3 lab*

RPTT 202 Pathophysiology (3) Study of the etiology, diagnosis, pathophysiology, and treatment of some of the most commonly encountered cardiopulmonary diseases. Topics include chronic obstructive pulmonary diseases and common restrictive, pleural, occupational, and cardiac related diseases. *F; preq. RPTT 130, 131, 132, 133, and 135*

RPTT 205 Clinical Application 4 (2) Continuation of RPTT 135 with emphasis on the skills and techniques learned in prerequisite courses. *F; preq. RPTT 130, 131, 132, 133, and 135; 16 clinical; $9.00*

RPTT 210 Critical Care (2) Study of the assessment, monitoring, and treatment of the acutely ill and traumatized patient. *W; preq. RPTT 200, 201, 202, and 205*

RPTT 211 Advanced Cardiopulmonary Assessment (1) Study of advanced techniques for the monitoring of cardiopulmonary function. *W; preq. RPTT 200, 201, 202, and 205*

RPTT 212 Pulmonary Rehabilitation and Home Care (2) Study of the care and management of patients receiving pulmonary rehabilitation or home care. Topics include patient selection, education, follow-up, program design, progress assessment, regulatory implications, and equipment. *W; preq. RPTT 200, 201, 202, and 205*

RPTT 213 Department Management (1) Introduction to the organization, planning, and management of, as well as the effect of current governmental regulations on, respiratory services. *W; preq. RPTT 200, 201, 202, and 205*

RPTT 215 Clinical Application 5 (3) Continuation of RPTT 205, with emphasis on the skills and techniques learned in RPTT 201. *W; preq. RPTT 200, 201, 202, and 205*

RPTT 220 Seminar (4) Designed to provide final curricular preparation for graduation. Includes oral case presentation, program assessment, systematic content review, and a comprehensive, cumulative student evaluation. *Sp; preq. RPTT 225; coreq. RPTT 225*

RPTT 225 Clinical Application 6 (8) Continuation of RPTT 215 with emphasis on skills and knowledge developed in RPTT 130, 201, 210, 211, 212, and 213. *Sp; preq. RPTT 115, 125, 135, 205, and 215*

SOCI 101 Introduction to Sociology (4) Studies the nature of human society and factors affecting its development, including concepts of culture, groups, organizations, collective behavior, and institutions. Required course for all social science majors. *Su F W Sp*

SOCI 110S Foundations of Social Science (4) Introduction to the methods and concerns of social science. Studies perspectives of anthropology, economics, history, geography, political science, psychology, and sociology as related to specific themes or topics. *Su F W Sp*

SOCI 150 Principles of Statistics (4) Cross-listed as MATH 150 and PSYC 150. Introduction to the vocabulary, concepts, formulas, and presentation of statistics as applied to business, education, and science. Topics include measures of central tendency and dispersion, probability applied to joint probability tables and Bayes' Theorem, probability distributions with emphasis on Binomial and Normal, sampling practices and theory, and calculator and computer use. *Su F W Sp; preq. MATH 101*

SOCI 199 Special Topics in Sociology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

SOCI 201 Introduction to Social Welfare (4) Overview of the field of social welfare: fundamental concepts and services in social welfare, social policies, historical development. *Offered as demand indicates.*

SOCI 204 Introduction to Social Work (4) Introduces students to the profession of social work. Includes an overview of the historical development of social work as a profession; social work practices with individuals, groups, and communities; and theory and practice of social work. *F Sp*

SOCI 205 Current Social Problems (4) An overview of major perspectives on social problems and their relevance in contemporary life. Topics include poverty, sexism, racism, aging, alienation, crime, human ecology, and colonialism in the third world. *F; preq. SOCI 101*

SOCI 210 Women in Society (4) A study of women's roles in society analyzed from a historical, cross-cultural, and sociological perspective. Examination of the position of women in a changing society. *Infrequently offered*

SOCI 224 Urban Sociology (4) Ecological and nonecological theories are used to study the processes of urbanization and the involvements and problems of the urban community. *Offered as demand indicates; preq. SOCI 101*

SOCI 227 Sociology of Education (4) Social organization of education and teaching as a profession. Examines class, ethnic, and other social factors affecting the educational process. Focuses on educational institutions and their relationship to the community. *Offered as demand indicates; preq. SOCI 101*

SOCI 234 Sociology of Aging (4) Various aspects of aging are examined with special emphasis on theories of aging, demographics, physical, psychological, and sociological aspects of the aging process. *Sp*

SOCI 299 Topics in Sociology (1-4) Separate courses repeatable for credit on topics not otherwise available to students.

SOCI 303 Introduction to Social Psychology (4) Cross-listed as PSYC 303. Behavior of the individual as influenced by other individuals, social groups, and culture. Examines group dynamics, leadership, attitude, and group conflict. *Offered as demand indicates; preq. PSYC 101*

SOCI 305 Social Work Practice (4) Social work theory, methodology, and application. Areas of study include theory and concept formation, research design, data collection, client-worker relationship, interviewing, and problem-solving. *W; preq. SOCI 201 or 204*

SOCI 307 Sociology of Work (4) Examines the history, methods, and context of work. Emphasis on the sociological perspectives of work, industry, and occupations. The future of the workplace is examined. *Infrequently offered*

SOCI 310 Gender Socialization (4) Focuses on the socio-cultural dynamics involved in the socialization process. Examines differential expectations, male and female identity formation, sex roles in the family, occupational stereotypes, and the changing nature of sex roles. *F W; preq. SOCI 101*

SOCI 311 Human Sexuality (4) Cross-listed as PSYC 311. An in-depth view of the current status of human sexuality in the U.S. Examines current research; modes of sexual expression and enhancement; physiological, sociological, and psychological basis of human sexuality; sexual variations; and sex ethics. *F*

SOCI 312 Sociology of Religion (4) General theories concerning the place of religion in social processes. Religion and its place in the modern world, secularization, fundamentalism, new movements; religion in relation to class, ethnicity, gender, politics, and education. Durkheim's work on religion as the basis of social order and Weber's work on religion and the rationalization process are emphasized. *F*

SOCI 325 Sociology of the Family (4) Historical perspective for understanding American family systems. Of central concern are the contemporary marriage process and context, family relationships, sexuality, family dysfunctions, and changes. *W; preq. SOCI 101*

SOCI 326 Small Group Dynamics (4) Analysis of small-group structure and processes; examination of roles, interpersonal relations, and leadership; and current theory and research on small group interaction. *Sp odd years; preq. SOCI 101*

SOCI 330 Social Theory (4) A study of major classical and contemporary sociological theories and their exponents. *W; preq. SOCI 101*

SOCI 340 Sociology of Appalachia (4) Intensive study of Appalachia from sociological perspective. Emphasizes demography of Appalachia, sub-cultural characteristics, religion, arts and crafts, social change, and community power in Appalachia. *Sp even years; preq. SOCI 101 or by permission*

SOCI 360 Drugs/Substance Abuse (4) Cross-listed as BUHE 360, PSYC 360, and HPER 360. An in-depth study of alcohol, tobacco, and other drugs and how chemical dependency on these drugs can affect individual performance and behavior. *F W Sp*

SOCI 380 Sociological Methods (4) Overview which includes scientific method, measurement, experimentations, survey research, observational methods, case study techniques, and content analysis. *Sp even years; preq. SOCI 101*

SOCI 399 Special Topics in Sociology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students.

SOCI 400 - SPAN 212

SOCI 400 Complex Organizations (4) Sociological analysis of complex organizations. Topics include theories, types of organizations, organizational change and conflict, and research in organizations. *Offered as demand indicates; preq. SOCI 101*

SOCI 403 Field Experience in Social Work (4) Controlled experience in a social work setting supervised by a qualified professional in an established agency. Designed to expose students to realistic conditions and "hands-on" learning. *Infrequently offered; preq. SOCI 204 and 305*

SOCI 405 Death and Dying (4) Cross-listed as PSYC 405. Focus on increased ability to deal with one's own mortality; skills for working with terminally ill and their families; understanding the complex social system of death in American society; and moral, ethical, and philosophical issues surrounding death. *F; preq. PSYC 101 or SOCI 101*

SOCI 410 Social Stratification (4) Analyzes stratification in the U.S. and other societies, focusing on income and wealth, role of family and education on social mobility, and inequality and influence of social class on public policy. *Offered as demand indicates; preq. SOCI 101*

SOCI 425 Industrial Sociology (4) Focuses on the growth of technology in the U.S. Emphasizes the social organization of industry, life in the work place, and the organizational culture. *Offered as demand indicates; preq. SOCI 101*

SOCI 429 Contemporary Minority Relations (4) Basic approaches are used to analyze American minority groups and their contemporary situation. Special emphasis is placed on patterns of prejudice and discrimination as well as the dynamics of race relations. *Offered as demand indicates; preq. SOCI 101*

SOCI 444 Social Deviance (4) Examination of the concept of deviance in sociology and its implications for the study of contemporary social behavior. How people develop a concept of some being different from others and act on this definition. Possible topics include mental illness, crime, sexual deviance, nonconformity, and subcultures of deviance. *Offered as demand indicates; preq. SOCI 101*

SOCI 450 Sociology of Occupations and Professions (4) Sociological analysis of contemporary occupations and professions in the U.S., social stratifications in the workplace, technology, and the individual in the workplace. *Offered as demand indicates; preq. SOCI 101*

SOCI 490S Senior Seminar (4) Provides an opportunity for students to place their chosen field of study in an interdisciplinary context with intellectual, ethical, and historical perspectives. The seminar focuses on the synthesis and integration of various concepts by applying them to the analysis and solution of problems chosen in the context of their academic disciplines. Oral and written presentations of the seminar paper are required. *Su F W Sp; preq. senior standing and 44 general education program hours*

SOCI 499 Special Topics in Sociology (1-4) Individual or small-group study, under the supervision of instructor, of topics not otherwise available to students. Separate courses repeatable for credit. *Preq. SOCI 101*

SPAN 111 Elementary Spanish 1 (4) Development of comprehension, speaking, reading, and writing skills in a cultural context. Basic grammar. Lab required. Initial course of three-quarter, first-year sequence. *Su F W Sp; $5.00*

SPAN 112 Elementary Spanish 2 (4) Continuation of SPAN 111. *F W Sp; preq. SPAN 111; $5.00*

SPAN 113 Elementary Spanish 3 (4) Continuation of SPAN 112. *F W Sp; preq. SPAN 112; $5.00*

SPAN 211 Intermediate Spanish 1 (4) Offers selected readings in Hispanic issues and literature to continue the development of communicative skills. Lab required. *F W Sp; preq. SPAN 113 or 2-3 years of high school Spanish; $5.00*

SPAN 212 Intermediate Spanish 2 (4) Continuation of SPAN 211. *F W Sp; preq. SPAN 211 or instructor's approval; $5.00*

SPAN 213 Intermediate Spanish 3 (4) Emphasizes the ability to read with detailed understanding, creative and accurate use of vocabulary items, use of subordinate structures in oral communication, and the ability to communicate in writing using complex sentence structures. *F W Sp; preq. SPAN 212 or instructor's approval; $5.00*

SPAN 311 Composition and Conversation (4) A follow-up to SPAN 213 with special emphasis on oral proficiency and applied grammatical concepts. In preparation to reading and writing, contemporary videos and films are used to stimulate discussion. *Offered on demand; preq. SPAN 213 or fluency in Spanish communicative skills*

SPAN 399 Special Topics (1-4) Designed for native speakers of Spanish or nonnative speakers who have acquired communicative skills in the language. The course analyzes the work of contemporary Latin-American writers, as well as Hispano-American writers in the U.S. *Offered on demand; preq. native speaker fluency in communicative skills (listening, speaking, reading, and writing)*

SPCH 103 Public Speaking and Human Communication (3) Principles of public speaking and practice in presenting informative and persuasive speeches with emphasis on the human communication process. *Su F W Sp*

SPCH 105 Introduction to Mass Communication (4) Cross-listed as JOUR 105. Study of all forms of mass communication, including newspapers, magazines, radio-television, book publishing, public relations, advertising, and photojournalism. Begins with an analysis of communication process and ends with media career opportunities. *Offered on demand*

SPCH 215 Group Discussion (4) Study of structure and internal dynamics of small groups, nature and functions of leadership and group participation, and problem solving and decision making. Frequent participation in group discussion activities. *Offered on demand*

SPCH 220 Oral Interpretation of Literature (4) Techniques of oral interpretation and development of adequate intellectual and emotional responsiveness to meaning of literature. *Offered on demand*

SPCH 299 Topics in Communications (1-4) Study of various topics not otherwise available to students. Repeatable for credit. *Offered on demand*

THAR 100 Introduction to Theater (4) Survey of development of theater from classical to modern times, emphasizing the artists and craftspersons of the theater and their contributions to its development. *F W Sp*

THAR 120 Introduction to Stagecraft (3) Scenic materials and techniques of planning and constructing stage scenery. Stage audience relationships and principles of technical production. *F W Sp*

THAR 121 Stage Lighting (3) Theory and practice in the mechanics and design of lighting for theatrical productions. *Sp*

THAR 122 Introduction to Costume (3) Principles of technical production. May be repeated for credit. *F W Sp; 2 lec. 1 lab*

THAR 132 Elements of Performance (4) Introduction to the elements of performance that create theater and drama, including text, performer, spectacle, spectator, and performance space. Attendance at university theater productions is required. *F W Sp*

THAR 135 Practicum in Production Design (2-4) Supervised lab practice in design and execution of scenery, lighting, costumes, properties, and sound. May be repeated for credit. *F W Sp*

THAR 205 Theater Planning and Management (3) Principles and practices of managing theatrical-producing organizations. Problems of finance, personnel, policy, program building, advertisement, publicity, and public relations. *W*

THAR 210 Acting 1 (4) Principles and techniques of acting with major emphasis on developing trust and freedom. Warm-up techniques, theater games, improvisation, monologue exercises, and preliminary scoring techniques underline this introduction to the work of the actor. *F W Sp; $25.00*

THAR 211 Acting 2 (4) Continuation of training started in THAR 210, with addition of more detailed character development, scoring techniques, and ensemble considerations through duet scene work. *W Sp; $5.00*

THAR 212 Acting 3 (4) For serious acting student, this course completes the second year sequential training program. Primary emphasis is to apply techniques learned in THAR 210 and 211 to more lengthy and complicated scene structures. Long duet scenes and multicharacter scenes or short plays used for study and performance. Public performances are frequently incorporated into final work in this course. *Sp; $5.00*

THAR 235 Practicum in Production Design (2-4) Supervised lab practice in design and execution of scenery, lighting, costumes, properties, and sound. May be repeated for credit. *F W Sp; preq. instructor's permission*

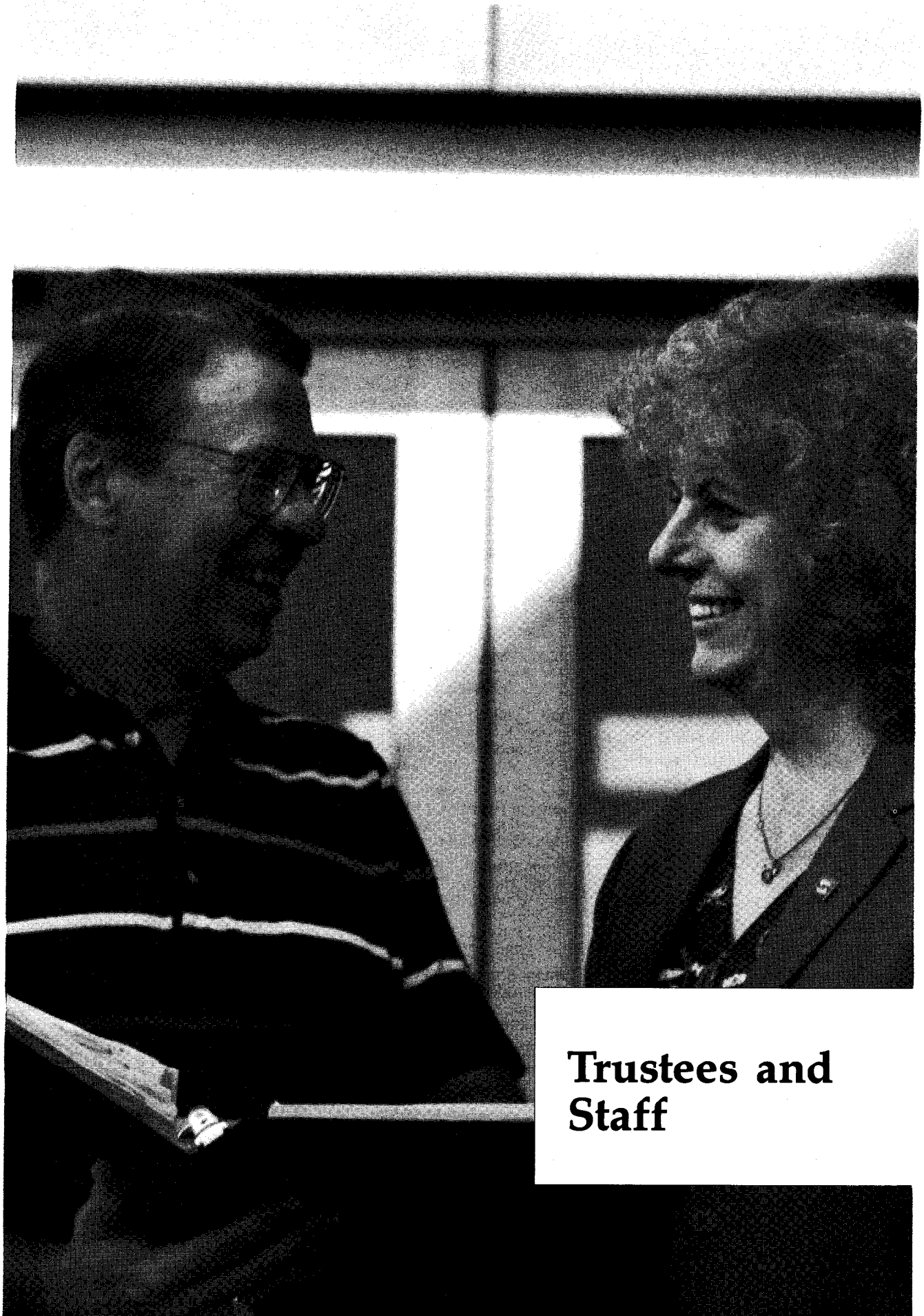
THAR 237 Stage Make-up (2) Stage make-up materials and the art of pigment application. *F W Sp*

THAR 331 Directing 1 (4) Principles and practices of directing for stage. *F W Sp*

THAR 332 Theater History (3) Development of theater and drama. May be repeated for credit. *Offered on demand*

UNIV 101 Academic Development Skills (4) A course recommended for students who place in at least two developmental education courses and optional for any student on campus. Recommended for entering freshmen with a high school GPA of 2.0 or lower. Teaches study skills and test-taking techniques. Emphasis on goal setting, time management, notetaking, studying and marking textbooks, taking exams, finding and using learning resources, improving memory and concentration, and skimming and scanning. *Su F W Sp*

UNIV 102 Personal Development Skills (4) A course recommended for students who place in at least two developmental education courses and optional for any student on campus. Designed to help students improve their personal skills in order to become more involved members of the academic community and to have richer personal lives. Topics include attitudes, self-esteem, communication, wellness/health, anxiety and stress, creativity, problem-solving, money management/personal finance, career exploration, and orientation to university services. *Su F W Sp*



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B.S.N., Spalding University
M.S.N., University of Tennessee

Mauldin, Robert (1994)
Associate Professor, Natural Sciences
College of Arts and Sciences
B.S., Ph.D., University of Tennessee

Miller, James M. (1989)
Assistant Professor, Social Sciences
College of Arts and Sciences
B.S., Manchester College
Ph.D., Kent State University

Miner, Edward C. (1983)
Chairperson, Professor
Department of Social Sciences
College of Arts and Sciences
B.A., Youngstown State University
M.A., Kent State University
Ph.D., Kent State University and Akron University

Mirabello, Mark L. (1987)
Associate Professor, History
College of Arts and Sciences
B.A., University of Toledo
M.A., University of Virginia
Ph.D., Univ. of Glasgow (Scotland)

Moore, Dan M. (1988)
Associate Professor, Management
College of Professional Studies
B.S., University of Virginia
M.B.A., D.B.A., Georgia State Univ.

Murray, Nancy L. (1992)
Instructor, Dental Hygiene
College of Professional Studies
B.S., The Ohio State University

Nickel, Linda K. (1978)
Associate Professor, Dental Hygiene
College of Professional Studies
A.A.S., Scioto Technical College
B.S., M.Ed., Ohio University

Nixt, Henry C.
Associate Professor, Mathematics
College of Arts and Sciences
B.S., Loras College
M.S., Ph.D., The Ohio State Univ.

O'Connor, Christopher S. (1992)
Associate Professor, Mathematics
College of Arts and Sciences
B.A., Univ. of Cal. at Santa Cruz
M.S., San Jose State University
Ph.D., University of Oregon

Oliver, Scott D. (1976)
Professor, Biological Sciences
College of Arts and Sciences
D.D.S., M.S., The Ohio State Univ.

Osborne, Dane H. (1988)
Assistant Professor, Physical Therapist Assistant Program
College of Professional Studies
B.S., The Ohio State University
M.Ed., Ohio University

Pambookian, Hagop S. (1987)
Professor, Psychology
College of Arts and Sciences
B.A., American University of Beirut
M.A., Columbia University
Ph.D., University of Michigan

Payne, Roy B. (1988)
Associate Professor, Business
College of Professional Studies
B.S., Morris Harvey College
M.B.A., Indiana University

Penn, William H. (1977)
Associate Professor, Computer Aided Drafting and Design
College of Professional Studies
B.S.A.S., Miami University
M.Ed., Ohio University

Perry, Catherine O. (1990)
Chairperson, Associate Professor
Dept. of Occupational Therapy
College of Professional Studies
B.S., The Ohio State University
M.Ed., University of North Carolina

Priode, Carl E. (1985)
Sr. Instr., Electromech. Eng. Tech.
College of Professional Studies
B.S.E.T., Franklin University

Raber, Christine L. (1994)
Sr. Instructor, Occupational Therapy
B.S., M.S., The Ohio State University

Raiser, Lane C. (1989)
Assistant Professor, Art
College of Arts and Sciences
B.A., Kutztown State College
M.F.A., Brooklyn College

Renfroe, Brenda S. (1991)
Senior Instructor, Radiologic Tech.
College of Professional Studies
A.A.S., B.U.S., Morehead State Univ.

Roberts, Jane M. (1981)
Assist. Prof., Assoc. Degree Nursing
College of Professional Studies
B.S.N., University of Kentucky
M.S.N., University of Tennessee

Ruby, Jerry L. (1988)
Associate Professor, Finance
College of Professional Studies
B.B.A., Ohio University
M.B.A., Morehead State University

Scherer, Roger C. (1991)
Assoc. Professor, Plastics Eng. Tech.
College of Professional Studies
B.S., California St. Polytechnic Univ.
M.A., California State University

Scott, Edmon N. (1978)
Assist. Prof., Instrumen. and Control
College of Professional Studies
B.S., Bowling Green State University

Scott, Sharon M. (1978)
Assoc. Prof., Assoc. Degree Nursing
College of Professional Studies
A.D.N., B.S.N., M.Ed., Ohio Univ.
M.S.N., Bellarmine College

Sherman, Martha J. (1991)
Assistant Professor, Education
Center for Teacher Education
B.S., Missouri Western College
M.E., University of North Florida
Ph.D., Purdue University

Simon, Kathleen M. (1971)
Professor, English
College of Arts and Sciences
B.A., M.A., Eastern Kentucky Univ.
Ph.D., Ohio University

Sissell, Melinda D. (1988)
Instr., Occupational Therapy Assist.
College of Professional Studies
A.A.S., Shawnee State Comm. Col.

Smith, Lyle B. (1975)
Assist. Professor, Plastics Eng. Tech.
College of Professional Studies
B.S., Ohio University

Staton, Pamela J. (1988)
Chairperson, Associate Professor
Medical Laboratory Technology
College of Professional Studies
B.S., Morehead State University
M.S., West Virginia University

Stead, Thomas D. (1969)
Associate Professor, Art
College of Arts and Sciences
B.F.A., M.F.A., Ohio University

Strunk, Priscilla A. (Sunny) (1984)
Instructor, Respiratory Therapy
College of Professional Studies
A.A.S., Shawnee State University

Sykes, William W. (1981)
Chairperson, Associate Professor
Radiologic Technology
College of Professional Studies
A.A.S., Central Ohio Technical Col.
B.S., The Ohio State University
M.B.A., Xavier University

Thiel, Becky A. (1981)
Assist. Prof., Assoc. Degree Nursing
College of Professional Studies
B.S.N., The Ohio State University
M.S.N., University of Tennessee

Thomas, Donald L. (1986)
Chairperson, Associate Professor
Respiratory Therapy
College of Professional Studies
A.S., Kettering Col. of Medical Arts
B.S., Georgia State University

Thoroughman, Marla H. (1989)
Assist. Prof., Medical Lab. Tech.
College of Professional Studies
MT (ASCP)
B.S., M.A., Morehead State Univ.
M.S., Morehead State University

Todt, David E. (1978)
Assoc. Professor, Biological Sciences
College of Arts and Sciences
Coord., Project Discovery So. Region
B.S., M.En.S., Miami University
Ph.D., Ohio University

Trampe, George M. (1977)
Associate Professor, Chemistry
College of Arts and Sciences
B.S., University of Illinois
Ph.D., Purdue University

Valentine, Eugene J. (1990)
Assoc. Prof., Comm. Invlvmt./Phil.
College of Arts and Sciences
A.B., Harvard University
M.A., Ph.D., Michigan State Univ.

Walke, Jerry L. (1976)
Professor, Psychology
College of Arts and Sciences
B.S., Capital University
M.Ed., Ph.D., The Ohio State Univ.

Walker, Marsha L. (1987)
Assist. Prof., Office Administration
College of Professional Studies
B.S., M.A., The Ohio State Univ.

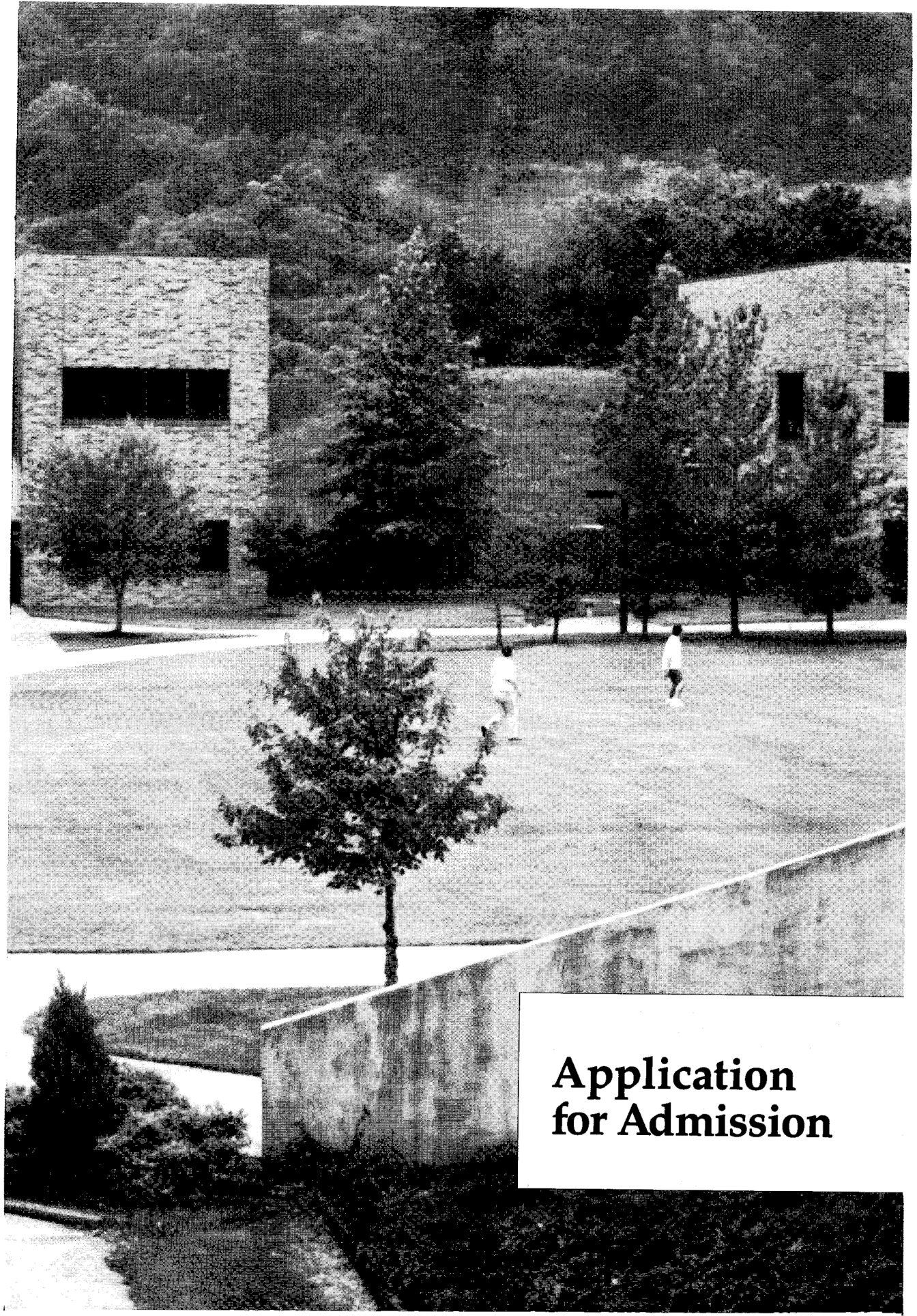
Ward, Carol M. (1992)
Assist. Prof., Assoc. Degree Nursing
College of Professional Studies
B.S.N., Western Reserve University
M.S.N., Case Western Reserve Univ.

Warfield, Kenneth W. (1983)
Sr. Instr., Electromech. Eng. Tech.
College of Professional Studies
B.G.S., Ohio University

Yang, Zhanbo (1989)
Associate Professor, Mathematics
College of Arts and Sciences
B.S., M.S., Heilongjing University
Ph.D., Auburn University

Yost, Carlson W. (1987)
Associate Professor, English
College of Arts and Sciences
B.S., Cornell University
B.A., Utica College of Syracuse Univ.
M.A., Ph.D., Texas A & M University

Yun, C.H. (Nan) (1988)
Professor, English
College of Arts and Sciences
B.A., San Francisco State University
M.A., University of Chicago
Ph.D., Syracuse University



Application for Admission

Application Instructions

Please print or type all information and answer all questions. Be sure to sign your name, and date the application on the reverse side. Applications which are incomplete will be returned, which may result in a delay in acceptance for admission. Your application should be accompanied by the current nonrefundable application fee. Please do not send cash..

Freshman Applicants

Your transcript may be mailed directly from your high school or you may hand-carry your transcript in an envelope sealed with a counselor's signature. Your guidance counselor or a high school official may also send your transcript via FAX at [614] 354=7794 if it is accompanied by a signed transmittal form or by electronic transfer.

Applicants who did not complete high school but earned high school equivalency through the GED (General Education Development) program should request an official GED transcript from the Department of Education of the state in which the test was taken. Request forms for the GED and the address of the Departments of Education in Ohio and Kentucky are available in the Office of Admission.

All degree-seeking students under the age of 21 must provide their ACT scores. Since Shawnee State University is an open admission university, the ACT is not used to make an admission decision.[1] It may, however, be used to assist in academic advising and registration. If you have not taken the ACT, you may be accepted provisionally, but you must take the ACT during your initial quarter of enrollment at Shawnee State.

Transfer Students

In addition to the application for admission and application fee, transfer applicants must forward a high school transcript (in the manner outlined above) and official transcripts from all other colleges and universities attended. Transfer students who have earned fewer than 45 quarter hours (30 semester hours) at previous schools and are under age 21 must submit ACT scores (or take the ACT during the initial quarter of enrollment).

Non-Degree Students

Applicants who wish to take courses for reasons other than earning a degree (e.g., self-enrichment, work-related courses, coursework for transfer to another college) need not provide high school or college transcripts. You may, however, be required to provide a transcript or grade card to take courses which have prerequisites.

International Students

Applicants who are not citizens of the United States must meet special admission requirements. For an international student application and admission packet, please write the International Student Advisor, Office of Admission, Shawnee State University, 940 Second Street, Portsmouth, Ohio 45662.

[1] The American College Test (ACT) is required of all applicants for admission to some of the health sciences programs. Specific information about required scores is stated in that section of the catalog.

Shawnee State University
940 Second Street
Portsmouth, OH 45662-4344

Application for Admission

☐ First-Time Application $30 application fee required ☐ Reapplication No application fee required

Please complete this application and return it to the Office of Admission at Shawnee State University. Have your high school transcript sent directly from the school to Shawnee State University or GED transcript directly from the State Department of Education. Applicants under age 21 must also send ACT (or SAT) scores. If you have attended another college or university, the registrar from that institution must forward an official college transcript to the Office of Admission at Shawnee State.

Personal Data

Social Security Number: _____

Name: _____
Last First Middle Initial Maiden/Other

Local Address: _____
Number & Street City State Zip Code County

Permanent or
Parents' Address: _____
Number & Street City State Zip Code County

Place of Birth: _____ Date of Birth: _____
State County

Home Phone: ( ) _____

High School Attended: _____ Year of Graduation: _____ GED: _____
Date Received

High School Location: _____ ACT/CEEB Code: _____
City State County

Resident Status for Past 12 Months:
- ☐ 10—Resident of Scioto County
- ☐ 1—Resident of Ohio, not Scioto County
- ☐ 6—Resident of Mason, Lewis, Boyd, or Greenup Counties, Kentucky or Cabell or Wayne Counties, West Virginia
- ☐ 2—Resident of another state: County _____
- ☐ 3—Other National
- ☐ 4—Foreign: Visa Type _____

Housing/Living Arrangements:
- ☐ 1—Commuter (drive from home)
- ☐ 2—On-Campus Housing
- ☐ 4—Other

*The information requested in the shaded area, while voluntary in nature, is necessary for state and national purposes. Your completion of this area is appreciated.**

Gender: ☐ Male ☐ Female

Marital Status:
☐ (1) Married ☐ (2) Single ☐ (3) Divorced ☐ (4) Widowed

Race/Ethnic:
- ☐ 1—Afro-American/Black
- ☐ 2—American Indian or Alaskan
- ☐ 3—Asian or Pacific Islander
- ☐ 4—Hispanic
- ☐ 5—Caucasian/White

Voluntary Disclosure:
Have either of your parents received a 4-year college degree? ☐ Yes ☐ No
Do you want to claim a disability? ☐ Yes ☐ No
Do you want to claim learning disabled status? ☐ Yes ☐ No
Type of disability: _____

Have you attended other colleges/universities? ☐ Yes ☐ No List all colleges/universities attended previously:

_____ Date attended: _____ to _____

_____ Date attended: _____ to _____

Were you, or will you be, in good academic standing when you transfer? (2.00 G.P.A. minimum) ☐ Yes ☐ No
Do you owe money to any college or university you previously attended? ☐ Yes ☐ No
Degree(s) earned: _____
Did you receive financial aid? ☐ Yes ☐ No
Are you a veteran/reservist/or national guard member? ☐ Yes ☐ No Did you receive veteran's benefits? ☐ Yes ☐ No

Student Intent in Enrolling

Degree
- ☐ A. Earn an associate degree (2-year degree)
  - ☐ Within 3 years ☐ In more than 3 years
- ☐ B. Earn a bachelor's degree (4-year degree)
  - ☐ Within 6 years ☐ In more than 6 years
- ☐ C. Earn a one-year certificate

Non-Degree
- ☐ D. Gain qualifications and skills for employment
- ☐ E. Take coursework for personal enrichment
- ☐ F. Complete coursework for transfer to another institution
- ☐ G. Earn teacher certification only (bachelor's degree earned previously)

* Shawnee State University does not discriminate in admission, access, or treatment in programs and activities or employment policies or practices on the basis of race, creed, sex, color, national or ethnic origin, religion, marital status, age, sexual orientation, or qualified handicap.

I am making application for the following major:

Bachelor Degrees

- ☐ 62400 Biology
  - ☐ 62407 Pre-Medicine
- ☐ 11400 Business Administration
  - ☐ 11401 Business Admin., Health Management
  - ☐ 11402 Legal Assisting (2 + 2)
- ☐ 63400 Chemistry
  - ☐ 63407 Pre-Medicine
- ☐ 31400 Computer Engineering Technology
- ☐ 41400 English/Humanities, General
  - ☐ 41401 Elementary Education
- ☐ 42402 Fine Arts, Ceramics
- ☐ 42403 Fine Arts, Drawing
- ☐ 42404 Fine Arts, Painting
- ☐ 42405 Fine Arts, Studio Arts
- ☐ 72400 History
- ☐ 51400 Mathematical Sciences
- ☐ 61400 Natural Science
  - ☐ 64400 Applied Mathematics
  - ☐ 64401 Applied Mathematics, Elementary Ed.
  - ☐ 61405 Biology
  - ☐ 62401 Biology, Elementary Education
  - ☐ 61404 Biology, Environmental Science
  - ☐ 61403 Chemistry
  - ☐ 63401 Chemistry, Elementary Education
  - ☐ 61409 Chemistry, Environmental Science
- ☐ 24400 Occupational Therapy
- ☐ 32400 Plastics Engineering Technology
- ☐ 71400 Social Science
  - ☐ 71401 Elementary Education
  - ☐ 71407 Legal Assisting (2 + 2)
- ☐ 81400 Sports Studies
  - ☐ 81402 Athletic Training
  - ☐ 81403 Sports Management

Associate Degrees

- ☐ 12201 Accounting, Professional
- ☐ 12202 Accounting, Management
- ☐ 41200 Arts/Humanities, General
  - ☐ 41201 Art
  - ☐ 41202 Communications
  - ☐ 41204 English
  - ☐ 41206 Music

Associate Degrees (cont'd.)

- ☐ 22200 Associate Degree Nursing
- ☐ 13200 Business Information Systems
- ☐ 11200 Business Management, General
- ☐ 11201 Business Management, Focused
- ☐ 35200 Computer Aided Drafting and Design
- ☐ 21200 Dental Hygiene
- ☐ 33200 Electromechanical Engineering Technology
- ☐ 01200 Individualized Studies
- ☐ 34200 Instrumentation and Control Engineering Tech.
- ☐ 15200 Legal Assisting
- ☐ 51200 Mathematics
- ☐ 23200 Medical Laboratory Technology
- ☐ 24200 Occupational Therapy Assistant
- ☐ 14200 Office Administration Technology
- ☐ 25200 Physical Therapist Assistant
- ☐ 32200 Plastics Engineering Technology
- ☐ 26200 Radiologic Technology
- ☐ 27200 Respiratory Therapy
- ☐ 61200 Sciences
- ☐ 71200 Social Science

Certificates

- ☐ 35100 Computer Aided Drafting and Design
- ☐ 31100 Computer Technology
- ☐ 28100 Emergency Medical Technology
- ☐ 61104 Environmental Science
- ☐ 32100 Plastics Engineering Technology

Other

- ☐ 88888 GED
- ☐ 89999 Postsecondary Enrollment Option
- ☐ 00402 Reading Endorsement
- ☐ 00000 Special, Non-Degree
- ☐ 00401 Teacher Certification Only (Bachelor's degree earned previously)
- ☐ 00001 Undecided

QUARTER AND YEAR YOU PLAN TO ATTEND:

☐ Fall ☐ Winter ☐ Spring ☐ Summer Yr._____

Name and address of hometown newspaper: _____

_____

How did you hear about Shawnee State University? _____

I certify that the statements included in this application are accurate and true to the best of my knowledge. Any falsification of information may result in disciplinary action, including dismissal.

_____ Signature of Applicant

_____ Date

MAILING ADDRESS: Please return the completed application and, if you are a first-time applicant, a nonrefundable $30 check or money order made payable to Shawnee State University to the Office of Admission, Shawnee State University, 940 Second Street, Portsmouth, Ohio 45662-4344.

How to get to Shawnee State . . .

. . . from Ashland, Ky.
Take Rt. 23 North across the U.S. Grant Bridge to Portsmouth. Exit right to Third Street.

. . . from Cincinnati
Take Rt. 32 East to Rt. 23 South. Stay on Rt. 23 to Third Street in Portsmouth. Turn left on Third Street.

. . . from Cleveland
Take I-71 South to Rt. 23 South (Circleville exit). Take Rt. 23 South to Third Street in Portsmouth. Turn left on Third Street.

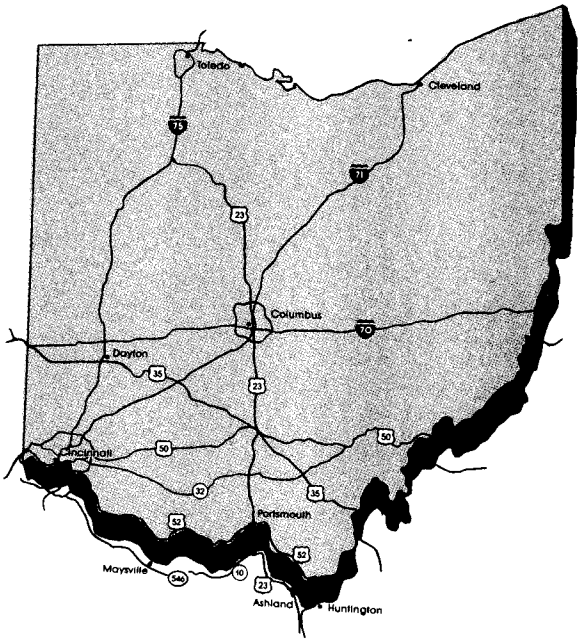
. . . from Columbus
Take Rt. 23 South to Third Street in Portsmouth. Turn left on Third Street.

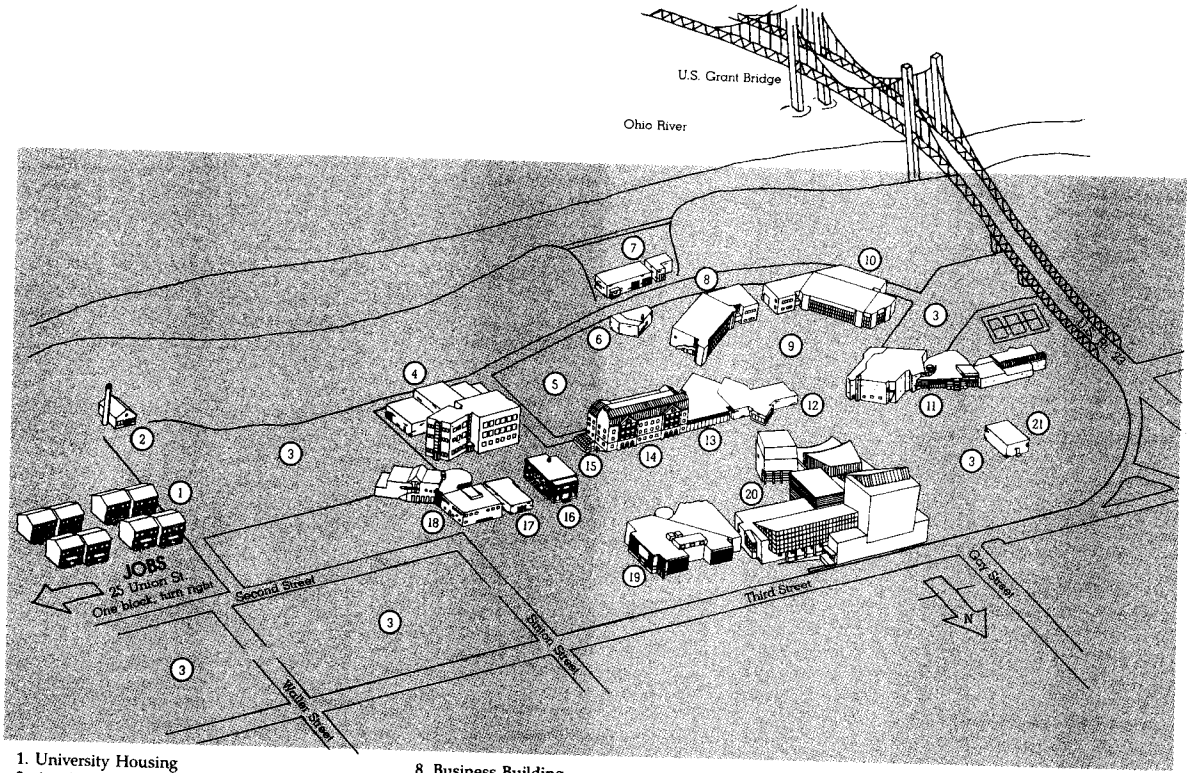
. . . from Dayton
Take Rt. 35 South to Rt. 23 South. Stay on Rt. 23 to Third Street in Portsmouth. Turn left on Third Street.

. . . from Huntington, W. Va.
Take Rt. 52 West to Rt. 23 South in Portsmouth. Stay on Rt. 23 to Third Street. Turn left on Third Street.

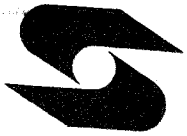
. . . from Maysville, Ky.
Take Rt. 546 East to Rt. 10 East. Take Rt. 10 to Rt. 23 North across the U.S. Grant Bridge to Portsmouth. Exit right to Third Street.

. . . from Toledo
Take I-75 South to Rt. 23 (Findlay). Take Rt. 23 South to Third Street in Portsmouth. Turn left on Third Street.





1. University Housing
2. Art Annex
3. Student Parking
4. Vern Riffe Advanced Technology Center
5. Faculty Parking/Future Overlook Plaza Site
6. Maintenance/Security/Heating Plant
7. Purchasing/Receiving
8. Business Building
9. Campus Green
10. Health Sciences Building
11. James A. Rhodes Athletic Center
12. Commons Building
13. Business Annex
14. Massie Hall
15. Waller Conservatory (greenhouse)
16. 1004 Building
17. Bookstore
18. University Center
19. Library
20. Center for the Arts
21. Office Annex



Shawnee State University
940 Second Street
Portsmouth, Ohio 45662-4344

Office of Admission