THE UNIVERSITY OF MICHIGAN BULLETIN

Volume 10, Number 5
September 3, 1980

COLLEGE OF ENGINEERING 1980-81

The University of Michigan Bulletin

COLLEGE OF ENGINEERING 1980–1981

published by The University of Michigan, Ann Arbor

Academic Calendar, 1980–81

Fall Term, 1980

Orientation	August 31, September 1-3, Sunday–Wednesday
Labor Day (Holiday)	September 1, Monday
Registration	September 2-3, Tuesday–Wednesday
Classes begin	September 4, Thursday
Thanksgiving recess, 5:00 p.m.	November 26, Wednesday
Classes resume, 8:00 a.m.	December 1, Monday
Classes end	December 11, Thursday
Study Days	December 12-14, Friday–Sunday
Examinations	December 15-20, Monday–Saturday
Winter Commencement	December 21, Sunday

Winter Term, 1981

Orientation	January 4-6, Sunday–Tuesday
Registration	January 5-6, Monday–Tuesday
Classes begin	January 7, Wednesday
Spring recess begins, 12:00 noon	February 21, Saturday
Classes resume, 8:00 a.m.	March 2, Monday
Classes end	April 20, Monday
Study Days	April 21-23, Tuesday–Thursday
Examinations	April 24,27-May 1, Friday, Monday–Friday
Spring Commencement	May 2, Saturday

Spring-Summer Term, 1981

Orientation	May 3-5, Sunday–Tuesday
Registration for full term and spring half term	May 4-5, Monday–Tuesday
Classes begin	May 6, Wednesday
Memorial Day (Holiday)	May 25, Monday
Classes end, spring half term	June 23, Tuesday
Study day	June 24, Wednesday
Examinations	June 25-26, Thursday–Friday
Spring half term ends	June 26, Friday
Registration for summer half term	June 29-30, Monday–Tuesday
Summer half-term classes begin	July 1, Wednesday
Independence Day (Holiday)	July 3, Friday
Classes end	August 18, Tuesday
Study day	August 19, Wednesday
Examinations	August 20-21, Thursday–Friday
Full term and summer half term end	August 21, Friday
Summer Commencement	August 23, Sunday

This calendar is subject to change at any time by the Regents of the University.

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POSTMASTER: SEND FORM 3579 to College of Engineering, 259 West Engineering, The University of Michigan, Ann Arbor, Michigan 48109.

Office Directory

General University Offices

Academic Affairs, Office of, 3080 Administration
Admission of Freshmen, Student Activities Building
Cashier's Office, 1015 Literature, Science, and the Arts Building (LSA) and 2226 Student Activities Building
Director of Admissions, Student Activities Building
D.O.B., 409 E. Jefferson
Eligibility for Activities, Student Activities Building
Employment:
  hospital employment, A6002 Hospital
  University offices, 2031 Ad Serv
Extension Service, 412 Maynard St.
Financial Aids, 2011 Student Activities Building
Foreign Student Counselors, International Center
Fraternities, information about, Student Activities Building and Michigan Union
Graduate School, Rackham Building
Health Service, Fletcher Avenue
Housing:
  Married Students, 2364 Bishop St., North Campus
  Men, 1011 Student Activities Building
  Women 1011 Student Activities Building
Information desk, first floor, LSA Building
Orientation, West Quad
Placement Services, 3200 Student Activities Building
President's Office, 2074 Administration
Print Lending Library, Student Activities Building
Refund of term fees, 1513 LSA Building
Residence Halls:
  Business Manager, 2244 Student Activities Building
  fees, payment of, 2226 Student Activities Building
Scholarship bulletins, Student Activities Building
Secretary of the University, 2080 Administration
Sororities, information about, 1011 Student Activities Building
Student activities, Student Activities Building
Student Affairs, Office of, 337 Michigan Union
Veterans Affairs, 1510 LSA Building

College of Engineering Offices

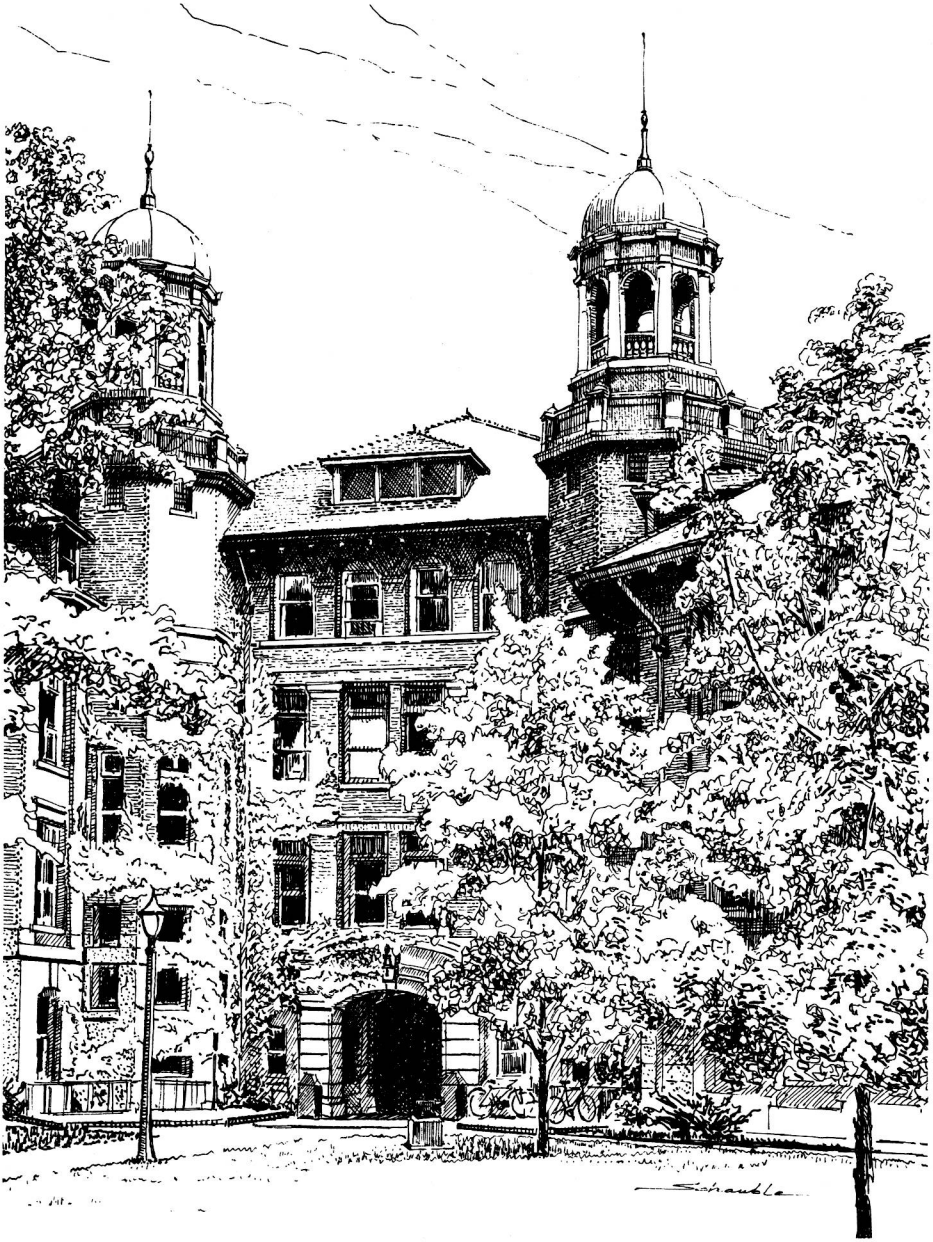
For information: Area Code 313, Telephone 764-8470

Admissions: Advanced Standing, 259 West Engineering

Deans of the College:
  Dean David V. Ragone, 255 West Engineering
  Associate Dean J. G. Eisley, 208 Aerospace Building; 245 West Engineering
  Associate Dean and Secretary M. J. Sinnott, 248 West Engineering
  Assistant Dean for Freshman Services R. O. Goetz, 259 West Engineering
  Assistant Dean for Student Services R. H. Hoisington, 259 West Engineering

Assistants to the Dean:
  E. R. Lady, Director of Continuing Engineering Education, 273 Chrysler Center
  H. H. Harger, Business & Finance & Publications, 247 West Engineering
  R. W. Schneider, Director of Development, 445 West Engineering
  H. F. Schulte, Jr., Director of Instructional Television, 327 West Engineering
Freshman Counseling, 275 West Engineering
Lost and Found:
  3011 SAB
  Office of the Assistant Dean, 259 West Engineering
  Humanities Department Office, 1079 East Engineering
Placement, student and alumni, 128H West Engineering, D. C. Peterson, and department offices
Records Office, 263 West Engineering
Transcripts, 263 West Engineering
Transfer students, admission of, 259 West Engineering

Contents



COLLEGE OF ENGINEERING

Harold T. Shapiro, M.A., Ph.D., *President of the University*
Alfred S. Sussman, Ph.D., *Acting Vice-President for Academic Affairs*
David V. Ragone, Sc.D., *Dean of the College of Engineering*
Joe G. Eisley, Ph.D., *Associate Dean of the College of Engineering*
Maurice J. Sinnott, Sc.D., *Associate Dean and Secretary of the College of Engineering*
Arlen R. Hellwarth, M.S., *Associate Dean Emeritus and Secretary Emeritus of the College of Engineering*
Robert O. Goetz, M.S.E. (C.E.), *Assistant Dean for Freshman Services*
Robert H. Hoisington, M.S., *Assistant Dean for Student Services*
Edward R. Lady, Ph.D., *Director of Continuing Engineering Education*
Donald C. Peterson, B.S.E. (Ae.E.), *Director of Placement*
Harold H. Harger, B.A., *Business and Finance and Publications*
Robert W. Schneider, B.C.E., *Director of Development*
Hal F. Schulte, Jr., M.S.E., *Director of Instructional Television*

For Committees, Departments, Chairmen, and Faculty see page 242.

General Information

Our society is increasingly dependent on a scientific and technological base not only for its prosperity but for its very survival. Throughout the modern era, the need has been great for men and women who as scientists can discover the truths of nature, or as engineers can apply those truths "for the benefit of mankind." Never has the need been greater than it is today.

Engineers as well as scientists make their contributions to the storehouse of knowledge. It should be stressed, however, that engineers are occupied primarily with solving real-life problems. Engineering is a profession that began as a practical art, and although it has become less of an art and more of a science, its main concern is still "the benefit of mankind."

By bringing to bear on each problem a proper combination of knowledge, experience, and judgment, engineers seek the best or most economical solution. Every day of every year, they find more and more ways to make our way of life easier, safer, cleaner, and more comfortable—for more and more people. They invent methods for doing something never done before. Unhappy with what exists, they are always seeking ways to improve, to do things better and more efficiently. In the various processes of inventing, designing, manufacturing, and constructing, engineers are concerned continually with the use of manpower, and the effects of their creativity on people and their total welfare. They also find ways of coping with the problems that derive from their earlier successes—such problems as air and water pollution, mass transportation, the noises of supersonic travel, or the need for better forms of information storage and retrieval.

In our time, the engineering approach to problems has taken on particular importance because social and technological problems have become so closely interrelated. The problem of air pollution, to cite but one example, cannot be solved in terms of the underlying physical causes alone. We must know why it looms as such a major problem; what social, political, legal, and ethical conflicts it arouses; and how the alternative technological solutions would affect both individual and group interests or welfare. Positions in modern engineering demand a sensitivity to such problems across the full range of our social and economic concerns. The College of Engineering is dedicated to educating young men and women for such technological leadership.

To an increasing number of young people today, the words "environment" and "ecology" suggest a wide range of opportunities that lie ahead in solving the problems and meeting the needs of contemporary society. The solution to these problems certainly involves the contributions of the engineers who design, build, and operate our machines, plants, and processes.

Students in the College of Engineering have the opportunity to elect courses that will broaden their knowledge of the environment and ecology. Those who do will be particularly well qualified to utilize their technical knowledge in developing definitive solutions to environmental problems.

The College's enduring educational objective is that of preparing its students for positions of responsibility that are commensurate with their abilities and interests. But the means by which the College carries out this objective must be continually revised in the light of conditions that are continually changing in education and throughout the whole of society. Students enrolled in the College soon discover that its programs have been planned to prepare them for any one of a broad range of possibilities. According to their aptitudes and desires, the students may go on to become practicing engineers, or researchers, or administrators, or teachers. Moreover, the knowledge and discipline gained from undergraduate engineering study are proving to be excellent preparation for other careers, particularly in business, law, and medicine. Many graduates of the College remain after they have received an undergraduate degree to earn a master's or doctor's degree. Another opportunity for continued growth and development beyond the undergraduate degree is that of registration as a professional engineer. After a certain length of experience (usually four years), young engineers can take qualifying examinations offered by the state in which they seek registration.

At Michigan, students have an opportunity to associate with distinguished teachers who have not only solid academic grounding but also broad professional involvement, the result of continuing research and consultation on actual engineering projects. The College believes that such professional involvement is necessary if its faculty is to retain maximum efficiency both in the classroom and the laboratory. The benefits of such involvement are passed on to students through formal classroom exposure and through informal exposure as well. Often, teaching is most effective when a teacher can work together with students in fundamental scientific investigations, or on improved ways of applying scientific knowledge to the problems of industry and public well-being. Graduate and undergraduate students in the College have an opportunity to participate in such activities in well-equipped engineering laboratories and at a number of field locations.

The College's program for undergraduate study consists typically of a four-year program leading to a bachelor's degree. There are twelve programs that lead to the degree Bachelor of Science in Engineering, and two that lead to the degree Bachelor of Science; these are identified throughout this catalog as B.S.E. and B.S., respectively. By careful planning, an additional bachelor's degree (B.S. or A.B.) can be earned in the University's College of Literature, Science, and the Arts in about one year beyond the time required for the B.S.E. and the B.S. For further information, refer to the later section on Undergraduate Programs.

Career Choice

In choosing engineering as a career, the main criteria are usually an interest in and successful completion of high school mathematics and science courses; a desire and ability to investigate the "why" as well as the "how" of things; and an interest in the creative development of devices or systems that meet specific needs. The engineer of the future will be increasingly concerned with the preservation of our natural environment, the wise use of our natural resources, and the importance of individual creativity and initiative

in the framework of a free democratic society. Certainly not all of these signs or interests will fit everyone, but they can be used as a rough guide.

More and more women are enrolling in engineering. Women who like science and mathematics will find engineering a satisfying career with a wide variety of employment opportunities. The College has one of the largest female enrollments of any engineering school in the country.

Officers and academic counselors within the College are glad to consult with high school or transfer students who are faced with a critical career choice or with the problem of choosing the school that best suits their interest and abilities. A student with questions in this regard may benefit from a leaflet entitled *Engineering*—available by writing to the Dean of the College.

History

The College of Engineering observed the centennial of engineering education at The University of Michigan in 1953-54. In 1857, when the first engineering degree was awarded, there were but a few colleges providing opportunities for study leading to this degree; scientific instruction in engineering was first established at West Point in 1802 followed by instruction at Rensselaer which granted the first degrees in Civil Engineering in 1835 in the United States.

As early as 1852, President Henry P. Tappan of the University proposed "a scientific course parallel to the classical course" containing "besides other branches, Civil Engineering, Astronomy with the use of an observatory, the application of chemistry and other sciences to agriculture, and the industrial arts generally." The early curriculum included mathematics, graphics, physics, natural science, elements of astronomy, language, philosophy, and engineering subjects including plain geodetics, railroad and mining surveying, leveling, nature and strength of materials, theory of construction, architecture, machines (particularly the steam engine and the locomotive), and motors, particularly steam and water.

Upon completion of the first four-year curriculum offered at the University, two students were granted first degrees in Civil Engineering in 1860. Today approximately 845 students graduate annually with bachelor's degrees. The opportunities for study have expanded to the point that students may select from about 950 engineering courses.

In the 1979 fall term 4,066 undergraduate students (with 754 entering for first time from high school) and 1,000 graduate students were enrolled in engineering. The total enrollment of the University for the Ann Arbor Campus is approximately 34,000.

The teaching staff of the College of Engineering numbers 350, not including those who teach mathematics, chemistry, physics, and those elective subjects taken in other colleges.

The University is located in Ann Arbor, a city of about 110,000 including students; it is located within forty miles from the heart of Detroit and is adjacent to one of the country's largest industrial communities with continually expanding needs for engineering facilities and services.

Accreditation

The following degree programs offered on the Ann Arbor Campus have been accredited by Accreditation Board for Engineering and Technology: Aerospace, Chemical, Civil, Computer, Electrical, Engineering Science, Environmental Sciences, Industrial and Operations, Materials and Metallurgical, Mechanical, Naval Architecture and Marine Engineering, and Nuclear.

Facilities

The offices and facilities used for instruction and research in engineering are located mostly in the following buildings on the Central and North Campuses:

West Engineering Building
East Engineering Building
Aerospace Engineering Building and Laboratories
Chrysler Center for Continuing Engineering Education
Engineering I-A
George Granger Brown Laboratory
Highway Safety Research Institute Building
Institute of Science and Technology Building
Naval Architecture and Marine Engineering Building
Mortimer E. Cooley Building
Research Activities Building
Space Research Building
Phoenix Memorial Laboratory with nuclear reactor
Walter E. Lay Automotive Laboratory

The descriptions of the undergraduate degree programs include a reference to the facilities for the respective programs.

The **Computing Center** is a research and service facility for the students, faculty, and research staff. Computing services are provided through one central computer, an Amdahl 470 V/7, which is controlled by an operating system called the Michigan Terminal System (MTS). MTS permits both conversational and batch processing. The computer may be accessed conversationally via several kinds of typewriterlike terminals, graphical cathode-ray tube displays, or small local computers. It may also be accessed from several batch stations within the University.

The **Engineering-Transportation Library,** located on the third floor of the Undergraduate Library, is one of the more than 25 divisional libraries in the University Library system. Its collection of approximately 400,000 volumes covers all fields of engineering except nuclear engineering. The library subscribes to almost 3,000 serial titles and maintains a large collection of technical reports and government documents.

The **North Engineering Library,** located in the Institute of Science and Technology Building on North Campus, holds the nuclear engineering collection and is a depository library for the Department of Energy (DOE). The Library also serves the special needs of the growing North Campus research community.

Trained staffs, orientation programs, and computerized reference searching are available to assist the student in making effective use of these libraries, as well as of the University Library system as a whole.

Other Physical Facilities. On request, the University will provide information on its facilities for housing, health care, recreation, physical education, and athletic participation.

Work-Study Opportunities

While the College does not sponsor a formal cooperative work-study plan, it is willing to accommodate a student who wishes to combine work experience with engineering studies. In such a plan, the student devotes alternate terms to study at the College and some form of related employment, generally adding a year or more to the graduation date.

In some instances, the employer takes the initiative by proposing the co-op program for

a qualified student; in others, the student may take the first step. The College does not exercise any control over the agreement between the student and the employer.

Ordinarily, the College does not allow credit for co-op work experience. A note will be entered on the student's academic record when the student informs the Assistant Dean's Office of plans to enroll during alternate terms.

Some upperclass students at the Ann Arbor Campus take advantage of a work-study opportunity through employment as a technician on one of the large number of research projects generally available at the University or in near-by research laboratories. In this case, the student lightens the academic load while working part time.

In addition, summer employment opportunities are available to a large number of students, particularly at the end of the second and third year. Many employers who recruit graduates also offer summer work to undergraduates through interviews at the campus. The college believes that such experiences are equivalent to those claimed for the formal cooperative plan and highly recommends that each student include a summer period of related employment, if possible.

Placement

The College of Engineering considers the proper placement of its graduates to be very important, since it is recognized that the first years of professional experience are of great significance in developing the full capabilities of the young engineer. For this reason the College provides an engineering placement service for both students and alumni in Room 128H, West Engineering Building. This service includes the arranging of employment interviews on campus, the announcement of openings received by mail, and the providing of placement information through counseling and published material.

Summer and other short-term training positions are also offered by many employers, especially to students who have completed at least three years of an engineering program. The placement service provides all possible assistance in this area, since such experience is generally considered to be a valuable adjunct to formal technical education.

Meetings for students are conducted by the placement service at the beginning of the fall and winter terms on subjects of placement interest, such as the nature and availability of engineering opportunities, techniques for effective interviewing and the plant visits, and considerations of engineering practice and professional development.

Registration as Professional Engineer

Modern civilization has found it necessary to regulate the practice of persons whose activities deal with the protection of life, health, property, or other rights. A profession such as engineering is judged by the qualifications and competency of all who use its name. Therefore, to provide the public with a clearly recognizable line of demarcation between the engineer and nonengineer, the state establishes standards and provides the legal processes associated with the registration of individuals and their practices as professional engineers.

In Michigan, the State Board of Registration for Professional Engineers provides an opportunity for students during their senior year to take the first half of a sixteen-hour, two-part examination as the first step toward registration, provided the degree is awarded within six months after the examination, and the degree program is one that has been accredited at the College by the Accreditation Board for Engineering and Technology (ABET). The accredited degree programs can be found on page 9. This first part is a general coverage of the fundamentals common to all fields of specialization including mathematics. After a minimum of four years of experience, which may include one year

of graduate study, the applicant will take the second half of the examination which will involve the application of engineering judgment and planning ability.

On completion of registration, an engineer establishes professional standing on the basis of legal requirements and receives authority to practice the engineering profession before the public. While state laws may differ in some respects, an engineer registered under the laws of one state will find that reciprocal agreements between states generally make possible ready transfer of privileges to other states.

Extracurricular Opportunities

Students at The University of Michigan have an opportunity to participate in a number of extracurricular activities. Some of these are associated with a professional society, others with social organizations, musical and drama groups, sports, or service groups. In addition, a great many cultural programs are offered throughout the year—more than anyone could possibly attend.

The College of Engineering encourages participation in the wide range of activities—campus-wide as well as those within the College. Used to advantage, college activities can provide a basis for many friendships and memorable times, as well as an opportunity for self-development.

The following is a list of organizations of particular interest to students in Engineering. Those interested in exploring other campus-wide opportunities may obtain information concerning campus organizations at the Student Organizational Services, 341 Michigan Union.

Professional Societies

American Institute of Aeronautics and Astronautics, student chapter
American Institute of Chemical Engineers, student chapter
American Institute of Industrial Engineers, student chapter
American Nuclear Society, student chapter
American Society of Civil Engineers, student chapter
American Society of Mechanical Engineers, student chapter
Institute of Electrical and Electronics Engineers, student chapter
Michigan Metallurgical Society, student chapter
Operations Research Society of America, student chapter
Society of Automotive Engineers, student chapter
Society of Manufacturing Engineers, student chapter
Society of Women Engineers, student chapter

Honor Societies

The criteria for election to one of the honor societies are based on the rules and regulations of the respective society. In general, the criteria include a scholastic requirement.

Student members of a society are responsible for election of new members. On request, the College will provide to each society the names and local addresses of students who are eligible for election according to scholastic criteria specified by the respective society.

Membership in honor societies will be posted on the academic record (263 West Engineering Building) upon receipt of the list of newly elected members from the secretary of the organization.

Alpha Phi Mu, national industrial engineering honor society
Alpha Sigma Mu, national materials science and engineering honor society
Chi Epsilon, national civil engineering honor society
Eta Kappa Nu, national electrical engineering honor society
Mortar Board, national senior honor society

Phi Kappa Phi, national honor society for seniors of all schools and colleges
Phi Lambda Upsilan, national Chemical Engineering, Chemistry, and Pharmacy honor society
Pi Tau Sigma, national mechanical engineering honor fraternity
Quarterdeck Honorary Society, honorary-technical society for the Department of Naval Architecture and Marine Engineering
Sigma Xi, a national society devoted to the encouragement of research
Tau Beta Pi, national engineering honor society
Vulcans, senior engineering honor society

College Service Activities

IAESTE-US, International Association for the Exchange of Students for Technical Experience, United States, Michigan chapter
Meteorology and Oceanography Student Council, for the Department of Atmospheric and Oceanic Science
Michigan Technic and *Datum* staff, publishers of the *Michigan Technic*—student magazine for the College, and *Datum*—student newspaper
Society of Minority Engineering Students
University of Michigan Amateur Radio Club, organization of students interested in radio communications as a hobby.

College Student Government and Judiciary

Engineering Council. The University of Michigan Engineering Council is the student government of the College of Engineering and serves as the representative for engineering student opinion on College and University issues. The Council's work, done by committees, advisory boards, and a coordinating executive board, includes efforts in student-faculty relations, summer and permanent job placement, grades and grading, and faculty and course evaluation. Membership is open to all students of the College and the sole requirement for full membership is attendance at three of four consecutive meetings.

The Council welcomes the opinions of all students, from freshmen to seniors, as well as their active participation in its projects. New ideas and projects are always welcome. Those wishing to express opinions or to bring ideas to the Council should attend a Council Meeting or come to the Engineering Council Office, 332 West Engineering, 764-8511.

Honor Council. The Student Honor Council, the student judiciary for the College, has the responsibility of conducting hearings and recommending action in the cases of alleged violation of the Honor Code or College rules on conduct.

Scholarships, Fellowships, Prizes, Loans, and Employment

Numerous University scholarships, fellowships, and prizes as well as loan funds, are available to qualified engineering students. In keeping with University practice and policy, financial assistance is available to qualified students regardless of sex, race, color, or creed.

Incoming Freshmen, Undergraduates, and Transfer Students. In general, scholarships are awarded to full-time undergraduates (14 credit hours) on the basis of demonstrated need and at least a 2.7 grade point average. Each year, a limited number of incoming freshmen are awarded one-term honorary scholarships, based upon SAT scores and high school grades. After completing one term, students can apply for a regular engineering scholarship.

Transfer students from other colleges or universities within the State of Michigan with approximately 55 or more semester hours of credit are eligible for scholarship aid. Transfer students from Michigan community colleges should consult with their counseling

office for further information. All other transfer students should write to Office of the Assistant Dean, 259 West Engineering Building.

Because U.S. immigration laws restrict the employment opportunities of students from other countries, it is essential that all students from abroad be in a position to finance their education. A guarantee of total financial backing must be provided when making application for admission. Financial aid to non-U.S. citizens is, therefore, limited to short term loans for emergency situations only.

Applications for Engineering College scholarships are accepted during the periods of January 15 to February 15 and September 15 to October 15. Application forms can be obtained at the Engineering Dean's Office, 255 West Engineering Building. For more information call Engineering Scholarship Office (313) 763-2180.

Many of the scholarship funds are made available through the generosity of alumni and other friends of the College. There is no direct obligation to repay a scholarship but as recipients recognize their moral obligation to return gifts to the College scholarship fund according to their ability, other worthy students will likewise benefit.

A number of qualified undergraduates are employed each term as student assistants for assigned work in several departments. Loans are administered by the Office of Financial Aid.

Graduate Students. Graduate students should apply to the departmental adviser for fellowships, to the Office of Financial Aid for long-term loans, or to the Engineering Scholarship Office for a Ford Foundation short-term loan.

Veterans and Social Security Benefits

Educational benefits are available to students who qualify under the several Public Laws providing benefits for veterans (or their children) and to orphans or children of a disabled parent who qualify under the Social Security Law. Questions may be referred to Assistant Dean's Office or The Office of Student Certification, LSA Building.

Fee Regulations, Expenses, Indebtedness

A nonrefundable fee of $15 will be required of each applicant for admission to the University.

The fees for one full term for the 1979-80 academic year were as follows:

	Michigan Resident	*Non-resident*
Underclassmen	$51 for first hour + $51 for each additional hour	$152 for first hour + $152 for each additional hour
12-18 credit hours	$606	$1,824
Over 18 credit hours add	$51 per credit hour	$152 per credit hour
Upperclassmen (55 or more credit hours)	$57 for first hour + $57 for each additional hour	$164 for first hour + $164 for each additional hour
12-18 credit hours	$682	$1,964
Over 18 credit hours add	$57 per credit hour	$164 per credit hour

Students enrolled as special students or guest students in the College of Engineering will be assessed the upperclass fees.

The following guideline may be used for the total expenses:

Michigan resident (2 terms, academic year)	$4,700
Non-Michigan U.S. citizen (2 terms, academic year)	$7,400
Foreign (3 terms, calendar year)	$10,000

Fees are subject to change at any time by the Board of Regents of the University.

Detailed information relating to fees, deposits, payments and refunds may be obtained in the Assistant Dean's Office and/or may be found in the first few pages of the Time Schedule.

Withdrawal. A student withdrawing after registration shall pay a disenrollment fee according to the rules in effect at the time of withdrawal as published in the Time Schedule for each term.

Indebtedness to the University. Proper observance of financial obligation is deemed an essential of good conduct, and students who are guilty of laxness in this regard to a degree incompatible with the general standards of conduct shall be liable to disciplinary action by proper University authorities. Students shall pay all accounts due the University in accordance with regulations set forth for such payments by the vice-president in charge of business and finance.

When a student's account shows indebtedness, academic credits are withheld, no transcript of academic record or diploma will be issued, nor will future registration be permitted.

Residence Regulations of The University of Michigan

1. Since normally a student comes to The University of Michigan for the primary or sole purpose of attending the University rather than to establish a domicile in Michigan, one who enrolls in the University as a non-resident shall continue to be so classified throughout his attendance as a student, unless and until he demonstrates that his previous domicile has been abandoned and a Michigan domicile established.

2. No student shall be eligible for classification as a resident unless he shall be domiciled in Michigan and has resided in Michigan continuously for not less than one year immediately preceding the first day of classes of the term for which classification is sought.

3. For purposes of these regulations, a resident is defined as a student domiciled in the state of Michigan. A non-resident student is defined as one whose domicile is elsewhere. A student shall not be considered domiciled in Michigan unless he is in continuous physical residence in this state and intends to make Michigan his permanent home, not only while in attendance at the University but indefinitely thereafter as well, and has no domicile or intent to be domiciled elsewhere.

4. The following facts and circumstances, although not necessarily conclusive, have probative value in support of a claim for residence classification:

a. Continuous presence in Michigan during periods when not enrolled as a student.
b. Reliance upon Michigan sources for financial support.
c. Domicile in Michigan of family, guardian or other relatives or persons legally responsible for the student.

d. Former domicile in the state and maintenance of significant connections therein while absent.
e. Ownership of a home in Michigan.
f. Admission to a licensed practicing profession in Michigan.
g. Long-term military commitment in Michigan.
h. Commitments to further education in Michigan indicating an intent to stay here permanently.
i. Acceptance of an offer of permanent employment in Michigan.

Other factors indicating an intent to make Michigan the student's domicile will be considered by the University in classifying a student.

5. The following circumstances, standing alone, shall not constitute sufficient evidence of domicile to effect classification of a student as a resident under these regulations:
a. Voting or registration for voting.
b. Employment in any position normally filled by a student.
c. The lease of living quarters.
d. A statement of intention to acquire a domicile in Michigan.
e. Domicile in Michigan of student's spouse.
f. Automobile registration.
g. Other public records, e.g., birth and marriage records.

6. An alien who has been lawfully admitted for permanent residence in the United States shall not, by reason of that status alone, be disqualified from classification as a resident, provided, however, that aliens who are present in the United States on a temporary or student visa shall not be eligible for classification as a resident.

7. These regulations shall be administered by the Office of the Registrar, in accordance with the following residence review procedures:
a. It shall be the responsibility of the student to register under the proper residence classification, to advise the Office of the Registrar of possible changes in residence, and to furnish all requested information pertinent thereto.
b. Applications for reclassification shall be filed not later than 20 calendar days following the first day of classes of the term for which such reclassification is sought. Such application shall be filed with the Assistant Registrar for Student Certification and Residence Status (see "f" below for address) and shall set forth in writing a complete statement of the facts upon which it is based, together with affidavits or other supporting documentary evidence. Failure to timely file such an application shall constitute a waiver of all claims to reclassification or rebates for such term.
c. Any student may appeal the decision of the Assistant Registrar for Student Certification and Residence Status made pursuant to paragraph b, above, by taking the following steps within 20 calendar days after notice of such decision was served upon him, either in person, by mail, or by posting in a conspicuous place at 503 South State Street:
   i. File with the Residency Appeal Committee a written notice of appeal stating the reasons therefor;
   ii. File a copy of said notice with the Assistant Registrar for Student Certification and Residence Status, together with a written request that all documents submitted pursuant to paragraph b, above, be forwarded to the Residency Appeal Committee. Failure to timely comply with this paragraph c shall constitute a waiver of all claims to reclassification or rebates for the applicable term or terms.