Michigan State University functions as a unit, its colleges, divisions, schools, and departments serving one another. No single part is independent of the others.

Most schools and departments offer courses at both the undergraduate and graduate levels. At the undergraduate level, freshman and sophomore students, except when enrolled in James Madison College and Lyman Briggs School, are enrolled in the Undergraduate University Division. Such students may select a field of study as a major preference; however, the academic responsibility for such students rests solely with the Undergraduate University Division. During the first two years students usually take (1) courses that will fulfill the University requirements as described in the Undergraduate Education section of this catalog and (2) courses appropriate to the particular major, or (3) courses of an exploratory nature. During the junior and senior years, students take courses, whether given by the colleges of the majors or others, which meet the needs of the academic programs. For high achieving undergraduate students, colleges, schools, departments, and faculty, in cooperation with the Honors College, provide programs to encourage the highest intellectual development and greatest achievement.

At the graduate level, colleges which offer graduate courses have developed graduate programs consistent with the highest national and professional standards of the respective fields.

Study abroad opportunities are sponsored by the University through its academic departments and schools, and cooperative arrangements with other universities. These opportunities include more than 150 programs in over fifty countries in Africa, Australia, the Americas, Asia, and Europe.

To provide broader access to its instructional resources, the University offers selected degree programs, certificate programs, and courses at various locations and via the Web.

The materials throughout this catalog are intended to be cumulative. The Undergraduate Education section is applicable to undergraduate programs only; and the Graduate Education section refers to graduate study. The all–University policies and requirements given in the General Information section apply to both undergraduate and graduate study. These three sections serve as the foundation for the college statements, and the all University sections and the college statements serve as the foundation for the department and school statements.

Each college statement addresses the purposes or role of the college in the University; the organizational structure of the college; undergraduate programs, including college policies and requirements for admission and graduation beyond the all University requirements; and graduate study, including the college policies and requirements for admission and the degrees beyond the all University requirements. The organization of the department and school statements is similar to that of the college statements.

SESSIONS

The University offers instruction throughout the academic year and during the summer.

The academic year consists of two semesters of approximately fifteen weeks each. The fall semester begins in late August and ends before the winter holidays. The spring semester begins in January and ends with commencement early in May.
THE ACADEMIC PROGRAM

Sessions

Two sessions are scheduled during the summer. The first session begins in mid-May and runs through early July. The second session begins about the first week of July and runs to late August. Sessions of varying lengths for defined audiences are also scheduled during the summer.

PERIOD COVERED BY REGISTRATION

The period covered by registration for a given semester or summer session is defined as commencing with the first day of classes as published in the University academic calendar, and extending through the day prior to the start of the first day of classes for the succeeding semester or summer session. The delivery of appropriate services requires at least minimum registration for that semester or summer session.

ACCREDITATION

Michigan State University is a member of the National Association of State Universities and Land Grant Colleges, Association of American Universities, American Council on Education, American Council of Learned Societies, Association of Graduate Schools, Council of Graduate Schools, Committee on Institutional Cooperation, and International Association of Universities. The University has been accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. Some individual programs, schools, and colleges have been recognized by the accrediting agencies in their respective fields. For a list, see http://opbweb.msu.edu.

Information about the accreditation of individual programs, schools, and colleges is included in program descriptions in Academic Programs. Updated program listings may be found at www.msu.edu/unit/apueas/uccweb.htm.

EQUAL OPPORTUNITY, NON-DISCRIMINATION, AND AFFIRMATIVE ACTION

Michigan State University is committed to the principles of equal opportunity, non-discrimination, and affirmative action. University programs, activities, and facilities are available to all without regard to race, color, gender, religion, national origin, political persuasion, sexual orientation, marital status, disability, height, weight, veteran status, age or familial status. The University is an affirmative action, equal opportunity employer. In carrying out this commitment, the University is guided by the applicable Federal and State laws and regulations, and policies adopted by the Board of Trustees.

The University has a comprehensive Affirmative Action Plan that includes goals for academic and support staff employment, an affirmative action policy for the employment of veterans and persons with disabilities. The Office of Affirmative Action, Compliance and Monitoring oversees the Plan by reviewing individual academic and support staff hiring recommendations, establishing relations with federal and state civil rights agencies, and advising the President and other University administrators.

The All–University Anti–Discrimination Policy applies to all University community members and to education and employment programs and activities without regard to age, color, gender, disability, height, marital status, national origin, political persuasion, race, religion, sexual orientation, veteran status, or weight. The Anti–Discrimination Judicial Board is an established internal judicial system for addressing complaints of discrimination or harassment.

Information about the University's affirmative action program can be obtained from the Office of Affirmative Action, Compliance and Monitoring, 303 Administration Building, 353-3922.

STUDENT CONSUMER INFORMATION

Michigan State University seeks to make available to prospective and enrolled students full information on all pertinent matters that would affect their attendance at the University. These matters include academic programs, financial aid programs, eligibility requirements for financial aid, cost of attending the institution, refund policy and, to the extent available, patterns of retention in offered curricula.

Such information may be found in various University publications, such as this catalog and information brochures for prospective students; or inquiries may be made of appropriate MSU administrative offices. Typical sources include:

Office of Financial Aid
252 Student Services Building
www.finaid.msu.edu

Office of the Registrar
150 Administration Building
(For enrolled students)
www.reg.msu.edu

Office of Admissions and Scholarships
250 Administration Building
(For prospective students)
www.admis.msu.edu

Information on University rules and regulations affecting students also is published in the resource guide Spartan Life and other publications and is available at www.msu.edu.

GRADUATION RATES AT MICHIGAN STATE UNIVERSITY

Admission to Michigan State University is based upon academic preparation and ability. To assist students in their educational planning as well as for institutional planning and reporting, each fall, first-time degree/certificate-seeking undergraduate students are a part of a cohort which is followed to determine the rate of retention and graduation from Michigan State University.

The decision by a student to take more than four years to complete a program varies from personal to programmatic reasons. The most recent Graduation Rate Survey, based upon the 1995 entering cohort, indicates that 68.5% (or 69%) of that cohort graduated within 6 years (or 150% of the normal time to award). Of the same cohort, 63% graduated within 5 years, and 33% within 4 years. These data compare favorably to data from similar institutions.

In addition, some students in the cohort will eventually graduate at other institutions through transfer or prebaccalaureate entry into professional programs.

Office of Financial Aid
252 Student Services Building
www.finaid.msu.edu

Office of the Registrar
150 Administration Building
(For enrolled students)
www.reg.msu.edu

Office of Admissions and Scholarships
250 Administration Building
(For prospective students)
www.admis.msu.edu

Information on University rules and regulations affecting students also is published in the resource guide Spartan Life and other publications and is available at www.msu.edu.
COLLEGES, SCHOOLS and DEPARTMENTS

Departments of instruction at Michigan State University are organized into 14 colleges. The colleges, schools, and departments of instruction are:

**College of Agriculture and Natural Resources**
- Agricultural and Natural Resources Education and Communication Systems
- Agricultural Economics
- Agricultural Engineering
- Animal Science
- Crop and Soil Sciences
- Entomology
- Fisheries and Wildlife
- Food Science and Human Nutrition
- Forestry
- Horticulture
- Packaging
- Park, Recreation and Tourism Resources
- Plant Biology
- Plant Pathology
- Resource Development

**College of Arts and Letters**
- American Thought and Language
- Art and Art History
- English
- History
- Linguistics and Germanic, Slavic, Asian and African Languages
- Music
- Philosophy
- Religious Studies
- Romance and Classical Languages
- Theatre
- Women's Studies Program

**The Eli Broad College of Business**
The Eli Broad Graduate School of Management
- Accounting and Information Systems
- Finance
- Hospitality Business
- Management
- Marketing and Supply Chain Management

**College of Communication Arts and Sciences**
- Advertising
- Audiology and Speech Sciences
- Communication
- Journalism
- Telecommunication

**College of Education**
- Counseling, Educational Psychology and Special Education
- Educational Administration
- Kinesiology
- Teacher Education

**College of Engineering**
- Agricultural Engineering
- Chemical Engineering and Materials Science
- Civil and Environmental Engineering
- Computer Science and Engineering
- Electrical and Computer Engineering
- Mechanical Engineering

**College of Human Ecology**
- Family and Child Ecology
- Food Science and Human Nutrition
- Human Environment and Design

**College of Human Medicine**
- Biochemistry and Molecular Biology
- Epidemiology
- Family Practice
- Medicine
- Microbiology and Molecular Genetics
- Neurology and Ophthalmology
- Obstetrics, Gynecology and Reproductive Biology
- Pediatrics and Human Development
- Pharmacology and Toxicology
- Physiology
- Psychiatry
- Surgery

**James Madison College**

**College of Natural Science**
- Biochemistry and Molecular Biology
- Chemistry
- Entomology
- Geological Sciences
- Lyman Briggs School
- Mathematics
- Microbiology and Molecular Genetics
- Physics and Astronomy
- Physiology
- Plant Biology
- Plant Pathology
- Statistics and Probability
- Zoology

**College of Nursing**

**College of Osteopathic Medicine**
- Biochemistry and Molecular Biology
- Family and Community Medicine
- Internal Medicine
- Microbiology and Molecular Genetics
- Neurology and Ophthalmology
- Osteopathic Manipulative Medicine
- Osteopathic Surgical Specialties
- Pediatrics
- Pharmacology and Toxicology
- Physical Medicine and Rehabilitation
- Physiology
- Psychiatry

**College of Social Science**
- Anthropology
- Criminal Justice
- Economics
- Geography
- Labor and Industrial Relations
- Political Science
- Psychology
- Social Work
- Sociology
- Women's Studies Program

**College of Veterinary Medicine**
- Large Animal Clinical Sciences
- Microbiology and Molecular Genetics
- Pathobiology and Diagnostic Investigation
- Pharmacology and Toxicology
- Physiology
- Small Animal Clinical Sciences

**Office of the Provost**
- Aerospace Studies—Air Force
- Military Science—Army
Michigan State University offers a wide variety of programs and areas of study that contribute to the overall strength of the University. Although some programs and areas of study are not available as majors, the following list indicates the breadth and depth of opportunities available to students. In addition, special programs, suited to individual needs and purposes may be arranged, particularly at the advanced levels.

Accounting
Accounting and Business Processes
Adult Language Learning
Advertising
Aerospace Studies—Air Force
African American and African Studies
African American History and Culture
African Languages
African Studies
Agribusiness
Agribusiness Management
Agriscience
Agricultural and Extension Education
Agricultural Economics
Agricultural Technology and Systems Management
Agricultural and Natural Resources Biotechnology
Agriculture
Agriculture and Natural Resources Communications
American Studies
Ancient Studies
Animal Science
Anthropology
Apparel and Textiles
Apparel and Textile Design
Applied Developmental Science
Applied Mathematics
Applied Spanish Linguistics
Applied Statistics
Art and Art History
Art Education
History of Art
Studio Art
Asian Studies
Astrophysics
Astrophysics and Astronomy
Audiology and Speech Sciences
Biochemistry and Molecular Biology
Biochemistry and Molecular Biology/Biotechnology
Biological Science
Biology
Biomedical Engineering
Biomedical Laboratory Operations
Biosystems Engineering
Biotechnology
Botany
Building Construction Management
Business Administration
Business Information Systems
Cell and Molecular Biology
Canadian Studies
Chemical Engineering
Chemical Physics
Chemistry
Chicano/Latino Studies
Child Development
Chinese
Civil Engineering
Clinical Laboratory Sciences
Clinical Social Work
Coaching
Cognitive Science
Commercial Floriculture
Communication
Community Services
Comparative Literature
Comparative Medicine and Integrative Biology
Computational Chemistry
Computational Mathematics
Computational Statistics
Computer Engineering
Computer Science and Engineering
Connected Learning
Corporate Accounting
Counseling
Counseling Psychology
Criminal Justice
Crop and Soil Sciences
Crop Production
Crop Science
Curriculum and Teaching
Curriculum, Teaching, and Educational Policy
Dairy Production
Dance
Dietetics
Earth Science
East Asian Languages and Cultures
Ecology and Evolutionary Biology and Behavior
Economics
Education
Educational Policy
Electrical Engineering
Engineering Arts
Engineering for International Service
Engineering Mechanics
English
Critical Study in Teaching of English
Teaching English to Speakers of Other Languages
Entrepreneurship
Entomology
Environmental Biology
Environmental Biology/Botany
Environmental Biology/Microbiology
Environmental Biology/Plant Biology
Environmental Biology/Zoology
Environmental Design
Environmental Economics
Environmental Economics and Policy
Environmental Engineering
Environmental Geosciences
Environmental Sciences and Management
Environmental Soil Science
Environmental Studies
Environmental Studies and Applications
Environmental Toxicology
Epidemiology
Family and Consumer Resources
Family and Consumer Sciences
Family Community Services
Family and Child Ecology
Family Studies
Film Studies
Finance
Fisheries and Wildlife
Food Industry Management
Food Processing and Technology
Food Safety
Food Science
Foodservice Management
Forensic Science
Forestry
French
THE ACADEMIC PROGRAM
Programs and Areas of Study

General Business Administration
General Business Administration—Prelaw
General Management
General Science
Genetics
Geographic Information Science
Geography
Geological Sciences
Geophysics
German
Health and Humanities
Health Communication
Health Promotion
Higher, Adult, and Lifelong Education
Hispanic Cultural Studies
History
Horse Management
Horticulture
Hospitality Business
Human Biology
Human Environment: Design and Management
Human Medicine
Human Nutrition
Human Nutrition-Environmental Toxicology
Human Resource Management
Humanities—Prelaw
Industrial Mathematics
Industrial Microbiology
Infant Studies
Integrated Pest Management
Integrative Management
Interdisciplinary Humanities
Interdisciplinary Studies in Social Science
Interior Design
Interior Design and Facilities Management
International Development
International Relations
Italian
Japanese
Jazz Studies
Jewish Studies
Journalism
K—12 Educational Administration
Kinesiology
Labor Relations and Human Resources
Landscape Architecture
Landscape and Nursery
Large Animal Clinical Sciences
Latin
Latin American and Caribbean Studies
Learning, Technology and Culture
Linguistics
Literacy Instruction
Livestock Production
Logistics
Manufacturing Engineering
Manufacturing Management
Marketing
Marriage and Family Therapy
Materials Science and Engineering
Materials Science and Mechanics
Mathematics
Mathematics Education
Measurement and Quantitative Methods
Mechanical Engineering
Medical Technology
Merchandising Management
Microbiology
Microbiology and Molecular Genetics
Military Science—Army
Museum Studies
Music

Composition
Composition and Music Theory
Conducting
Education
Performance
Theory
Therapy
Musicology
Neuroscience
Nonprofit Sector Policy and Administration
Nursing
Nutritional Sciences
Operations and Sourcing Management
Operations Research—Statistics
Organizational and Community Practice
Organizational Behavior—Human Resource Management
Osteopathic Medicine
Packaging
Park, Recreation and Tourism Resources
Pathology
Pharmacology and Toxicology
Philosophy
Physical Science
Physics
Physics and Geophysics
Physiology
Piano Pedagogy
Plant Biology
Plant Breeding and Genetics
Plant Pathology
Policy and Applied Economics
Political Economy
Political Science
Political Science—Prelaw
Political Theory and Constitutional Democracy
Portuguese
Postcolonial and Diaspora Literature
Professional Accounting
Professional Applications in Anthropology
Psychology
Public Administration
Public Administration and Public Policy
Public Relations
Rehabilitation Counseling
Rehabilitation Counselor Education
Religious Studies
Resource Development
Resource Economics
Russian
Russian and East European Studies
School Psychology
Security Management
Small Animal Clinical Sciences
Social Relations
Social Science
Social Work
Sociology
Soil Science
South Asian Languages
Spanish
Spatial Information Processing
Special Education
Deaf Education
Emotional Impairment
Learning Disabilities
Visual Impairment
Statistics
Strategic Management
Student Affairs Administration
Supply Chain Management
Surgery
Teaching and Learning with Technology
Telecommunication
THE ACADEMIC PROGRAM
Programs and Areas of Study

Theatre
Turfgrass Management
Urban and Regional Planning
Urban Studies
Veterinary Medicine
Veterinary Technology
Western European Studies
Women's Studies
Zoo and Aquarium Management
Zoology
Preprofessional
Dentistry
Law
Optometry
Osteopathy
Podiatry
Theology
Veterinary Medicine

DEGREES

Michigan State University grants the following degrees upon satisfactory completion of appropriate programs of study in the departments, schools, and colleges.

Bachelor of Arts ....................... B.A.
Bachelor of Fine Arts ................. B.F.A.
Bachelor of Landscape Architecture . B.L.A.
Bachelor of Music ..................... B.Mus.
Bachelor of Science .................. B.S.
Bachelor of Science in Nursing ....... B.S.N.
Master of Arts ....................... M.A.
Master of Arts for Teachers .......... M.A.T.
Master of Business Administration . M.B.A.
Master of Fine Arts .................. M.F.A.
Master of Labor Relations and Human Resources . M.L.H.R.
Master of Music ..................... M.Mus.
Master of Science in Nursing ........ M.S.N.
Master of Public Administration .... M.P.A.
Master of Science ................... M.S.
Master of Social Work ............... M.S.W.
Master in Urban and Regional Planning . M.U.R.P.
Educational Specialist .............. Ed.S.
Doctor of Medicine .................. M.D.
Doctor of Musical Arts .............. D.M.A.
Doctor of Osteopathic Medicine ..... D.O.
Doctor of Philosophy ............... Ph.D.
Doctor of Veterinary Medicine ...... D.V.M.

Undergraduate programs and degree requirements are described in a section entitled Undergraduate Education; graduate programs and degree requirements, in a section devoted to Graduate Education. For detailed information about the programs of study and requirements in the colleges and their schools and departments, the section in Academic Programs describing each college should be consulted.

TEACHER CERTIFICATION

For information about teacher certification opportunities, options, and requirements, refer to the statement on TEACHER CERTIFICATION in the Department of Teacher Education section of this catalog.

COURSE DESIGNATIONS

Throughout the programs of study given in this section, courses are identified either by course subject codes, course numbers, and course titles (example: CSE 101 Computing Concepts and Competencies) or by course names and course numbers (example: Computer Science and Engineering 101). Additional information about specific courses may be found in the Descriptions of Courses section of the catalog or in its frequently updated on-line version available at: www.msu.edu/academics/officialcatalogs.

To assist in locating information about specific courses in the Descriptions of Courses, the course subject codes are listed below in alphabetical order. For each subject code, the corresponding name is given.

<table>
<thead>
<tr>
<th>SUBJECT CODE</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABM</td>
<td>Agribusiness Management</td>
</tr>
<tr>
<td>ACC</td>
<td>Accounting and Information Systems</td>
</tr>
<tr>
<td>ADV</td>
<td>Advertising</td>
</tr>
<tr>
<td>AE</td>
<td>Agricultural Engineering</td>
</tr>
<tr>
<td>AEC</td>
<td>Agricultural Economics</td>
</tr>
<tr>
<td>AEE</td>
<td>Agriculture and Natural Resources Education and Communication Systems</td>
</tr>
<tr>
<td>AFR</td>
<td>African Languages</td>
</tr>
<tr>
<td>AL</td>
<td>Arts and Letters</td>
</tr>
<tr>
<td>AMS</td>
<td>American Studies</td>
</tr>
<tr>
<td>ANP</td>
<td>Anthropology</td>
</tr>
<tr>
<td>ANR</td>
<td>Agriculture and Natural Resources</td>
</tr>
<tr>
<td>ANS</td>
<td>Animal Science</td>
</tr>
<tr>
<td>ANT</td>
<td>Anatomy</td>
</tr>
<tr>
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<td>Human Anatomy</td>
</tr>
<tr>
<td>ANTV</td>
<td>Veterinary Anatomy</td>
</tr>
<tr>
<td>ARB</td>
<td>Arabic</td>
</tr>
<tr>
<td>AS</td>
<td>Aerospace Studies</td>
</tr>
<tr>
<td>ASC</td>
<td>Audiology and Speech Sciences</td>
</tr>
<tr>
<td>ASN</td>
<td>Asian Languages</td>
</tr>
<tr>
<td>AST</td>
<td>Astronomy and Astrophysics</td>
</tr>
<tr>
<td>AT</td>
<td>Institute of Agricultural Technology</td>
</tr>
<tr>
<td>ATL</td>
<td>American Thought and Language</td>
</tr>
<tr>
<td>ATM</td>
<td>Agricultural Technology and Systems Management</td>
</tr>
<tr>
<td>BCM</td>
<td>Building Construction Management</td>
</tr>
<tr>
<td>BE</td>
<td>Biosystems Engineering</td>
</tr>
<tr>
<td>BMB</td>
<td>Biochemistry and Molecular Biology</td>
</tr>
<tr>
<td>BME</td>
<td>Biomedical Engineering</td>
</tr>
<tr>
<td>BS</td>
<td>Biological Science</td>
</tr>
<tr>
<td>BUS</td>
<td>Business</td>
</tr>
<tr>
<td>CAS</td>
<td>Communication Arts and Sciences</td>
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<tr>
<td>CE</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>CEM</td>
<td>Chemistry</td>
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<tr>
<td>CEP</td>
<td>Counseling, Educational Psychology and Special Education</td>
</tr>
<tr>
<td>CHE</td>
<td>Chemical Engineering</td>
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<tr>
<td>CHS</td>
<td>Chinese</td>
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<tr>
<td>CJ</td>
<td>Criminal Justice</td>
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<tr>
<td>CLA</td>
<td>Classical Studies</td>
</tr>
<tr>
<td>CMB</td>
<td>Cell and Molecular Biology</td>
</tr>
<tr>
<td>COM</td>
<td>Communication</td>
</tr>
<tr>
<td>CSE</td>
<td>Computer Science and Engineering</td>
</tr>
<tr>
<td>CSS</td>
<td>Crop and Soil Sciences</td>
</tr>
<tr>
<td>EAD</td>
<td>Educational Administration</td>
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<tr>
<td>EC</td>
<td>Economics</td>
</tr>
<tr>
<td>ECE</td>
<td>Electrical and Computer Engineering</td>
</tr>
<tr>
<td>EEP</td>
<td>Environmental Economics and Policy</td>
</tr>
<tr>
<td>EGR</td>
<td>Engineering</td>
</tr>
<tr>
<td>EMB</td>
<td>Executive MBA</td>
</tr>
<tr>
<td>ENE</td>
<td>Environmental Engineering</td>
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<td>ENG</td>
<td>English</td>
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<td>ENT</td>
<td>Entomology</td>
</tr>
<tr>
<td>EPI</td>
<td>Epidemiology</td>
</tr>
</tbody>
</table>
Refer to the Michigan State University Faculty and Staff Directory for information about the central administration; the academic organization of the University; the academic governance system including Academic Council, Academic Council Standing Committees, Advisory Consultative Committees and university student–faculty judiciaries; Administrative Advisory Committees; and Board Established Committees. The names of the persons who hold administrative positions and who serve on the committees are included. For additional information visit: www.msu.edu.