

The ACADEMIC PROGRAM

Michigan State University functions as a unit, with its colleges, divisions, schools, and departments serving one another. No single part is independent of the others. The Michigan State University College of Law, through a special affiliation, functions fully as a part of the University, although it remains financially independent.

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 programs are sponsored by the University through its academic departments and schools, and cooperative arrangements with other universities. The University offers more than 200 programs in over 60 countries on all seven continents.

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*, *Policies*, *Procedures and Regulations* 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 early May. Sessions of varying lengths for defined audiences are also scheduled during the fall and spring semesters

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 the first 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://propsystem.org/

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.reg.msu.edu/ucc/ucc.asp.

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 judi-

cial 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, 444 Administration Building, 353-3924 or at www.msu.edu/unit/aacm.

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

Decisions by students to complete degree programs in more than four years may vary from personal to programmatic reasons. The most recent Graduation Rate Survey, based upon the 1997 entering cohort, indicates that 71% of that cohort graduated within 6 years, or 150% of the normal time to award. Of the same cohort, 66% graduated within 5 years, and 36% within 4 years. These data compare favorably to graduation statistics from similar institutions.

Additionally, some students in the initial cohort will eventually graduate at other institutions through transfer or pre-baccalaureate entry into professional programs.

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 Economics

Animal Science

Biosystems and Agricultural Engineering

Community, Agriculture, Recreation and Resource Studies

Crop and Soil Sciences

Entomology

Fisheries and Wildlife

Food Science and Human Nutrition

Forestry

Horticulture

Packaging
Planning, Design and Construction

Plant Biology

Plant Pathology

College of Arts and Letters Art and Art History

English

French, Classics, and Italian

Linguistics and Germanic, Slavic, Asian and African Languages

Music

Philosophy

Religious Studies

Spanish and Portuguese

Theatre

Program in Women, Gender, and Social Justice

Writing, Rhetoric and American Cultures

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, Public Relations and Retailing

Audiology and Speech Sciences

Communication

Journalism

Telecommunication, Information Studies and Media

College of Education

Counseling, Educational Psychology and Special Education

Educational Administration

Kinesiology

Teacher Education

College of Engineering

Biosystems and 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 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

Radiology

Surgery

James Madison College

College of Natural Science

Biochemistry and Molecular Biology

Chemistry

Entomology

Food Science and Human Nutrition

Geological Sciences Lyman Briggs School

Mathematics

Medical Technology Program

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

Radiology

College of Social Science

Anthropology Criminal Justice

Economics

Geography History

Labor and Industrial Relations

Political Science

Psychology

Social Work

Sociology

Program in Women, Gender, and Social Justice

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

PROGRAMS and AREAS OF STUDY

Michigan State University offers a wide variety of programs and areas of study that contribute to the overall strength of the Univer-

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 Actuarial Science Advertising

Aerospace Studies—Air Force

African American and African Studies African American History and Culture

African Languages African Studies Agribusiness

Agribusiness Management

Agriscience

Agricultural Economics

Agricultural Technology and Systems Management Agricultural and Natural Resources Biotechnology

Agriculture and Natural Resources Communications

American Studies **Animal Science** Anthropology Apparel and Textiles Apparel and Textile Design Applied Developmental Science Applied Engineering Sciences Applied Mathematics Applied Spanish Linguistics Applied Statistics

Aquaculture Art and Art History Art Education

Art History and Visual Culture

Studio Art

Asian Pacific American Studies

Asian Studies Astrophysics

Astrophysics and Astronomy Audiology and Speech Sciences

Biochemistry and Molecular Biology

Biochemistry and Molecular Biology/Biotechnology

Bioethics, Humanities, and Society

Biological Science

Biology

Biomedical Engineering

Biomedical Laboratory Operations

Biosystems Engineering

Biotechnology

Black American and Diasporic Studies

Business Administration

Cell and Molecular Biology Canadian Studies Chemical Engineering Chemical Physics

Chemistry

Chicano/Latino Studies Child Development

Chinese

Civil Engineering Classical Studies

Clinical Laboratory Sciences

Clinical Social Work

Coaching

Cognitive Science Commercial Floriculture

Communication

Communication Arts and Sciences-Media and Information Studies

Community, Agriculture, Recreation and Resource Studies

Community Services Comparative Literature

Comparative Medicine and Integrative Biology

Computational Chemistry Computational Mathematics Computational Statistics Computer Engineering

Computer Science and Engineering

Connected Learning Construction Management Corporate Accounting Counseling Creative Writing

Criminal Justice Critical Studies in the Teaching of English

Crop and Soil Sciences Crop Production Crop Science

Curriculum and Teaching

Curriculum, Teaching, and Educational Policy

Dairy Production

Dance

Diagnostic Molecular Science

Dietetics

Digital Rhetoric and Professional Writing

Earth Science

East Asian Languages and Cultures
Ecology and Evolutionary Biology and Behavior

Economics Education **Educational Policy Educational Technology** Electrical Engineering

Engineering for International Service

Engineering Mechanics

English

Entrepreneurship Entomology

Environmental and Resource Economics

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 Science and Policy Environmental Sciences and Management

Environmental Soil Science Environmental Studies

Environmental Studies and Applications

Environmental Toxicology

Epidemiology

Ethics and Development

Family Community Services Family and Child Ecology Family Studies

Film Studies Finance

Fish and Wildlife Disease Ecology and Conservation Medicine

Fisheries and Wildlife

Food and Agricultural Standards Food Industry Management Food Processing and Technology

Food Safety Food Science

Foodservice Management

Forensic Science

Forestry French

Game Design and Development General Business Administration

General Business Administration—Prelaw

General Management General Science

Genetics

Geographic Information Science

Geography Geological Sciences

Geophysics German

Greek Health Communication Health Promotion

Higher, Adult, and Lifelong Education

Hispanic Cultural Studies

History

Horse Management Horticulture Hospitality Business

Hospitality Business Real Estate and Development

Human Biology

Human Environment: Design and Management

Human Medicine Human Nutrition

Human Nutrition-Environmental Toxicology

Human Resource Management

Humanities—Prelaw Industrial Mathematics

Industrial Microbiology

Industrial Relations and Human Resources

Infant Studies

Information Technology

Information Technology Management Integrated Pest Management Integrative Management

Interdisciplinary Humanities Interdisciplinary Studies in Social Science

International Business

Interior Design

Interior Design and Facilities Management

International Development International Planning Studies International Relations

Italian

Japanese Jazz Studies Jewish Studies Journalism

Judicial Administration

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 Marine Ecosystem 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 Microbiology and Molecular Genetics

Military Science—Army Museum Studies

Music Composition

Composition and Music Theory

Conducting Education Performance Theory Therapy Musicology Muslim Studies

Neuroscience

Nursing

Nutritional Sciences

Operations and Sourcing Management

Organizational Behavior—Human Resource Management

Osteopathic Medicine

Packaging Park, Recreation and Tourism Resources

Pharmacology and Toxicology

Philosophy Physical Science Physics

Physics and Geophysics

Physiology Piano Pedagogy

Plant Biology
Plant Breeding and Genetics

Plant Pathology Political Economy Political Science Political Science —Prelaw

Political Theory and Constitutional Democracy

Portuguese

Postcolonial and Diaspora Literature Professional Applications in Anthropology

Professional Writing

Psychology

Public Administration and Public Policy

Public Policy Public Relations

Rehabilitation Counseling Rehabilitation Counselor Education

Religious Studies Retailing

Rhetoric and Writing

Russian

Russian and East European Studies

School Psychology

Science, Technology, Environment and Public Policy Second Language Studies

Security Management

Small Animal Clinical Sciences

Social Relations Social Science Social Work Sociology Soil Science

South Asian Languages

Spanish

Spatial Information Processing

THE ACADEMIC PROGRAM Programs and Areas of Study

Special Education

Deaf Education

Emotional Impairment

Learning Disabilities

Statistics

Strategic Management

Student Affairs Administration

Supply Chain Management

Technology Systems Management

Telecommunication, Information Studies and Media

Theatre

Turfgrass Management

Urban and Regional Planning

Veterinary Medicine

Veterinary Technology

Western European Studies

Women, Gender and Social Justice

Women's Studies

Youth Development

Zoo and Aquarium Management

Zoology

Preprofessional

Dentistry

DOMEST

Law

Medicine

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 International Planning Studies	M.I.P.S.
Master of Labor Relations	
and Human Resources	M.L.H.R.
Master of Music	M.Mus.
Master of Public Policy	M.P.P.
Master of Science in Nursing	M.S.N.
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 requiremen	nts are de-
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Undergraduate programs and degree requirements are described in a section entitled *Undergraduate Education*. Graduate programs and degree requirements are described 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 CERTIFI-CATION* 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 frequently updated online version of *Descriptions of Courses* at: http://www.reg.msu.edu/Courses/search.asp.

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.

SUBJECT CODE	NAME		
ABM	Agribusiness Management		
ACC	Accounting		
ACR	Community, Agriculture, Recreation and Resource		
	Studies		
ADV	Advertising		
AE	Agricultural Engineering		
AEC	Agricultural Economics		
AEE	Agriculture and Natural Resources Education		

and Communication Systems

AFR African Languages Arts and Letters AL **AMS American Studies** ANP Anthropology **ANR** Agriculture and Natural Resources Animal Science **ANS ANTR Human Anatomy ANTV** Veterinary Anatomy **ARB** Arabic Aerospace Studies AS **ASC** Audiology and Speech Sciences Asian Languages ASN **AST** Astronomy and Astrophysics AΤ Institute of Agricultural Technology ATM Agricultural Technology and Systems Management Biosystems Engineering BF **BMB**

BE Biosystems Engineering
BMB Biochemistry and Molecular Biology
BME Biomedical Engineering
BS Biological Science

CAS Communication Arts and Sciences
CE Civil Engineering

Counseling, Educational Psychology and Special Education Chemical Engineering

CHE Chemical Engineering
CHS Chinese
CJ Criminal Justice
CLA Classical Studies
CMB Cell and Molecular Biology

Chemistry

CEM

CEP

CMB Cell and Molecular Blology
CMP Construction Management Program
COM Communication

CSE Computer Science and Engineering

CSS	Crop and Soil Sciences	MUS	Music
EAD	Educational Administration	NEU	Neuroscience
EC	Economics	NOP	Neurology and Ophthalmology
ECE	Electrical and Computer Engineering	NSC	Natural Science
ED	Education	NUR	Nursing
EEP	Environmental Economics and Policy	OGR	Obstetrics, Gynecology, and Reproductive Biology
EGR	Engineering	OMM	Osteopathic Manipulative Medicine
EMB	Executive MBA	OSS	Osteopathic Surgical Specialities
ENE	Environmental Engineering	OST	Osteopathic Medicine
ENG	English	PDC	Planning, Design and Construction
ENT	Entomology	PED	Pediatrics
EPI	Epidemiology	PHD	Pediatrics and Human Development
ES	Earth Science	PHL	Philosophy
ESL	English as a Second Language	PHM	Pharmacology and Toxicology
ESP	Environmental Science and Policy	PHY	Physics
FCE	Family and Child Ecology	PIM	Integrative Management
FCM	Family and Community Medicine	PKG	Packaging
FI	Finance	PLB	Plant Biology
FIM	Food Industry Management	PLP	Plant Pathology
FMP	Family Practice	PLS	Political Science
FOR	Forestry	PMR	Physical Medicine and Rehabilitation
FRN	French	PPL	Public Policy
FRS	Forensic Science	PRO	Office of the Provost
FSC	Food Science	PRR	Park, Recreation and Tourism Resources
FW	Fisheries and Wildlife	PRT	Portuguese
GBL	General Business and Business Law	PSC	Psychiatry
GEN	Genetics	PSL	Physiology
GEO	Geography	PSY	Psychology
GLG	Geological Sciences	PTH	Pathology
GRK	Greek	RAD	Radiology
GRM	German	RD	Resource Development
HA	History of Art	REL	Religious Studies
HB	Hospitality Business	RET	Retailing
HEB	Hebrew	ROM	Romance Languages
HEC	Human Ecology	RUS	Russian
HED	Human Environment and Design	SCS	Small Animal Clinical Sciences
HM	Human Medicine	SME	Science and Mathematics Education
HNF	Human Nutrition and Foods	SOC	Sociology
HRT	Horticulture	SPN	Spanish
HST	History	SSC	Social Science
IAH	Integrative Studies in Arts and Humanities	STA	Studio Art
IDES	Interior Design	STT	Statistics and Probability
IM	Internal Medicine	SUR	Surgery
ISB	Integrative Studies in Biological Sciences	SW	Social Work
ISP	Integrative Studies in Physical Sciences	TC	Telecommunication
ISS	Integrative Studies in Social, Behavioral and	TE	Teacher Education
	Economic Sciences	THR	Theatre
ITL	Italian	TSM	Technology Systems Management
ITM	Information Technology Management	UP	Urban Planning
JPN	Japanese	VM	Veterinary Medicine
JRN	Journalism	WRA	Writing, Rhetoric and American Cultures
KIN	Kinesiology	WS	Women's Studies
LA	Landscape Architecture	ZOL	Zoology
LBS	Lyman Briggs School		
LCS	Large Animal Clinical Sciences		
LIN	Linguistics		
LIR	Labor and Industrial Relations		VED OITV
LL	Linguistics and Languages	UNI	VERSITY
LLT	Language, Learning and Teaching		_
LTN	Latin	ORC	GANIZATION
MBA	Master of Rusiness Administration		

Master of Business Administration

Microbiology and Molecular Genetics

Materials Science and Engineering

Marketing and Supply Chain Management

James Madison College

Mechanical Engineering

Medicine

Management

Mathematics

Military Science

Medical Technology

MBA MC

ME

MED

MGT

MMG

MSE

MTH

MT

MS MSC

ORGANIZATION

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.