ACADEMIC ORIENTATION
PROGRAM

DESCRIPTIONS of COURSES
2004-2005

The complete listing of undergraduate, graduate-professional, and graduate level courses is located at http://ntweb1.ais.msu.edu/j4100/scripts/CatalogSearch.asp.

For information about courses offered through the Institute of Agricultural Technology, contact the Institute of Agricultural Technology in Room 120 Agriculture Hall.

COURSE NUMBERS

001-099 Non-Credit Courses

Courses with these numbers are offered by the University to permit students to make up deficiencies in previous training or to improve their facility in certain basic skills without earning credit. For information about remedial-developmental-preparatory courses, consult the Undergraduate Education section of this catalog.

100-299 Undergraduate Courses

Courses with these numbers are for undergraduate students. They carry no graduate credit, although graduate students may be admitted to such courses in order to make up prerequisites or to gain a foundation for advanced courses. For information about remedial-developmental-preparatory courses, consult the Undergraduate Education section of this catalog.

300-499 Advanced Undergraduate Courses

Courses with these numbers are for advanced undergraduate students. They constitute the advanced portion of an undergraduate program leading to the bachelor's degree. A graduate student may carry 400 level courses for credit upon approval of the student's major department or school. In exceptional cases, a graduate student may petition the dean of his or her college, in writing, for approval of a 300 level course for graduate credit.

VARIABLE CREDIT COURSES

For each variable credit course, the range of credits for which a student may enroll in a given semester and the maximum number of credits that a student may earn in a course with a reenrollment provision shall be specified.
312 Mass Transfer and Separations

Spring. 4(3-2) A student may earn a maximum of 8 credits in all reenrollments for this course.

Interdepartmental with Biosystems Engineering.

P: (CHE 201 and MTH 235 or concurrently)

RB: Knowledge of basic calculus. C: ECE 201 concurrently.

R: Open only to students in the College of Engineering. SA: EE 200 Diffusion. Mass transfer coefficients. Design of counter-current separation systems, both stagewise and continuous. Distillation, absorption, extraction. Multicomponent separations.

To understand the characteristics of a course, consider each of the five categories depicted below.

A The course number and title and, if existent, the course number suffix (Ex: 312H or 1121). The suffixes are:

H = Honors Course
1 = Type 1 Remedial-Developmental Preparatory Course
2 = Type 2 Remedial-Developmental Preparatory Course
3 = Type 3 Remedial-Developmental Preparatory Course
4 = Type 4 Remedial-Developmental Preparatory Course
5 = Type 5 Remedial-Developmental Preparatory Course

For additional information about remedial–developmental–preparatory courses, consult the Academic Programs section of the catalog.

The designation code for a Tier II writing course in parentheses following the course title. For additional information, refer to the statement on Writing Requirement in the Academic Programs section of catalog.

(W) – Tier II writing course

The diversity designation code for an Integrative Studies course in parentheses following the title. For additional information, refer to Integrative Studies in the Academic Programs section of the catalog.

(I) – international and multicultural diversity
(N) – national diversity
(D) – national diversity, and international and multicultural diversity

B Information about the semester of offering, credits and instructional model, reenrollment provision, and interdepartmental status.

The semester(s) the course is authorized to be given is identified. Lack of staff or low student enrollment may preclude offering the course every semester for which it is authorized.

The semester credits are designated to include class-hours-a week 4(3–2) where:

4 = Number of semester credits.
3 = Number of class hours a week in lecture/recitation/discussion.
2 = Number of class hours a week in a laboratory.

If the credit is indicated to be variable, the number of credits is to be determined at the time of enrollment. If the course is a non-credit course, the credit-equivalent is given in brackets.

Reenrollment provision is identified.

Interdepartmental course status is identified.

C Information about prior academic preparation and student access to the course.

P: Prerequisite Monitored = a course to be completed either prior to, or concurrently with, another course. A prerequisite is identified by course subject code and number. The course subject codes and corresponding names are listed on the following pages. When a student tries to enroll the Student Information System (SIS) will verify that the prerequisite is fulfilled.

RB: Recommended Background = prior academic work, experience, or other qualifications that are recommended, but not required, and which will not be monitored (either in SIS or by the unit). Recommended work may provide some background that will be helpful and faculty want to signal to potential enrollees. Such background is not essential to success in the course, nor can faculty assume that students who enroll will have such knowledge.

C: Corequisite = a course that must be completed concurrently with another course. A corequisite is identified by course subject code and number. The course subject codes and corresponding names are listed on the following pages.

R: Restriction = a limitation on student access to the course. For example, a course may be available only to juniors and seniors, or to students in a specified major, department, or college.

SA: Semester Alias = a course identified as the equivalent of another course.

A student who is unsure of eligibility for enrolling in a course should contact the department, school, or college that administers the course.

D A brief description of the course.
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 online version available at: http://ntweb1.ais.msu.edu/j4100/scripts/CatalogSearch.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 CODES

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
AL  Arts and Letters
AMS  American Studies
ANP  Anthropology
ANR  Agriculture and Natural Resources
ANS  Animal Science
ANTR  Human Anatomy
ANTV  Veterinary Anatomy
ARB  Arabic
AS  Aerospace Studies
ASC  Audiology and Speech Sciences
ASN  Asian Languages
AST  Astronomy and Astrophysics
AT  Institute of Agricultural Technology
ATM  Agricultural Technology and Systems Management
BCM  Building Construction Management
BE  Biosystems Engineering
BMB  Biochemistry and Molecular Biology
BME  Biomedical Engineering
BS  Biological Science
CAS  Communication Arts and Sciences
CE  Civil Engineering
CEM  Chemistry
CEP  Counseling, Educational Psychology and Special Education
CHE  Chemical Engineering
CHS  Chinese
CJ  Criminal Justice
CLA  Classical Studies
CMB  Cell and Molecular Biology
COM  Communication
CSE  Computer Science and Engineering
CSS  Crop and Soil Sciences
EAD  Educational Administration
EC  Economics
ECE  Electrical and Computer Engineering
ED  Education
EEP  Environmental Economics and Policy
EGR  Engineering
EMB  Executive MBA
ENE  Environmental Engineering
ENG  English
ENT  Entomology
EPI  Epidemiology
ES  Earth Science
ESL  English as a Second Language
ESP  Environmental Science and Policy
FCE  Family and Child Ecology
FCM  Family and Community Medicine
FI  Finance
FIM  Food Industry Management
FMP  Family Practice
FOR  Forestry
FRN  French
FRS  Forensic Science
FSC  Food Science
FW  Fisheries and Wildlife
GBL  General Business and Business Law
GEN  Genetics
GEO  Geography
GLG  Geological Sciences
GRK  Greek
GRM  German
HA  History of Art
HB  Hospitality Business
HEB  Hebrew
HEC  Human Ecology
HED  Human Environment and Design
HM  Human Medicine
HNF  Human Nutrition and Foods
HRT  Horticulture
HST  History
IAH  Integrative Studies in Arts and Humanities
IM  Internal Medicine
ISB  Integrative Studies in Biological Sciences
ISP  Integrative Studies in Physical Sciences
ISS  Integrative Studies in Social, Behavioral and Economic Sciences
ITAL  Italian
ITM  Information Technology Management
JPN  Japanese
JRN  Journalism
KIN  Kinesiology
LA  Landscape Architecture
LBS  Lyman Briggs School
LCS  Large Animal Clinical Sciences
LIN  Linguistics
LIR  Labor and Industrial Relations
LL  Linguistics and Languages
LLT  Language, Learning and Teaching
LTN  Latin
MBA  Master of Business Administration
MC  James Madison College
ME  Mechanical Engineering
MED  Medicine
MGT  Management
MMG  Microbiology and Molecular Genetics
MS  Military Science
MSC  Marketing and Supply Chain Management
MSE  Materials Science and Engineering
MT  Medical Technology
MTH  Mathematics
MUS  Music
NEU  Neuroscience
NOP  Neurology and Ophthalmology
NSC  Natural Science
NUR  Nursing

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<table>
<thead>
<tr>
<th>Code</th>
<th>Department</th>
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<tr>
<td>OGR</td>
<td>Obstetrics, Gynecology, and Reproductive Biology</td>
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