



# DESCRIPTIONS of COURSES 1977

This section provides descriptions of all courses given by the University at both the undergraduate and graduate levels. The courses are listed in the schools and departments which give the instruction. The schools and departments are arranged in alphabetical sequence.

## 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.

### 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.

### 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 and the department offering the course. 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.

### 500-699 Graduate-Professional Courses

Courses with these numbers are courses in the graduate-professional programs. A graduate student may carry these courses for credit with approval of the major department.

### 800-899 Graduate Courses

Courses with these numbers are for graduate students. Advanced undergraduates with a 3.00 or better grade-point average in their total programs may be admitted to 800-899 level courses; others, if recommended by their academic adviser and approved by their dean. *At least 23 credits of the total required for a master's degree shall be taken at the 800 and 900 level* except as specifically exempted by the dean of the college.

### 900-999 Advanced Graduate Courses

Courses with these numbers are exclusively for graduate students and primarily for advanced graduate students. A master's degree candidate may take these courses with the approval of the major department.

## COURSE LISTINGS

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
(A) →	401. <i>Comparative Physiology I</i> (412.) Fall. 4(3-4) 240 or B S 212 and CEM 132. Interdepartmental with Department of Zoology.		
(B) →			
(C) →	A comparison of osmoregulation, digestion, respiration, and other physiological processes in a wide range of organisms.		

This material has three categories.

(A) The course number and title.

(B) The material in italics which includes:

**1** The former course number in parentheses if the course number has been changed within the past 5 years.

**2** The term or terms the course is authorized to be given. Lack of staff or low student enrollment may preclude offering the course, particularly at the advanced level, every term for which it is authorized.

**3** The term credits for the course with the classroom and laboratory hours respectively within the parentheses. Special information relative to the course credit is included. 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.

**4** The course number(s) or other information indicate the preparation or classification prerequisite to enrollment in the course. If no department code is listed, the course number refers to the course within the same department. If a department code and course number are listed, the reference is to a course in the department indicated by the code. The department codes and the corresponding department names are listed on this page. *The prerequisite may be satisfied by the course or courses indicated or equivalent background.* If a class standing such as juniors is listed, only students with that or higher class level are eligible for enrollment. The school or department office should be consulted in cases of question as to eligibility for taking the course.

(C) A brief description of the course.

### Department Codes Used in Course Prerequisites

Codes are listed in alphabetical order by the code. The departments are listed in alphabetical sequence by their names in the pages which follow.

DEPT. CODE	DEPARTMENT NAME
ADV	Advertising
A E	Agricultural Engineering
AEC	Agricultural Economics
AFA	Accounting and Financial Administration
AFR	African Languages—See Linguistics and Oriental and African Languages
AG	Agriculture
A H	Animal Husbandry
A L	Arts and Letters
AMS	American Studies
ANP	Anthropology
ANS	Animal Science
ANT	Anatomy
ART	Art—See History of Art and Studio Art
A S	Aerospace Studies
ASC	Audiology and Speech Sciences

DEPT. CODE	DEPARTMENT NAME
AST	Astronomy and Astrophysics
ATL	American Thought and Language
B C	Building Construction—See Packaging
BCH	Biochemistry
BIO	Business Law, Insurance and Office Administration
BIM	Biomechanics
BME	Biomedical Engineering
BOT	Botany and Plant Pathology
BPY	Biophysics
B S	Biological Sciences
CAS	Communication Arts and Sciences (College of)
C E	Civil Engineering
CEM	Chemistry
CHE	Chemical Engineering
CHS	Chinese—See Linguistics and Oriental and African Languages
CLA	Classical Studies
COM	Communication
C M	Community Medicine
CPS	Computer Science
C J	Criminal Justice
CSS	Crop and Soil Sciences
DRY	Dairy Science
EC	Economics
ED	Education
E E	Electrical Engineering
EGR	Engineering
ENG	English
ENT	Entomology
E S	Earth Science—See Geology
FCS	Family and Child Sciences
F E	Family Ecology
F M	Family Medicine
FMP	Family Practice
FOR	Forestry
FRN	French—See Romance and Classical Languages
FSC	Food Science
FSM	Food Systems Economics and Management
F W	Fisheries and Wildlife
GEN	Genetics
GEO	Geography
GLG	Geology
G R	German and Russian
GRK	Greek—See Romance Languages
GRM	German—See German and Russian
H A	History of Art—See Art
H D	Human Development
HED	Human Environment and Design
H M	Human Medicine (College of)
HNF	Human Nutrition and Foods
HPR	Health, Physical Education and Recreation
HRI	Hotel, Restaurant and Institutional Management
HRT	Horticulture
HST	History
HUM	Humanities
IDC	Interdisciplinary Courses
I S	Improvement Services
ITL	Italian—See Romance and Classical Languages
JAP	Japanese—See Linguistics and Oriental and African Languages
JMC	Justin Morrill College
JRN	Journalism
L A	Landscape Architecture—See Urban Planning and Landscape Architecture
LBC	Lyman Briggs College
LIN	Linguistics—See Linguistics and Oriental and African Languages
LIR	Labor and Industrial Relations
LOA	Linguistics and Oriental and African Languages

DEPT. CODE	DEPARTMENT NAME	DEPT. CODE	DEPARTMENT NAME
LSM	Large Animal Surgery and Medicine	PSC	Psychiatry
LTN	Latin—See Romance and Classical Languages	PSL	Physiology
M C	James Madison College	PSY	Psychology
M E	Mechanical Engineering	PTH	Pathology
MED	Medicine	R D	Resource Development
MGT	Management	RES	Racial and Ethnic Studies
MMM	Metallurgy, Mechanics and Materials Science	REL	Religious Studies
MPH	Microbiology and Public Health	RCL	Romance and Classical Languages
M S	Military Science	RUS	Russian—See German and Russian
M T	Medical Technology	SAL	South Asian Languages—See Linguistics and Oriental and African Languages
MTA	Marketing and Transportation Administration	S E	Sanitary Engineering—See Civil and Sanitary Engineering
MTH	Mathematics	SOC	Sociology
MUS	Music	SPN	Spanish—See Romance and Classical Languages
N E	Nursing	S S	Social Science
N R	Natural Resources	SSC	Social Science (College of)
N S	Natural Science	SSM	Small Animal Surgery and Medicine
NSC	Natural Science (College of)	STA	Studio Art—See Art
OGR	Obstetrics, Gynecology and Reproductive Biology	STT	Statistics and Probability
O M	Osteopathic Medicine	S W	Social Work
OST	Osteopathic Medicine (College of)	SUR	Surgery
PAM	Public Affairs Management	SYS	Systems Science—See Electrical Engineering and Systems Science
PHL	Philosophy	THR	Theatre
PHM	Pharmacology	TC	Telecommunication
PHS	Physical Science	U C	University College
PHY	Physics	U D	Urban Development
PKG	Packaging	UMS	Urban and Metropolitan Studies
PLS	Political Science	U P	Urban Planning
PRR	Park and Recreation Resources	V M	Veterinary Medicine (College of)
PRT	Portuguese—See Romance and Classical Languages	ZOL	Zoology
P S	Poultry Science		
PSA	Physical Systems in Agriculture and Natural Resources—See Agricultural Engineering		