PHOTOGRAPHY
See course descriptions under Technology Education: Photography on p. 139.

GRAPHIC ARTS AND DIGITAL MEDIA
See course descriptions under Technology Education: Digital Multimedia on p. 137.

BEHAVIORAL SCIENCES

Nethery Hall, Room 123
(616) 471-3152, FAX: (616) 471-3108
bhsce-info@andrews.edu
http://www.andrews.edu/BHSC

Faculty
Duane C. McBride, Chair
John M. Berecz
Sharon A. Gillespie
Herbert W. Helm
James H. Hopkins
Øystein S. LaBianca
Lionel N. A. Matthews
Sue E. Murray
Derrick L. Proctor
Larry S. Ulery
Kristopher P. Zygowiec

leading to many different fields of Christian service; and (3) extracurricular participation by students in voluntary religious activities, community service, and research.

TEACHER CERTIFICATION
Students seeking teacher certification on the secondary level may enroll in the BS in Behavioral Sciences (Student Development Emphasis), the Behavioral Sciences minor in teacher certification, or the Sociology minor. Elementary certification is available only for the Behavioral Sciences minor in teacher certification. See the School of Education for full details.

MINORS, COGNATES, AND ELECTIVES
Majors should take advantage of the variety of undergraduate courses available at Andrews to acquire a broad education. Combining behavioral science courses with other areas such as business, health, and language provides avenues for reaching individual professional goals.

Students should counsel with advisers in selecting cognates and electives. Volunteer work is most beneficial and majors are urged to seek opportunities through the Community Service Assistantship Program (CSAP). Those planning to pursue graduate studies should seek opportunities in research.

RESEARCH SEQUENCE
It is strongly recommended that all BS majors take the Research Methods Sequence during their junior year.

Undergraduate Programs

BS: Behavioral Sciences—60
Core Courses—30-32
ANTH124 or 336, 200; PSYC101, 210, 450;
SOCI119, 306, 427; PSYC469 OR SOCI474.
A minimum of 36 credits must be selected
from courses numbered 300 or above.

Cognate Requirement
STAT285.
The remaining credits are to be selected from at least two of the areas offered in the department or as specified in an area of emphasis below. Majors are required to take the major field test in either psychology or sociology. Those with specific vocational goals may wish to consider one of the following areas of emphasis:

Anthropology Emphasis
Core Courses—30-32
Emphasis Courses
ANTH205, 478, 496 (6 credits); ENGL440;
FMST350; SOCI425.

Required cognates
BIOL111,112 or 155, 156, 157; ECON308;
GEOG125; HIST400; STAT285. For students planning graduate-level training in anthropolo-
gy, foreign language is highly recommended.

Public Health Emphasis
Core Courses—30-32
Emphasis Courses
BHSC440 Topics: Human Disease, Community Health, Health Behavior Change, Substance Abuse Prevention; PSYC319, 354, 420,
460, 471; SOCI415, 420, 428.
Required cognates
BIOL111, 112, 260 or BIOL155, 156, 157; CHEM111, 112 or CHEM121, 122, 123; STAT285; FDNT230; PETH374.

Student Development Emphasis
Core Courses—30-32
Emphasis Courses
PSYC204; 251 or 252, 420, 466; SOCI120, 345, 480 (1 credit).
Required cognates
EDPC430; EDTE389; STAT285. Students desiring secondary-teacher certification must also take EDC450; EDPC302; EDTE215, 354, 417, 424, 4595, 465.

Substance Abuse Emphasis
Core Courses—30-32
Emphasis Courses
PSYC449, 455, 458, 471, 486, 488 or SOWK320; SOCI415; SOWK325.
Required cognates

BS: Family Studies—60
Core Courses
BHSC440 (5 credits); FDNT230; FMST115, 310, 454, 456, 470; EDR438; FNCE 206; PSYC251, 252, 420.
Electives chosen in consultation with program adviser. Majors are required to take FDNT230 for the biology course breadth core.

BS: General Studies—60
Core Courses
ANTH124, 200; FMST310; PSYC101, 251 or 252, 420, 469, 480 or SOCI474; SOCI119, 427, 476 (1 credit). A minimum of 36 credits must be selected from courses numbered 300 or above.
Required Cognates
STAT285. The remaining credits must be selected from one of the following emphases:

Cross-Cultural Relations Emphasis
In addition to the core courses listed under the BS in General Studies, the following courses (24 credits) should be taken: BHSC220; COMM436; FMST350; GEOG125; SOCI425, 430.

Human Organization and Development Emphasis
In addition to the core courses listed under the BS in General Studies, 24 credits should be selected from the following courses: BHSC440 Topics: Industrial/Organizational Psychology; ANTH124, 205; PSYC101, 427, 428, 450, 460; FMST350; GEOG496. Recommended cognates for students interested in anthropology include ANTH124, 205, 336, 496. Recommended cognates for students interested in sociology include ARCH260; BOT468 or ZOOL468; CMME476 or PHTO115; MGMT125; RELT210.

Minor in Anthropology—30
ANTH124 and 200. Students interested in emphasizing archaeology should select ANTH124, 205, 336, 496. Recommended cognates for students interested in archaeology include ARCH260; BOT468 or ZOOL468; CMME476 or PHTO115; MGMT125; RELT210.

Minor in Behavioral Sciences—30
Selected from at least three of the following five areas: anthropology, family studies, geography, psychology or sociology. Students choosing this minor should consult with the chair of the department.

Minor in Behavioral Sciences—36
Teacher certification emphasis
PSYC101, 364, 450; SOCI119, 427; one of PSYC251, 252, 260, 306, 345, 415, 427, 450, 476.

Minor in Family Studies—30
FDNT230, FMST115, 310, 456, 460. Additional credits chosen in consultation with program adviser.

Minor in Geography—30
GEOG110, 125 (repeated 3 times), 240, 260. BIOL487 or PHYS110 may be taken as an elective.
Minor in Psychology—30
PSYC 101, at least one of PSYC 450, 454, 460; at least one of 210, 364, 465, 471; at least one of PSYC 427, 429.

Minor in Sociology—30
SOCI 119; one of BHSC 220; SOCI 120, 425 or 430; one of SOCI 315, 345 or 415; one of SOCI 360, 420 or 470; SOCI 474.

Graduate Programs

MSA in Community Development
In order to be admitted to regular standing, students must have completed the following prerequisites:
1. A bachelor’s degree or its equivalent
2. Undergraduate course work (or equivalents) including ACCT 111, 112, PSYC 450; SOCI 427; and SOCI 470.
3. Computer literacy skills equivalent to at least the level of mastery needed to pass the general education computer skills course such as INSY 107, 108.
4. Graduate Record Exam (GRE) or the Graduate Management Admission Test (GMAT).

MSA degree requirements:
1. A cumulative GPA of at least 3.00 (4.00 system) in a curriculum of 48 credits selected in consultation with the adviser.
2. Community Development Core—24
   ANTH 515, BHSC 590, CHMN 540, IDS 698, SOCI 530, 535, 545, 580, 585.
3. School of Business Core—12
   ACCT 550, MKTG 540, BSAD 530. If students do not have the prerequisites for these required business courses, additional graduate classes may be needed, selected from ACCT 500, BSAD 500, or ECON 500 survey courses. No more than 20 graduate credits may be taken from the School of Business for this degree.
4. Electives—up to 12
   Select from the following: ANTH 600, 530; BHSC 440; BSAD 515, 690; CHMN 540; COMM 436; JOUR 454; SOCI 415, 420, 460; FMST 454, 460. Some of these courses are only taught alternate years.
5. Research Project or Grant Proposal
   Students must complete satisfactorily a research project or grant proposal which demonstrates the ability to apply knowledge acquired in this program to the chosen field of service. This is done normally in conjunction with the main graduate seminar (SOCIS85).
6. Comprehensive Examination
   Students must pass a comprehensive examination over the material covered in the master's program, both in business and Community Development.

MSA: International Development
This interdisciplinary program is jointly supported by Andrews University and the Adventist Development and Relief Agency (ADRA). Further information can be found on p. 34.

Courses
See inside back cover for symbol code.

ANTH 124
Introduction to Anthropology
An introduction to the anthropological perspective. Topics include cognitive and social aspects of language, biology, and the study of culture, origins of culture, archaeology and cultural beginnings, introduction to the study of cultural variation, and models of culture. Normally offered even years.

ANTH 200
Cultural Anthropology
The study of culture and cultural variation. The contemporary beliefs, values, institutions, and material way of life of people in North America are contrasted with those of people living in other regions of the world today and in the past.

ANTH 205
Introduction to Archaeology
An introduction to some of the discoveries made by archaeologists and to some of the methods whereby their discoveries are made. Advances in archaeological methods and theory over the past one hundred years are explained and illustrated. Normally offered odd years.

ANTH 336
Social Anthropology
Cultural myths and social realities in America are contrasted with those of other nations and societies. Symbolic and materialist approaches to explaining the origin, maintenance, and change of social structures are examined and critiqued. Normally offered even years.

ANTH 465
Research Methods: Ethnography

ANTH 478
Archaeological and Ethnographical Perspectives on the Middle East

ANTH 496
Supervised Fieldwork in Anthropology or Archaeology
Students may apply to participate as trainees on research projects sponsored either by the Department of Behavioral Sciences or the Institute of Archaeology.

ANTH 500
Topics in Anthropology
Topics in cross-cultural anthropology. Repeatable as topics vary.

ANTH 515
Urban Anthropology
An introduction to ethnographic approaches to understanding urban populations and problems. Special emphasis is placed on examining the uses of quantitative methods in the design of urban community initiatives.

ANTH 530
Global Food Systems

ANTH 600
Seminar in Cultural Anthropology
Examines the roots and meanings of the concept of culture. Method and theories developed by anthropologists for studying contemporary and ancient cultures. Archaeology, ethnography, and ethnology. Prerequisites: ANTH 124 or 200 or permission of instructor.

BEHAVIORAL SCIENCE

BHSC 100
Philosophy of Service
Provides a theoretical and practical basis for understanding and meeting needs of communities and individuals. Course materials include works from Christian and secular sources. Students develop an individualized practical plan to understand and meet needs. Does not apply to a major or minor.

BHSC 220
Contemporary Social Issues
Issues may include drug abuse, the family, crime/violence and punishment, AIDS, poverty, and health care. Integrates foundational social science with a Christian perspective to help students understand the origins of current societal issues and strategies for addressing those issues.

BHSC 235
Culture, Place, and Interdependence
Integrates concepts from anthropology, geography, and other sciences, helping students understand how human culture and natural habitat create regional, ethnic, religious, and other social groups. Examines origins of group conflict and considers avenues of responsible action for resolution.
### FAMILY STUDIES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FMST310</strong></td>
<td>(4)</td>
<td>Parent-Child Relationships Study of the concepts, challenges, and changes in the parent/child relationship including contemporary strategies, parenting in diverse family types, and changing parenting roles throughout the life cycle.</td>
</tr>
<tr>
<td><strong>FMST350</strong></td>
<td>(4)</td>
<td>Family Cultural Perspectives Study of the family as a social institution, its biological and cultural foundations, and its historic development and changing structure and function. Cross-cultural uniqueness is examined.</td>
</tr>
<tr>
<td><strong>FMST454</strong></td>
<td>g (4)</td>
<td>Understanding Abuse in Family and Society Study of factors contributing to abuse in the family, with emphasis on prevention of domestic violence.</td>
</tr>
<tr>
<td><strong>FMST456</strong></td>
<td>Alt g (4)</td>
<td>Marriage and the Family Study of the family and the marriage relationship from a multicultural perspective, focusing on diversity and strengths of families, developing and maintaining satisfying intimate relationships, trends in family structure, family dynamics and the conceptual frameworks from which researchers, theoreticians, and clinicians look at families.</td>
</tr>
</tbody>
</table>

### GEOGRAPHY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEOG100</strong></td>
<td>g (4)</td>
<td>Survey of Geography A survey of major geographic perspectives: physical, human, technical, and regional. Applies toward General Education social science requirements.</td>
</tr>
<tr>
<td><strong>GEOG105</strong></td>
<td>(4)</td>
<td>Introduction to Regional Geography Regional study of human beings in their spatial environment in selected countries of major regions of the world. Regions selected for study vary from quarter to quarter. Direct inquiries to program coordinator. Repeatable with different regions.</td>
</tr>
<tr>
<td><strong>GEOG240</strong></td>
<td>$ (4)</td>
<td>Physical Geography The physical environment in which human societies exist; the earth's crust, its water systems, land systems, and climatic features.</td>
</tr>
<tr>
<td><strong>GEOG245</strong></td>
<td>(4)</td>
<td>Introduction to Meteorology and Climatology Emphasis on atmospheric processes and regional distribution and classification of the world's climate.</td>
</tr>
<tr>
<td><strong>GEOG260</strong></td>
<td>(4)</td>
<td>Cultural Geography The geographic viewpoint of the human occupancy of the earth in relation to the environment; including aspects of population, settlement, language, religion, and economy; a generalized survey of major world cultural areas to integrate course elements.</td>
</tr>
<tr>
<td><strong>GEOG445</strong></td>
<td>(4)</td>
<td>Environmental Disasters An integrated study of the causes and geography of natural disasters and those caused by human action. Understanding of extreme event prediction, early warning, and disaster mitigation. Organizations involved in disaster response.</td>
</tr>
</tbody>
</table>

### PSYCHOLOGY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSYC101</strong></td>
<td>(4)</td>
<td>Introduction to Psychology Principles of psychology including the study of growth, perception, learning, thinking, motivation, emotion, personality, and mental health.</td>
</tr>
<tr>
<td><strong>PSYC101-50</strong></td>
<td>(4)</td>
<td>Honors Introduction to Psychology</td>
</tr>
<tr>
<td><strong>PSYC204</strong></td>
<td>(4)</td>
<td>Theories of Personal and Social Adjustment Application of psychological principles of behavior as they influence optimal personal and social adjustment, with an emphasis on group dynamics.</td>
</tr>
<tr>
<td><strong>PSYC210</strong></td>
<td>$ (4)</td>
<td>Introduction to Health Psychology Study of causes for the rise of health psychology; interrelationships between psychology and health-related disciplines; models of disease and health care; interrelationships between stressful life events, social support, and wellness; illness behavior; psychology of addictive behavior; and behavioral health. Prerequisite: PSYC101.</td>
</tr>
<tr>
<td><strong>PSYC251</strong></td>
<td>(4)</td>
<td>Psychology of Early Development Current psychological theories relating to environmental influences during prenatal, infant, and childhood years. Prerequisite: PSYC101.</td>
</tr>
<tr>
<td><strong>PSYC252</strong></td>
<td>(4)</td>
<td>The Psychology of Adolescence, Youth, and Aging</td>
</tr>
</tbody>
</table>

### Independent Study/Readings/Research/Project in Behavioral Sciences

- **BHSC235** V (4.5 qtr; 3 sem) Culture, Place, and Interdependence Distance education—see content above.
- **BHSC300** Philosophy of Service Fieldwork Provides an opportunity for the practical application of the theories, principles, and concepts learned in BHSC100S. Prerequisite: BHSC100S or permission of Service Learning Coordinator. Does not apply to a major or minor.
- **BHSC438** Workshop Provides an opportunity to study in a focused area within the behavioral sciences.
- **BHSC440** g (1-5) Topics in examines emerging issues in the behavioral sciences. Repeatable in different areas.
- **BHSC495** Independent Study/Readings/Research/Project in Behavioral Sciences Set up on a contract basis with no more than 4 credits per quarter. Students may repeat or take any combination of departmental independent study courses for up to 8 credits. Consult staff before registering.
- **BHSC590** Internship To be arranged in cooperation with the student’s adviser.
- **BHSC648** Workshop Provides an opportunity to study in a focused area within the behavioral sciences.
- **BHSC690** Independent Study/Readings/Research/Project in Behavioral Sciences Repeatable in different areas.

### Project in Behavioral Sciences

- **FMST360** V (4.5 qtr; 3 sem) Family Management and Decision Making in the Family Principles of management of resources like time, money, and energy as they relate to individuals and groups. Emphasis on the family.
- **FMST470** Practicum Supervised experience in observing, planning, directing, and/or assisting families in various home or organizational environments. Repeatable to 12 credits.
- **FMST480** Introduction to Health Psychology Study of the family and the marriage relationship from a multicultural perspective, focusing on diversity and strengths of families, developing and maintaining satisfying intimate relationships, trends in family structure, family dynamics and the conceptual frameworks from which researchers, theoreticians, and clinicians look at families. An integrated study of the causes and geography of natural disasters and those caused by human action. Understanding of extreme event prediction, early warning, and disaster mitigation. Organizations involved in disaster response.
Current psychological theories relating to psychological development, maturity, and decline as evidenced during the adolescent, youth, middle age, and retirement years. Prerequisite: PSYC101.

**PSYC252**  
**V (6 qtr; 4 sem)**  
**The Psychology of Adolescence, Youth, and Aging**  
Distance education—see content above.

**PSYC319**  
**(4)**  
**Stress Management**  
An introduction to stress along with signs and symptoms of stress and identification of stressors in a person's life. Students learn how to increase stress tolerance and implement change.

**PSYC354**  
**(4)**  
**Statistical Reasoning**  
Statistical analysis of data, including parametric and nonparametric techniques, practice in analysis of professional reports and/or journal articles are done with an emphasis on the relationship of statistical thinking, reasoning, and inference to scientific investigation including hypothesis testing. Prerequisite: STAT285 or permission of instructor.

**PSYC364**  
**(4)**  
**Learning and Behavior**  
A study of theories of learning which evaluates connections between learning and behavioral processes within and between humans and animals. Prerequisite: PSYC101.

**PSYC364**  
**V (4.5 qtr; 3 sem)**  
**Learning and Behavior**  
Distance education—see content above.

**PSYC420**  
**g (4)**  
**Human Sexuality**  
A study of the multiple aspects of sexuality within a framework of Christian values. Prerequisite: PSYC101.

**PSYC427**  
**g (3)**  
**Research Methods: Introduction**  

**PSYC428**  
**g (3)**  
**Research Methods: Survey**  
Equips participants with an understanding of the principles undergirding the development of questionnaires and interview schedules; scale construction; administration of survey instruments; coding procedures; and data analysis. Structured around a research project. Corequisite: PSYC354. Prerequisite PSYC427. Recommended for the junior year.

**PSYC429**  
**g (3)**  
**Research Methods: Experimental**  
Examines key principles of experimentation and focuses on how to design, execute, analyze, interpret, and write an experimental research report. Attention given to the interpretation of scientific reports and professional journals. Prerequisites: PSYC354 and PSYC427. Recommended for the junior year.

**PSYC438**  
**(1-4)**  
**Workshop:**  
Provides an opportunity to study in a focused area within the Behavioral Sciences.

**PSYC449**  
**g (4)**  
**Psychopharmacology**  
Examines how current psychotropic drugs affect human perception and behavior and how they are used in clinical evaluation. Prerequisites: PSYC101; BIOL111, 112 or BIOL155, 156.

**PSYC450**  
**g (4)**  
**Social Psychology**  
A study of human behavior within a group context. Included are attitudes, social roles, collective behavior, and the dynamic aspects of human interaction. Prerequisites: PSYC101 and SOCI119 or permission of instructor.

**PSYC454**  
**g (4)**  
**Theories of Personality**  
Integrates subfields of psychology to enhance understanding of the individual personality. Prerequisite: PSYC101.

**PSYC455**  
**g (3)**  
**Treatment of Substance Abuse**  
An overview of prevention and treatment techniques, including specific training in therapeutic techniques, and examines the relation between etiology and treatment. Also discusses treatment evaluation. Prerequisites: PSYC101, SOCI415.

**PSYC458**  
**g (3)**  
**Advanced Theories of Addiction and Treatment**  
Survey, critique, and integration of the main theories currently in use to explain the process and outcome of addictions. Includes biological, psychological, social, and anthropological addiction theory and how these theories affect the development of treatment interventions. Normally offered odd years. Prerequisite: PSYC101, SOCI415.

**PSYC460**  
**g (4)**  
**Psychology of Abnormal Behavior**  
A study of deviant human behavior and theories of causation and remediation. Prerequisite: PSYC101.

**PSYC465**  
**g (4)**  
**Physiological Psychology**  
Introduces the biological bases of behavior. Examination of the neuroanatomical and physiological foundations of such topics as the mind/body problem, the development of language and learning, sexual behavior, recovery from brain damage, and psychopathology. Prerequisite: PSYC101.

**PSYC466**  
**g (4)**  
**Psychology of the Exceptional Child**  
A survey of assessment, remediation, and adjustment for exceptional children and youth who require special education and related services. Various types of exceptionality are explored such as mental retardation, learning disabilities, emotional or behavioral disorders, giftedness, disorders of communication, and impairment of hearing or sight. Prerequisite: PSYC101.

**PSYC469**  
**g (4)**  
**History and Systems of Psychology**  
A study of significant schools, individuals, and theories in psychology, together with their contributions to present knowledge of behavior. Limited to seniors and grads only or permission of instructor. Prerequisite: PSYC101.

**PSYC471**  
**Alt g (4)**  
**Behavior Modification**  
The theory and techniques of behavior change utilizing principles of conditioning. Applications relevant to health-centered and educational settings are emphasized. Prerequisite: PSYC101.

**PSYC476**  
**g (1, 1, 1)**  
**Research Colloquium**  
Faculty and students present various stages of their research projects and hear presentations on basic research-methodological issues. One credit per quarter may be taken over a maximum of 3 quarters. Recommended for the junior year.

**PSYC480**  
**g (1-12)**  
**Practicum**  
Supervised field placement in a human-services setting approved in advance by the department chair. A minimum of 30 hours of fieldwork activity is required for each credit. Consult staff before registering. Open only to departmental majors. Repeatable to 12 credits.

**PSYC486**  
**g (4)**  
**Psychological Assessment**  
Theory and practice in individual and group testing in the areas of intelligence, aptitude, achievement, personality, and interest. Evaluation of tests and other instruments for measurement with a focus on their worth and limitations. Prerequisite: PSYC101, 354.

**PSYC495**  
**(1-4)**  
**Independent Study/Readings/Research/Project in Psychology**  
Set up on a contract basis with no more than 4 credits per quarter. Students may repeat or take any combination of departmental independent study courses up to 8 credits. Consult staff before registering.

**PSYC495**  
**V (1-4.5 qtr; 1-3 sem)**  
**Independent Study**  
Distance education course. Provides an opportunity to work with an instructor on a research project and/or studies in psychology.

**PSYC575**  
**(1-4)**  
**Topics in Psychology**  
Repeatable with different topics.

**PSYC648**  
**g (1-4)**  
**Workshop**  
Provides an opportunity to study in a focused area within the Behavioral Sciences.

**SOCI119**  
**(4)**  
**Principles of Sociology**  
A study of the development of sociology as a social science, some concepts and ideas associated with the study of human behavior, and an overview of the principles, terms, and concepts in the discipline.
SOC1119 V (4.5 qtr; 3 sem)
Principles of Sociology
Distance education—see content above.

SOC1120 (3)
Marriage Dynamics and Growth
An introductory study of the factors leading to a stable marriage relationship and growth within that relationship in contemporary American society.

SOC1306 (1)
Pre-Professional Seminar
An integrative review of specialty areas in the field with some emphasis on current issues and trends. Graduate-school choice and career opportunities at the college and graduate training levels are discussed.

SOC1315 Alt (4)
Criminology
Theories and techniques associated with apprehension, conviction, and detention of individuals who infringe criminal law in this society.

SOC1345 (4)
Juvenile Delinquency
Topics related to modern youth in trouble, sociological analysis of the problems of youth, legal and societal factors involved in delinquency, and some of the remedial measures now being used.

SOC1360 Alt (3)
Introduction to International Development
Focuses on the dilemmas facing industrialized nations and developing nations in coping with severe global inequalities and poverty. Analyzes the popular strategies and explanations used by governments and non-governmental organizations (NGOs) to deal with these challenges.

SOC1375 Alt (4)
Work and Industry in Society
A discussion of human beings at work and how work interfaces with the community. The meaning of work, formal organization, informal group activity, occupational status and mobility, the structure and function of labor unions, and industry-community relationships are examined.

SOC1375 V (4.5 qtr; 3 sem)
Work and Industry in Society
Distance education—see content above.

SOC1410 Alt g (4)
Social Gerontology
A study of aging and ageism in the United States, including demographic trends, societal attitudes, problems of the elderly, and national policies relating to senior citizens in the cultural context of American society.

SOC1415 Alt g (2)
Substance Abuse in American Society
Overview of terminology, historical issues, definitions, epidemiology, consequences and drugs of abuse within an American cultural and historical framework.

SOC1420 Alt g (3)
Medical Socio-Geography
Analysis of the relationship between social characteristics and the incidence and prevalence of disease, as well as geographical determinants of health and medical systems.

SOC1425 g (4)
Racial and Ethnic Relations
A study of the distinctive racial and cultural minorities in American society with an emphasis on problems and adjustments within the larger society.

SOC1427 $ g (3)
Research Methods: Introduction

SOC1428 $ g (3)
Research Methods: Survey
Equips participants to understand the principles underlying the development of questionnaires and interview schedules; scale construction; administration of survey instruments; coding procedures and data analysis. Structured around a research project. Corequisite: PSYC354. Prerequisite: SOC1427. Recommended for the junior year.

SOC1430 g (4)
Women in Contemporary Society
Significant issues related primarily to the concerns of women as members of American society, but also in cross-cultural perspective. Includes such topics as socialization in sex roles, women in the professions, women in minority groups, the feminization of poverty, and women and substance abuse and crime.

SOC1440 g (3)
Sociology of the Family
The family as a social institution, its biological and cultural foundations, and its historic development and changing structure and function. The interaction of marriage and parenthood and some disorganizing factors in contemporary society examined.

SOC1460 g (3)
Death and Grief in Contemporary Society
The study of cultural and societal perspectives on death and personal and interpersonal dynamics of death and dying.

SOC1465 $ g (3)
Research Methods: Ethnography

SOC1470 g (4)
Demography
Overview of the world’s population; spatial dimensions of human populations; fertility concepts, measurements, trends, levels, and explanations; mortality and migration; population structures, life chances; population growth, economic development, and the environment.

SOC1474 Alt g (4)
Social Thought and Theory
The roots of self-conscious social thought and the rise of sociology and anthropology as scientific disciplines in the 19th century. Major theoretical orientations in their fields, proponents, and impact on present-day sociology and anthropology are reviewed.

SOC1476 g (1-3)
Research Colloquium
Faculty and students present various stages of their research projects and hear presentations on basic research methodological issues. Up to 3 credits may be taken over a maximum of 3 quarters. Recommended for the junior year.

SOC1480 g (1-12)
Practicum
Supervised field placement in a human services setting is approved in advance by the department chair. A minimum of 30 hours of fieldwork is required for each credit. Open only to departmental majors. Repeatable not more than 3 times to 12 credits.

SOC1495 (1-4)
Independent Study/Readings/Research/Project in Sociology
Set up on a contract basis with no more than 4 credits per quarter. Students may repeat or take any combination of departmental independent study courses for up to 8 credits. Consult staff before registering.

SOC1525 (2)
National Policy and Substance Use
Begins with a historical overview of America’s national substance-use policy and focuses on current issues, national priorities, and plans for dealing with substance use. Emphasis on components of developing rational national policy.

SOC1530 (3)
Community Needs Assessment and Capacity Mapping
Introduction to various methods for assessing community needs and mapping community capacity to address those needs.

SOC1535 (3)
Program Planning, Budgeting, and Grantsmanship
Building on assessment and capacity mapping, the related topics of program planning, budgeting, and grant writing are presented. Hands-on experience is sought, linking classroom instruction and real community situations.

SOC1540 (2-4)
Workshop/Colloquium in Community Development
Practical issues encountered in implementing community service and international development programs. Usually offered in conjunction with the Summer Institute of Christian Service.

SOC1545 (3)
Program Implementation and Evaluation
Strategies for implementation. Review of various methods of evaluation with emphasis on measuring outcomes and assessing quality in community program development.
BIOLOGY

Price Hall, Room 216
(616) 471-3243
biology@andrews.edu
http://www.biol.andrews.edu

Faculty
John F. Stout, Chair
Gordon J. Atkins
Bill Chobotar
H. Thomas Goodwin
James L. Hayward
Timothy G. Standish
David A. Steen
Dennis W. Woodland
Robert E. Zdor

Academic Programs Credits
BS: Biology 60
- Biomedical
- Botany
- Molecular Biology
- Neurobiology
- Special
- Zoology
Minor in Biology 30
MS: Biology 44
MAT in Biology 16

Each degree offered by the Biology Department includes a common core curriculum and additional courses tailored to students’ special needs. Highly motivated students may compete for the Biology Undergraduate Research Traineeship (BURT) program. For full details, consult the Biology Department.

Undergraduate Programs

Bachelor of Science

All biology majors must complete the following core and cognate courses:

**Biology Core** 34

**Cognate Core** 36 or 39
- CHEM121, 122, 123, 211, 212, 213;
- PHYS151, 152, 153 or 251, 252, 253 or 261, 262, 263.

**General Education Cognates**
- RELT340, RELP400, PSYC101.

**BS: Biology**

Students must complete the biology core, the cognate core, and the requirements for one of the emphases listed below.

**Biomedical Emphasis—24**
Must include ZOOL315, 464, 465, BIOL475; PHTH 417 and 427. BCHM401, 402 must be included in the cognate core.

**Botany Emphasis—26**
Upper-division biology courses; must include a botany course (BOT prefix) drawn from each of the environmental, morphological, and functional biology electives.

**Molecular Biology Emphasis—24-25**
Must include BIOL418, 419, 445, 447, and two of the following courses: BIOL475; BIOL444, 446; ZOOL315; BOT470 or ZOOL464. BCHM401, 402 must be included in the cognate core.

**Neurobiology Emphasis—26**
Upper-division biology courses; must include a zoology course (ZOOL prefix) drawn from each of the environmental, morphological, and functional groups of courses listed below. In addition, ZOOL475 and either PSYC364, 365 or 449 must be taken. BCHM423 must be included in the cognate core.

**Special Emphasis—26**

In situations where students are preparing for a specific job opportunity or a graduate or professional program, the special emphasis may be considered if other degree programs are not adequate. The credits must include one biology course each from the functional, morphological, and environmental courses listed below. Additional credits to reach a minimum of 26 are to be selected from courses in biology or other disciplines in consultation with a Biology Department adviser. Departmental approval must be received before the beginning of the winter quarter of the student’s junior year.

**Zoology Emphasis—26**

Upper-division biology courses; must include a zoology course (ZOOL prefix) drawn from each of the environmental, morphological, and functional groups of courses listed below. In addition, one botany course (BOT prefix) must be included.

**Minor in Biology—30**

BIOL155, 156, 157, 449 and one course each from environmental, morphological, and functional biology electives.

**SENIOR THESIS**

A minimum of 4 credits of BIOL495 or HONS497. Biology majors may elect to complete a minimum of 4 credits of original research in a topic of mutual interest with a Biology Department staff member and present this original work in the form of a senior thesis. This research experience may be supported by a research scholarship.

Graduate Programs

The Biology Department offers courses leading to the Master of Science degree and also cooperates with the School of Education in offering courses leading to the Master of Arts in Teaching degree.

Students are strongly urged to incorporate into their study programs a summer of study at the Marine Biological Station at Rosario Beach, Puget Sound, Washington. During the 8-week summer session, students may earn 10 to 12 credits.

Master of Science