

INTERDISCIPLINARY STUDIES

Academic Programs	Credits
BS: Environmental Sciences	
MA: Interdisciplinary Studies Communication	37-45
MS: Interdisciplinary Studies Mathematics and Physical Sciences	32-40

An increasing number of careers demand that students have integrated, advanced skills and expertise in more than one field of study. Careers in education, leadership, management, and religion require a holistic grasp on philosophical, ethical, and pedagogical interrelationships. The interdisciplinary programs provide a framework where faculty and students can engage in scholarly pursuits which require such interrelationships.

Undergraduate Programs

BS: Environmental Sciences

(616) 471-3240

FAX: (616) 471-6911

woody@andrews.edu

Faculty

Dennis W. Woodland, Biology, *Coordinator*

James L. Hayward, Biology

Øystein S. LaBianca, Anthropology

Gary G. Land, History

Duane C. McBride, Sociology

G. William Mutch, Chemistry

David A. Steen, Biology

The discipline of environmental science deals with the relationships between humans and natural systems. This degree develops an understanding of the relationship between humans and natural systems, expertise in problem solving and communication skills, environmental-management skills, testing and planning abilities, and a strong foundation for advanced study in various professional and basic research fields. It promotes "hands on" as well as basic and theoretical training.

Requirements in seven areas:

Physical/Natural Sciences and Math: BIOL165, 166, 208, 348;

CHEM131, 132, 231, 232, 241, 242, 340; IDSC401, 402;

MATH145, 182.

Religion: RELT100, RELB210, RELT348, RELP400.

Language/Communication: ENGL115, 215, 306; COMM104.

Arts/Humanities: HIST117, 118; IDSC211, 340; PLSC100, 425.

Computer Tools: INFS110 (or pass of competency test)

Social Sciences: ANTH124, ARTH220 or ENGL255; BHSC100, 235; SOC1470; ECON225 or 226.

PE/Wellness: HLED130; two activity courses.

An internship is required, lasting a minimum of three months. Students are encouraged to select other electives with the help of their advisor according to their career interests.

Graduate Programs

The College of Arts and Sciences (in cooperation with other schools) offers graduate programs leading to the Master of Arts: Interdisciplinary Studies (Communication), and Master of Science: Interdisciplinary Studies (Mathematics and Physical Sciences).

ENROLLMENT AND GRADUATION PROCEDURES FOR MASTER OF ARTS/SCIENCE IN INTERDISCIPLINARY STUDIES

Students planning to enroll in the Master of Arts or Master of Science: Interdisciplinary Studies program should note the following procedures:

1. At the time of application for admission, Master of Arts: Interdisciplinary Studies (Communication), students must submit a statement of purpose for seeking the degree in which is explained how the relevant disciplines will be integrated to meet their goals.
2. Upon acceptance and registration, the area coordinator, in conjunction with a graduate advisor, advises the student in developing a plan of study.
3. The student then develops a plan of study and submits it to the area coordinator for approval. In order to coordinate the communication discipline with the secondary discipline, the student identifies 3 faculty members to serve as a supervisory committee; two members from communication and one from the secondary area.
4. Any deficiencies, prerequisites, research, language tools, transfer credits, and residency are discussed to establish the status of the student. All course work and procedures are to be consistent with the student's defined and approved statement of purpose and the general requirements for the MA or MS as defined in this bulletin.
5. This plan of study is the curriculum that the student will follow to complete the requirements for the degree. Any changes in the plan of study must therefore be approved by the graduate advisor, the area coordinator and the committee.
6. All projects must be submitted to the supervising committee at least 2 months prior to graduation. The area coordinator recommends final project approval after the consent of the committee has been obtained.
7. Upon completion of 50% of course work, advancement to degree candidacy is initiated by the student, who completes all the required forms. Forms are submitted to the area coordinator who approves and recommends, to the Records Office and to the Dean of Graduate Studies, the student for graduation.
8. Graduation procedures and degree conferral. See pp. 24-25 for further details.

GENERAL ADMISSION REQUIREMENTS

1. Availability of faculty and facilities, as determined by Area Coordinator for the intended program, as per the student's plan of study.
2. Completion of a baccalaureate degree in one of the areas selected for graduate study.

MA: Interdisciplinary Studies—Communication

Janice Y. Watson, *Area Coordinator*
Nethery Hall, Room 024
(616) 471-3160
commdept@andrews.edu
<http://www.andrews.edu/COMM/>

The Master of Arts: Interdisciplinary Studies—Communication is designed for students who wish to develop advanced-level communication skills in combination with knowledge or skills in another area or areas.

Some of the areas of study that may be combined with communication in preparation for specific careers are international languages, religion, marketing, curriculum and instruction, consumer science, behavioral science, history and political science, health care, English, and the arts.

SPECIFIC ADMISSION REQUIREMENTS

In addition to the admission requirements outlined for the Master of Arts on p. 40 and general interdisciplinary requirements noted above, the following apply:

1. The student must have a minimum of 12 semester credits in communication and adequate prerequisites for the other area or areas of study. Deficiencies must be made up at the beginning of a student's program and such courses are in addition to the regular graduate-degree course work. Students must complete at least 6 undergraduate credits in communication before registering for graduate course work in communication.
2. The student must have sufficient command of the English language to succeed in the proposed program. This requires a minimum *TOEFL* score of 600 average with no section score lower than 60 and a minimum 5.5 score on the *TWE* (Test of Written English) or a minimum *MELAB* average score of 90 with no section lower than 88. No test score may be older than one year.
3. A supervising committee is appointed before students register for their second semester in the program. This committee determines individual requirements for completion with reference to a student's plan of study.

MA DEGREE REQUIREMENTS

1. Comply with the standards outlined in the Graduate Degree Academic Information section of the bulletin.
2. Complete a curriculum consisting of a minimum of 37 credits of course work (see below) approved by the supervising committee.
3. Pass a comprehensive examination over the areas selected for the degree.

Communication Core—12

COMM515, 520 or an approved graduate level research class, 590, 651, 652

Two projects—4-6

Selected from COMM589, 599, 695. Students consult with their advisor and with their committee to determine what combination of the above is most suited to their degree goals.

Additional Communication Courses—9-12

Selected with the approval of the supervising committee.

Additional Courses in Other Area(s)—12-15

Selected with the approval of the other department(s) and the student's supervising committee.

Total MA degree credits required—37-45

MS: Interdisciplinary Studies—Mathematics and Physical Sciences

Robert E. Kingman, *Coordinator*
Haughey Hall, Room 212
(616) 471-3431
physics-info@andrews.edu
<http://www.andrews.edu/PHYS/>

The Master of Science in Interdisciplinary Studies—Mathematics and Physical Sciences is designed for students who wish to acquire a breadth of knowledge which cannot be achieved within any of the disciplines of chemistry, mathematics, or physics. Such a degree may be useful for junior-high or secondary teachers who teach several science subjects, but who do not desire the traditional MAT; for those who wish to develop their skills in the areas of overlap in these disciplines; for those who wish to study the relationships that exist among the disciplines; and for those who wish further preparation for careers in industry or government.

SPECIFIC ADMISSION REQUIREMENTS

Students admitted into the Master of Science: Interdisciplinary Studies—Mathematics and Physical Sciences program must hold a baccalaureate degree with a major in one of the above areas with a cumulative GPA of at least 2.60 (4.00 system) and have earned credit in the following prerequisite basic science courses: CHEM131, 132; CPTR125 (FORTRAN) or CPTR151; MATH141, 142, 286; PHYS241, 242, 271, 272. A student may be admitted with deficiencies in the above courses, but this exception requires the student to take additional credits beyond the minimum 32 credits required.

MS DEGREE REQUIREMENTS

1. Comply with all standards as given in the *Graduate Degree Academic Information* section of the bulletin.
2. Complete a curriculum consisting of 32-40 credits of course work (see below) approved by their supervising committee.
3. Pass a comprehensive examination over the two areas of science (Mathematics, Physics, Chemistry) selected for the degree.

Core Courses—15

MATH405(3), CHEM431, 432 (6)
and CHEM441, 442 (2) or PHYS411(2.5)
and PHYS430 (2.5) and PHYS481 (3),
IDSC526 (2), IDSC698 (1-3) may be repeated up to 6 credits,
IDSC575 (1), undergraduate prerequisites* (0-8), and other
courses recommended by the student's committee.

*Up to 8 credits selected from among the prerequisite basic science courses listed in the specific admission requirements are added to the minimum of 32 credits for the degree.

Total MS degree credits required—32-40

- The student must include at least 12 credits in each of the two disciplines selected for the degree.
- A student must complete a minimum of 16 credits in courses numbered 500 and above.

Courses

(Credits)

See inside front cover for symbol code.

Details of departmental course offerings and course descriptions may be obtained from the department(s) involved. A list of enrollment and graduation procedures is available at the offices of the area coordinators and the Graduate Program Coordinator for the College of Arts and Sciences.

GENERAL AND INTERDISCIPLINARY STUDIES

IDSC200

(3)

Christ in Music and Art

An investigation of religious themes in art and music inspired by the life of Christ. Also discussed are the Christian and the aesthetic experience, as well as principles for understanding and evaluating art and music from the Christian perspective. Not applicable toward a major or minor in Music or Art.

IDSC211

\$ (3)

Creativity and the Arts

Explores the creative process as it relates to the theory and practice and to selected works of literature, music, and the visual arts. Includes approaches to the reading and critical analysis of verbal, visual, and aural texts. Explores the relationship between creativity and Christian values. Emphasis on group projects. Includes a lab.

IDSC237

(3)

The Individual, State, and Marketplace

Politics and economics examined through classic and contemporary sources and Christian and ideological perspectives. What is the good life? What is the purpose of politics, and the best form of government? What are the implications for efficiency and equity of economic systems? Should government be responsible for the well-being of the individual and the economy?

IDSC250

(1)

Career and Life Planning

Techniques of career and life planning. Topics such as the relationship between religious commitment and career choice, decision-making techniques, and individualized exploration of specific career areas are considered. Helps the student choose a career and develop skills for decision making throughout life.

IDSC280, 380

(.5-1)

Cooperative Education in _____ (subject area)

Supervised work experience with a cooperating industry, agency, or institution. The student is supervised by his/her department. At least 175 hours of work required per credit. Repeatable twice. Graded S/U. Prerequisites: Sophomore standing or above and permission of the department chair. Students must apply and be accepted one semester in advance of their planned cooperative education experiences.

IDSC294, 394

(3-15)

Off-Campus Study in _____

For details, see advisor.

IDSC296

(0)

Student Missionary/Taskforce Experience

IDSC298

(variable)

PLA: (Special Topic)

PLA (Prior Learning Assessment) is a process which validates

learning experiences that have occurred outside traditional college/university academic programs. A portfolio of evidence for demonstrating experience and competency justifies and determines the amount of credit granted. Repeatable with different topics.

IDSC310

(3)

Introduction to Western Arts

The stylistic character and cultural climate of the important epochs of Western civilization; the relationship of painting, sculpture, architecture, and music. Discussion periods and lectures illustrated with colored slides, film strips, and recordings.

IDSC321, 322

\$ (3, 3)

Scientific Inquiry I, II

Concepts from physics, chemistry, and biology organized in a sequence involving lab experimentation in the scientific method. Topics include philosophical issues of origins and cosmology, ethical issues, and the environment. Risk vs. Benefit analysis is used in addressing modern technologies. Prerequisites: MATH145, INSF110 or equivalent.

IDSC340

(3)

Environmental Policy

A survey of historic and current environmental issues, pending and existing legislation on the state and federal level, federal land management offices and their differing missions, and competing and non-competing demands from bio-diversity to water usage. Prerequisites: BIOL208 or consent of the instructor.

IDSC401, 402

(1, 1)

Environmental Science Seminar

Discussion and presentations dealing with current or historic topics in environmental science.

IDSC440

(1-4)

Topics: _____

Designed to meet the needs of students with various interests in environmental science. Repeatable in different areas.

IDSC495

(1-3)

Independent Study/Readings

Directed study or readings under the guidance of an instructor. Repeatable. Registration is by permission of the dean in consultation with an instructor.

IDSC498

(variable)

PLA (Special Topic)

PLA (Prior Learning Assessment) is a process which validates learning experiences that have occurred outside traditional college/university academic programs. A portfolio of evidence for demonstrating experience and competency justifies and determines the amount of credit granted. Repeatable with different topics.

IDSC499

(5)

PLA Portfolio Development

The development of a portfolio of evidence to present for Prior Learning Assessment.

IDSC526

(2)

Christian Faith and the Sciences

Discussion of science and epistemology in the context of Christian faith, scientific model building, the church-science interface, and ethical considerations. An interdisciplinary course recommended for all graduate students in the sciences.

- IDSC550** (1-3)
Certification Seminar
A web-based seminar providing an orientation to a topic associated with graduate certification, including an introduction to the most important sources, an overview of salient issues and problems, an inventory of baseline competencies, and a survey of professional opportunities.
- IDSC575** (1)
Mathematics and Science Seminar
Current research topics in mathematics and physical sciences. Attendance at 12 hours of research presentations, a paper, and a presentation of a current research topic.
- IDSC640** (1-3)
Topics: _____
- IDSC640** (1-3)
Topics: Professional Seminar
A web-based seminar providing an orientation to the topic making up the certificate concentration, including an introduction to the most important sources of information about the topic; an overview of salient issues and problems related to the topic; an orientation to communities of researchers and professionals working on the topic; an inventory of baseline competencies of persons professing expertise on the topic; and a survey of opportunities for professional involvement related to the concentration.
- IDSC640** (2)
Topics: Ethics in Development
An ethical framework for the understanding of social transformation. Ethical paradigms are explored, as well as historical examples of how development interventions have generated social change. Focus on contemporary approaches to development, revolution and liberation.
- IDSC650** (0)
Project Continuation
- IDSC660** (0)
Thesis Continuation
- IDSC665** (0)
Preparation for Comprehensive Examinations
- IDSC680** (2)
Field Practicum
Students integrate interdisciplinary course content and theory into practice during a (300-hour) field practicum coordinated with each student's research project and/or concentration (e.g., Food Security) that is the concluding requirement for the concentration. 260 hours may be done with the student's primary employer, but all students must complete one week (40 hours) in an external organization. Students must submit a practicum proposal indicating approval from a sponsoring organization and learning objectives. Upon completion, the student submits a practicum portfolio. Prerequisite: 2 courses in concentration.
- IDSC689** (1-3)
Seminar
Projects, reports and discussions on various subjects corresponding to faculty specialization. Repeatable with different subject matter. Needed to accommodate new topics under different concentrations.
- IDSC690** (1-3)
Independent Study
Individualized reading or research in a specified area under the guidance of an instructor. Repeatable to 6 credits.
- IDSC698** (1-3)
Project
- IDSC698-1** (1)
Project I
A project typically carried out by the Master's degree candidates by means of which the student's ability to synthesize and summarize knowledge pertaining to a given empirical domain is demonstrated. A typical end product might be an "agency profile" or a "fact sheet" about a certain process or problem.
- IDSC698-2** (2)
Project II
A research project typically carried out by a Master's degree candidate in which the student's mastery of the research process is demonstrated. A typical end product might be a community assessment study, a program evaluation study, a best practice benchmarking study, or a problem-solving study. Such projects are normally carried out in lieu of a Master's thesis.
- IDSC699** (4)
Master Thesis