

Interim/Spring 2009 Registration Issue

The official publication for students of the
Department of Biological Sciences, Bethel University

Bio-Notes is published from time to time during the academic year to inform biology and related majors of the activities of the department. Examples of entries include course offerings, upcoming events, and research and other opportunities within or outside of the department. Be sure to read each issue carefully as there are often important announcements presented here. If you have any comments regarding Bio-Notes or if you would like to have something included, see Dr. Hyatt (AC130, b-hyatt@bethel.edu), the Bio-Notes editor this year.

Registration for Interim and Spring 2010 courses is November 9-16. You should have received registration information via e-mail during the week of October 26th.

For current sophomores, juniors, seniors: below is a description of the biology research/seminar/symposium sequence (BIO399, BIO493, BIO495, BIO496, and BIO499)

1. **BIO399 Introduction to Research** (*all junior biology and ENS majors*) is offered in the fall only. If you will be a junior biology or ENS major next year, you must take BIO399 during the fall 2010 semester.
2. **BIO493 Literature Review in Biology** (offered fall and spring). Students that plan on completing a literature review for their senior project should sign up for this course the semester before you plan to graduate. *All students planning on completing a literature review must register for this course.*
3. **BIO496 Biology Research** (offered fall and spring). Students that plan on completing an independent research project for their senior project should sign up for this course at least one semester before you plan to graduate. *All students completing independent research for their senior project must register for this course.* If the project is significant in scope and time commitment, in consultation with your research advisor, you may register for up to 2 credits.
4. **BIO495 Biology Seminar** (offered fall only). *All biology majors of senior standing must register for this course during the fall of their senior year.* May be taken concurrently with BIO493 or BIO496 or BIO499. Prerequisites: BIO399 Introduction to Research, Senior standing.
5. **BIO499 Biology Symposium** (offered fall and spring). *All biology majors of senior standing must register for this course during either the fall or spring of their senior year.* Prerequisites: BIO399 Introduction to Research (cannot be taken concurrently), Senior standing.

6. **BIO499 Biology Symposium—notice for Spring 2010**—There are two sections of BIO499 offered this upcoming spring. Section 1 will focus on the completion and presentation of a literature review, while section 2 will focus on writing and presenting a research project. Please register for the section that matches your senior project.

The following Biology courses will be offered Spring 2010:

INTRODUCTORY COURSES

BIO112D Intro to Molecular/Cellular Biology (Dr. Soneral)

BIO113D Intro to Organismic Biology (Dr. Apostol)

BIO114D Intro to Biodiversity, Ecology, and Adaptation (Dr. Johnson)

CELL AND MOLECULAR AREA

BIO207 Microbiology (Dr. Johnston)

BIO341 Cell Biology (Dr. Doan)

BIO378 Molecular Biology (Dr. Soneral)

ORGANISMAL AREA

BIO201 Human Anatomy (Dr. Shaw)

BIO202 Human Physiology (Dr. DeGolier and Dr. Van Berkomp)

BIO209 Human Anatomy and Physiology (Dr. Winter)

BIO220 Pathophysiology and Pharmacology (Dr. Van Berkomp)

ENVIRONMENTAL AREA

BIO301 Wildlife Ecology and Management (Dr. Petersen)

BIO308 Invertebrate Biology (Dr. Port)

OTHER BIO COURSES

BIO105 Medical Terminology (Dr. Neiwert)

BIO493 Literature Review in Biology (various; required for students completing the literature review option; sign-up per faculty section)

BIO496 Biology Research (option for BIO majors; sign-up per faculty section)

BIO499 Biology Symposium (Dr. Doan)

The following Environmental Studies courses will be offered Spring 2010:

ENS102D Environment and Humanity (Grant Spickelmier)

ENS201 Introduction to Geographic Information Systems (Dr. Petersen)

ENS205L Sustainable Living (Dr. Petersen)

ENS498 Seminar in Environmental Studies (Dr. Petersen)

ENS496 Research in Envir. Studies (Dr. Petersen; required for senior ENS majors)

Interim 2010 Science, Technology, and Society (K) ENS courses

ENS335K Environmental Ethics (3 credits, Dr. Shady) An examination of the intersection of science, society, and technology as they pertain to issues in environmental ethics. The course moves from theory by considering science, society, and technology philosophically to application by concluding with a major research project on an applied issue in environmental ethics involving scientific data and technological choice. Prerequisites: Laboratory Science (D) course, Mathematics (M) course.

GES305K HIV/AIDS: Anatomy of a Pandemic (3 credits, Dr. Doan) Exploration of the history, biology, and social and global impact of the HIV/AIDS pandemic since discovery of the human immunodeficiency virus in 1983. Evaluation of technological advances that have generated anti-retroviral therapies, technological challenges that have prevented vaccine development, and social factors related to availability of medical treatment. Prerequisites: Laboratory Science (D) course; Mathematics (M) course.

Spring 2010 Science, Technology, and Society (K) courses taught by Biology/ENS faculty

GES307K Natural Resources (3 credits, Bryan Anderson) A consideration of the use and management of natural resources and their impact on society and vice versa. Primary resources considered include forests, agricultural land, and geologic/mineral resources. GPS and GIS technologies are spotlighted as key management tools. Prerequisites: Laboratory Science (D) course, Mathematics (M) course.

GES302K Lethal Microbes (3 credits, Dr. Johnston) Despite amazing scientific and technical successes in medicine in the last century, diseases like AIDS, tuberculosis, and malaria confront us today with both national and global healthcare crises. Living with the lethal microbes responsible for these diseases requires careful inquiry about these organisms and their wide impact on human society. Prerequisites: Laboratory Science (D) course, Mathematics (M) course.

Spring 2009 Non-major Biology courses needing Biology teaching assistants

BIO103D Human Biology (Bryan Anderson and Dr. Johnson)
BIO101D Principles of Biology (Dr. Apostol)

Summer Offerings

BIO409 Advanced Gross Anatomy (4 credits, Dr. Shaw). For the undergraduate pre-health professions student. A regional approach to the study of anatomy through supervised and directed student dissection of human cadavers. Identification of detailed structures and understanding their significance to the body. Prerequisite: One course in biology involving some dissection.

AuSable Institute of Environmental Studies (summer). Bethel is one of 60+ Christian colleges and universities affiliated with this environmental institute. Several environmentally oriented courses are offered each summer at their Great Lakes and Pacific Rim campuses. See Dr. Port or Dr. Petersen if interested.

Fall 2010 Off-campus programs

Creation Care Study Program. The CCSP is a high-caliber academic semester abroad connecting Christian faith with complex global issues. They offer two programs during both fall and spring semesters: one in [Belize](#), Central America and one in the [South Pacific](#) (New Zealand and Samoa). See Dr. Johnston or the Office of International Studies for more information.

Interim 2011 Off-campus programs

BIO318K Ecuador and the Galapagos Islands: Natural History and Future Prospects. Travel from base in Quito throughout Ecuador and the Galapagos Islands, surveying the land, climate, plants, animals, homes, transportation, and industries, noting especially the impact of human culture, presence, and activities. Sites include the Amazon rainforest, Andean cloud forests, volcanic mountains, highlands, towns, cities, and the Galapagos Islands. Prerequisite: Laboratory Science (D) course (carries cross credit in environmental studies). Registration starts in the spring of 2009. See Dr. Port or the Office of International Studies for more information.

Au Sable Institute of Environmental Studies (interim at Great Lakes Campus). Courses offered include Winter Stream Ecology and Watersheds, Winter Biology, and Environmental Ethics. Winter Stream Ecology and Winter Biology can be used as environmental area courses for the biology major. See Dr. Port or Dr. Petersen if interested.

Au Sable Institute of Environmental Studies (interim in India). mid-December-mid January. Course focuses on the ecology of India. Dates and further information will be available by mid summer. See Dr. Port or www.ausable.org for more information.

Students: To help you plan for the full year, the following courses are scheduled to be offered next Fall 2010:

INTRODUCTORY COURSES

- BIO112D Intro to Molecular/Cellular Biology
- BIO113D Intro to Organismic Biology
- BIO114D Intro to Biodiversity, Ecology, and Adaptation

CELL/MOLECULAR AREA

- BIO207 Microbiology
- BIO312 Genetics
- BIO386 Biochemistry I

ORGANISMAL AREA

- BIO201 Human Anatomy
- BIO202 Human Physiology
- BIO220 Pathophysiology and Pharmacology
- BIO375 Endocrinology

ENVIRONMENTAL/ECOLOGY AREA

- BIO321 Aquatic Biology
- BIO366 Environmental Plant Biology

OTHER BIOLOGY COURSES

- BIO105 Medical Terminology
- BIO399 Introduction to Research
- BIO493 Literature Review in Biology
- BIO495 Biology Seminar
- BIO496 Biology Research
- BIO499 Biology Symposium

ENS, K and P courses taught by biology faculty scheduled for Fall 2010

ENS102D Environment and Humanity
ENS330K Science, Values, and the Making of Environmental Policy
ENS341K Environmental Writing
ENS399 Introduction to Research
ENS496 Research in Environmental Studies

GES322K Cancer: Science and Society
GES424P Christian Perspectives on Creation and Evolution

Important dates to remember:

Tuesday, November 17	Tri-Beta Fall Banquet (November 2 nd is last day to join to be inducted)
Wednesday, November 18	Biology/ENS Senior Research Symposium
Thur-Fri November 26-27	Thanksgiving Break
Friday, December 11	Last day of classes
Friday, December 18	Commencement

All students: Please visit the first and second floor Departmental Bulletin Boards for information on upcoming summer jobs, internships, and research opportunities in the biological sciences or see the biology department webpage (<http://cas.bethel.edu/dept/biology/index.html>) for links to available internships and jobs. Participation in these professional experiences often increases the likelihood of acceptance into graduate and/or medical schools as well as provides excellent preparation for future employment in university, industrial, and government sectors.