



ACADEMIC ALERT #2008-15

DATE: August 2008

DECISION: College of Arts and Sciences (CAS)

Revised B.A. Biology

Two New Concentrations: General Biology and Health Biology

RATIONALE: Students have two options for focusing their study within the life sciences—General Biology (offering existed but not as a concentration) and Health Biology (new offering).

- The **General Biology Concentration** provides students with well-rounded knowledge of important concepts and research techniques at the ecosystem, organismal, physiological, and molecular levels. It prepares students for graduate study leading to careers in biological research, environmental sciences, and secondary school teaching. Future biology teachers should choose the General Biology Concentration; they are eligible to participate in the B.A. - M.A.T. Dual Degree Program, which is designed to help students make a smooth transition from their undergraduate major to the NLU Master of Arts in Teaching (M.A.T.) Secondary Education Program.
- The **Health Biology Concentration** focuses on biomedical sciences and human health. It requires coursework in (1) basic biological, chemical and physical sciences, and (2) health sciences (e.g., human genetics, immunology, ethical and legal issues in health care). This concentration is designed to provide students with a foundation in health sciences that will enable qualified graduates to move into any of the wide variety of career paths available within the healthcare industry. Many professions (e.g., physician assistant, occupational therapy, physical therapy, public health, forensic sciences, etc.) will require further training at the master's or doctorate level, but others (e.g., entry positions in the pharmaceutical or medical diagnostics industries, in hospital and independent testing laboratories, or in government health laboratories) will not.

APPROVALS: Senate Academic Planning Committee: March 20, 2008

No other approvals are required; this is a Point of Information.

Program Authorizations: The B.A. Biology Program is authorized to be offered in the following Illinois Regions: Chicago; North Suburban; West Suburban and South Metropolitan.

IMPLEMENTATION DATE: Fall Term 2008

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SIGNATURE

Carol R. Melnick, Ph.D.

Vice Provost

Admission Criteria

Admission requirements remain as specified in the catalog for students desiring admittance into the B.A. Biology Program in the College of Arts and Sciences.

New Health Biology Concentration Courses

Three new courses have been developed and one has been revised, with a title change.

LAN325/325L Human Genetics 5QH; option to LAN409/409L Genetics; for core in B.A Biology
LAN430 Cell Biology 5QH; for Health Biology concentration
LAN435 Virology 5QH; for Health Biology concentration

LAN352/352L General Physics II 5QH, for Health Biology concentration
(previously Physical Science II)

Biology Program (B.A.) 180 QH Required

- General Education requirements 60 QH
- Core Courses in Biology 30 QH
- Core Courses in Chemistry 27 QH
- Additional Biology Courses Required for the chosen concentration 20 QH
- Science electives 23 QH
- Additional elective courses to reach the minimum (180 QH) required for graduation. A list of recommended electives is available by contacting the Undergraduate Academic Advising Center (UAAC) or the Natural Science Department. 20 QH
- Forty-five upper level biology courses must be taken at NLU, as follows:
 - General Biology Concentration:** All six core biology core courses, LAN425, and two of the four General Biology Concentration courses must be taken at NLU.
 - Health Biology Concentration:** All six biology core courses, LAN425, LAN412, and LAN426 must be taken at NLU.
- Students must earn a grade of "C" or better in all math and science courses taken to fulfill requirements for the B.A. in Biology.
- Science courses that meet for non-standard durations (e.g., accelerated, field-based, intersession) may not count towards fulfillment of the degree without department approval.

General Education Requirements 60QH

Fields of Knowledge

1. Communications

LAE101 English Composition I 5
LAE102 English Composition II 5
English, Speech, or Drama elective 5

2. Humanities

One philosophy course 5
Recommended are:
LAH120 Logic and Effective Thinking 5
OR
LAH320 Philosophy of Death and Dying 5

3. Fine Arts

A Fine Arts course	5
OR	
LAA110 Intro to Art	2
AND	
LAU110 Intro to Music	2

4. Quantitative Reasoning

LAM310 Pre-calculus	5
OR	
LAM311 Calculus I	5
LAM216 Statistical methods	5
OR	
LAN366 Biostatistics	5

5. Physical and Life Sciences

LAN110/110L General Biology	5
LAN351/351L General Physics I	5

6. Social Sciences

A History course	5
A Social Science course	5

7. Behavioral Science

LAP100 General Psychology	5
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Core Course Requirements; all courses are required for all Biology majors 57 QH

Core Biology Courses (must be taken at NLU) 30 QH

LAN409 Genetics	5
OR	
LAN325 Human Genetics	5
LAN411 Microbiology	5
LAN422 Biological Evolution	5
LAN415 Molecular Genetics	5
LAN430 Cell Biology	5
LAN499B General Biology Seminar	5

Core Chemistry Courses 27 QH

LAN250 General Chemistry I	5
LAN251 General Chemistry II	5
LAN362 Organic Chemistry I	6
LAN363 Organic Chemistry II	6
LAN425 Biochemistry I	5
(must be taken at NLU)	

General Biology Concentration 20 QH
All Four are Required; Two Must be Taken at NLU

Course Code	Course Title	QH
LAN300/300L	Ecology and Conservation	5
LAN302/302L	Zoology	5
LAN303/303L	Botany	5
LAN 350/350L	Physical Geology	5

Health Biology Concentration 20 QH
All Four Courses are Required

Course Code	Course Title	QH
LAN200/200L	Anatomy and Physiology I	5
LAN205/205L	Anatomy and Physiology II	5
LAN412/412L	Medical Microbiology (must be taken at NLU)	5
LAN 426	Biochemistry II (must be taken at NLU)	5

Science Electives for the Concentration in General Biology
Choose courses from below with advisor approval to equal at least 23 QH

Course Code	Course Title	QH
LAN106/106L	Introduction to Scientific Thought	5
LAN200/200L	Anatomy and Physiology I	5
LAN205/205L	Anatomy and Physiology II	5
OR	OR	OR
LAN304/304L	Human Physiology	5
LAN305/305L	Animal Behavior	3 or 5
LAN410	Fundamentals of Immunology	1, 4, or 5
LAN412/412L	Medical Microbiology	5
LAN420	Tropical Marine Biology	5
LAN435	Virology	5
LAN491/491L	Field Ecology Research Experience	5

Science Electives for the Concentration in Health Biology
Choose courses from below with advisor approval to equal at least 23 QH

Course Code	Course Title	QH
LAN102	Medical Terminology (formerly AHG 102 Medical Terminology)	2
LAN352/352L	General Physics II (formerly Physical Science II)	5
LAN410	Fundamentals of Immunology	1, 4 or 5
LAN 435	Virology	5
AHA440*	Health Care Systems	4
AHA442*	Ethical and Legal Issues in Health Care	4
AHC 420	Pathology.	5
AHE430*	Educational Delivery in Health Care	4
AHG 400	Overview of Health Care Delivery	4

*A field course offered by the College of Management and Business

Implementation

The two new concentration need to be entered in Banner and CAPP.

The two new concentrations need to be incorporated in marketing materials, and added to NLU's website.

Issues regarding the three field courses (AHA 440, AHA 442, and AHE 430) in the College of Management and Business, that can serve as electives, still need to be resolved. For example, allowing "on-campus" students to take "field" courses might inadvertently cause financial aid problems due to differing term dates and lengths. Or new UCOs would need to be written and approved that would be 10-week, on-campus versions with the LAN prefix.

The new catalog copy will be written and submitted to the Vice Provost and Assistant Registrar for Schedules and Catalogs to ensure that catalog copy is prepared and ready for the next catalog, 2009-2010.