## Requirements towards satisfying the MAJOR & MINOR in Interdisciplinary Science in the General track or an area of focus: Biology of Health, Science of the Environment, History & Philosophy of Science

**GENERAL INTERDISCIPLINARY SCIENCE TRACK**
(Course may count only once towards satisfying a requirement)
**Students must earn a grade of C or higher in all courses taken in order to meet the requirements for the BA in Interdisciplinary Science.**

**Required Courses**
LSCI 2661 Energy and Sustainability
LMTH 2050 Math Models in Nature
LSCI 3020 Methods of Scientific Inquiry

**Four Foundation Courses**
Required:
LSCI 2040 Genes, Environment & Behavior
LSCI 2020 Constructing the Laws of Nature
LSCI 2820 Chemistry of Life

Select one from the list below
LSCI 2830 Biology of Beauty, Sex & Death
LSCI 2840 Science & Politics of Infectious Diseases
LSCI 2030 Quantum Universe
UENV 2400 Principles of Ecology

**One Additional Math Course -** Select one from the list below
LMTH 2060 Ethnomathematics
LMTH 2030 Game Theory
LMTH 2030 Statistics with SPSS
LMTH 3101 Discrete Math
LMTH 3006 Math Tools for Natural and Social Sciences
LMTH 2040 Calculus
LMTH 2045 Calculus II

**One Laboratory Course** - Select one from the list below
LSCI 2500 Water Quality Lab
LSCI 3030 Biodiversity Achieved Lab
UENV 3450 Ecology Lab

**Two Intermediate/Advanced Level Courses -** Select two from the list below
LSCI 3037 Cell Biology
LSCI 3028 Science & Politics of The Human Genome
LSCI 3035 Space, Time & Einstein
LSCI 3305 Chemistry of the Atmosphere
LSCI 3050 Ecology II: Urban Ecosystems
LMTH 3101 Discrete Math
LMTH 3006 Math Tools for Social and Natural Sciences
LSCI 4050 Science & Politics of Cancer
LSCI 3301 What is Science?
LSCI 4100 Nanotechnology
LSCI 4404 Epidemics and International Responses

**One Additional Advanced Level Course -** Select one from the list below
LSCI 4050 Science & Politics of Cancer
LSCI 3028 Science & Politics of The Human Genome
LSCI 3301 What is Science?
LSCI 4100 Nanotechnology
LSCI 4404 Epidemics and International Responses

**One Elective Course**
Any LSCI or LMTH course that has not applied towards satisfying a requirement above.
Note: The following courses do not satisfy this elective requirement: Brain, Biology & Behavior, From the Rainforest, Quantitative Reasoning, Algebra, Statistics (3 credits)

**BIOLOGY OF HEALTH TRACK**
(Course may count only once towards satisfying a requirement)
**Students must earn a grade of C or higher in all courses taken in order to meet the requirements for the BA in Interdisciplinary Science.**

This track focuses on the biology of health and emphasizes the importance of research in the natural sciences in understanding health issues and in the development of policies and solutions. After completing courses in the natural sciences (genetics, chemistry, cell biology) and social sciences (ethics, psychology, history, writing, and anthropology) students will be positioned to pursue: graduate study in health education, public health, medical anthropology, science journalism, history and philosophy of science, health economics; work at a scholarly institute focused on policy making or bioethics research; or work for NGOS/ NPOs interested in promoting health as a human right. By completing traditional natural science and mathematics courses at other institutions, students can pursue training for more specialized programs. For instance students interested in medical school or genetic counseling can complete the Biology of Health track and apply to post-bac programs or, as sophomores, complete premed requirements through Mount Sinai's early admission into medical school program designed for students in the humanities.
http://www.mountsinai.net/theschool/eap.shtml

The courses listed below satisfy the minimal requirements, and students are encouraged to complete a wide range of electives beyond these requirements and to consult with their Interdisciplinary Science academic advisor to be assured that the appropriate sequence of elective courses, internships, and senior work project are chosen for their desired post-graduate experiences.

**Required Courses:**
LSCI 2661 Energy and Sustainability
LMTH 2050 Math Models in Nature
LSCI 3009 Methods of Scientific Inquiry

**Required Mathematics**
LMTH 2525 Statistics with SPSS

**Required Laboratory Course**
LSCI 3211 Biodiversity Achieved

**Required Four Foundation Courses** (*Science & Politics of Infectious Diseases may count in some instances)*
LSCI 2040 Genes, Environment, and Behavior
LSCI 2838 Biology of Beauty Sex and Death
LSCI 2006 Chemistry of Life
LSCI 2000 Constructing Laws of Nature

**Three Intermediate/Advanced Courses (one must be 4000 level)**
LSCI 3037 Cell Biology
LSCI 4050 Science & Politics of Cancer
LSCI 4000 Science & Politics of Genomes
LSCI 4100 Nanotechnology
LSCI 4000 What is Science?

**One Elective Course**
LSCI 2045 Genes and Race
LSCI 2035 Science and Politics of Infectious Diseases
LSCI 2039 Science and Politics of Stem Cells
LSCI 4510 Epidemics and International responses
LSCI 4501: Global Perspectives on Reproductive Health
LSCI 4502: Health Inequality and Development
LSCI 4503: Intro to Epidemiology: Cases Studies in Global Health
LSCI 4505: Health Policy & Advocacy **SCIENCE OF THE ENVIRONMENT TRACK**
(Course may count only once towards satisfying a requirement)
**Students must earn a grade of C or higher in all courses taken in order to meet the requirements for the BA in Interdisciplinary Science.**

This track focuses on the science of environmental issues and emphasizes the importance of research in the physical sciences in understanding environmental issues and in the development of policies and solutions. Students who choose this track will be advised to take a series of courses in the natural sciences (chemistry, biology, and physics), mathematics, economics, urban studies and policy.

With this background students will be competitive for careers and graduate programs in environmental studies, policy, management, education, law, and business.

The courses listed below satisfy the minimal requirements, and students are encouraged to complete a wide range of electives beyond these requirements and to consult with their Interdisciplinary Science academic advisor to be assured that the appropriate sequence of elective courses, internships, and senior work project are chosen for their desired post-graduate experiences.

**Required Courses:**
LSCI 2661 Energy and Sustainability
LMTH 2155 Math Models in Nature
LSCI 3009 Methods of Scientific Inquiry

**Four Foundation Courses**
Required:
LSCI 2040 Genes, Environment, and Behavior
LSCI 2006 Chemistry of Life
LSCI 2000 Constructing Laws of Nature

Select one from the list below
LSCI 2838 Biology of Beauty Sex and Death
LSCI 2840 Science & Politics of Infectious Diseases
LSCI 2050 Ecology I

**One Additional Math Course -** Select one from the list below
LMTH 2030 Statistics with SPSS
LMTH 2040 Calculus
LMTH 2045 Calculus II

**One Laboratory Course**
LSCI 2500 Water Quality Lab

**Three Intermediate/Advanced Courses (one must be 4000 level)**
LSCI 3305 Chemistry of the Atmosphere
LSCI 4100 Nanotechnology
LSCI 3301 What is Science?
LSCI 3211 Biodiversity Achieved

**One Elective Course**
Any LSCI or LMTH course that has not applied towards satisfying a requirement above.
Note: The following courses do not satisfy this elective requirement: Brain, Biology & Behavior, From the Rainforest, Quantitative Reasoning, Algebra, Statistics (3 credits)

**HISTORY & PHILOSOPHY OF SCIENCE TRACK**
(Course may count only once towards satisfying a requirement)
**Students must earn a grade of C or higher in all courses taken in order to meet the requirements for the BA in Interdisciplinary Science.**

The focus of this track is on courses that emphasize the historical development of science, the philosophical foundations of scientific thought, and the relationship between science and culture. There are many graduate programs in the history and philosophy of science - usually administered by the History or Philosophy departments rather than the science program. As a result, students seeking to

pursue graduate work in this field should strive to build a broad background in history and/or philosophy courses outside of Interdisciplinary Science in addition to their required science courses. The topics emphasized in this track may also serve the needs of dual-concentrators who wish to combine their studies of science with their work in other concentrations such as Philosophy, Social and Historical Inquiry, or Writing. Students electing this track may also be interested in a program such as Cornell's graduate degree in "Science & Technology Studies." The field of "science studies" is concerned with the study of science and technology as historical and cultural products. Applicants to the program have a variety of backgrounds in the basic sciences, engineering, history, philosophy, sociology, or politics.

The courses listed below satisfy the minimal requirements, and students are encouraged to complete a wide range of electives beyond these requirements and to consult with their Interdisciplinary Science academic advisor to be assured that the appropriate sequence of elective courses, internships, and senior work project are chosen for their desired post-graduate experiences.

**Required Courses**
LSCI 2661 Energy & Sustainability
LMTH 2155 Math Models of Nature
LSCI 3009 Methods of Scientific Inquiry

**Four Foundation Courses**
LSCI 2000 Constructing Laws of Nature
LSCI 2030 Quantum Universe
LSCI 2040 Genes, Environment & Behavior
LSCI 2006 Chemistry of Life

**One Additional Math Course -** Select one from the list below
LMTH 2060 Ethnomathematics
LMTH 2030 Game Theory
LMTH 2030 Statistics with SPSS
LMTH 3101 Discrete Math
LMTH 3006 Math Tools for Natural and Social Sciences
LMTH 2040 Calculus
LMTH 2045 Calculus II

**One Laboratory Course** – Select one from the list below
LSCI 2500 Water Quality Lab
UENV 3450 Ecology Lab
LSCI 3030 Biodiversity Achieved Lab

**Two Intermediate/Advanced Level Courses**
LSCI 3035 Space, Time & Einstein
LSCI 3301 What is Science?

**One Additional Advanced Level Course -** Select one from the list below
LSCI 4100 Nanotechnology
LSCI 4050 Science and Politics of Cancer

**One Elective Course**
Any LSCI or LMTH course that has not applied towards satisfying a requirement above.
Note: The following courses do not satisfy this elective requirement: Brain, Biology & Behavior, From the Rainforest, Quantitative Reasoning, Algebra, Statistics (3 credits)

**REQUIREMENTS FOR SATISFYING THE MINOR IN INTERDISCIPLINARY SCIENCE**
(Course may count only once towards satisfying a requirement)
**Students must earn a grade of C or higher in all courses taken in order to meet the requirements for the Minor in Interdisciplinary Science.**

**Required**: Energy & Sustainability

**Two Foundation Courses** (select two from the list below)

LSCI 2040 Genes, Environment & Behavior
LSCI 2020Constructing Laws of Physics
LSCI 2006 Chemistry of Life
LSCI 2840 Science & Politics of Infectious Diseases
LSCI 2830 Biology of Beauty, Sex & Death
LSCI 2030 Quantum Universe
UENV 2400 Principles of Ecology

**One Math Course** (select one from the list below)
LMTH 2050 Math Models in Nature
LMTH 2060 Ethnomathematics
LMTH 2030 Game Theory
LMTH 2030 Statistics with SPSS
LMTH 3101 Discrete Math
LMTH 3006 Math Tools for Natural and Social Sciences
LMTH 2040 Calculus
LMTH 2045 Calculus II

**One Laboratory Course –** Select one from the list below
LSCI 2500 Water Quality Lab
UENV 3450 Ecology Lab
LSCI 3030 Biodiversity Achieved Lab

**One intermediate/advanced level course –** Select one from the list below
LSCI 3037 Cell Biology
LSCI 3035 Space, Time & Einstein
LSCI 3305 Chemistry of the Atmosphere
LSCI 3050 Ecology II: Urban Ecosystems
LMTH 3101 Discrete Math
LMTH 3006 Math Tools for Social and Natural Sciences
LSCI 3028 Science & Politics of The Human Genome
LSCI 4050 Science & Politics of Cancer
LSCI 3301 What is Science?
LSCI 4100 Nanotechnology
LSCI 4404 Epidemics and International Responses