

Integrative Science (ISCI) Major Requirements**LEVEL 1: Building a Scientific Foundation (16 Credits from at least 2 disciplines)**

All courses are 4 credits unless noted (12 credits must be completed with a GPA of 2.00 or higher to be accepted into the major).

_____ BIOL 101	_____ CSCI 130 or 140 or 150	_____ MATH 120
_____ BIOL 201	_____ CSCI 160	_____ MATH 124
_____ BIOL 202	_____ CSCI 200	_____ NUTR 125
_____ BIOL 216	_____ CSCI 239	_____ NUTR 225/223
_____ CHEM 125 + 201	_____ CSCI 230	_____ PHYS 105 or 191
_____ CHEM 250 + 202	_____ ENVR 175	_____ PHYS 106 or 200
_____ CHEM 251 + 203	_____ ENVR 275	_____ PHYS 211
_____ CHEM 255 + 205	_____ MATH 118 or 119	

Students interested in taking upper level Physics courses should take the calculus-based Physics sequence:

PHYS 191 + MATH 119 (Fall Semester)

PHYS 200 + MATH 120 (Spring Semester)

LEVEL 2: First Integration Point (2-4 Credits)

Students will have an opportunity to construct a written analysis of an integrative scientific question or issue of their choice. They will explain and demonstrate the important role of oral communication. They will demonstrate their quantitative and information literacy to investigate this scientific issue and effectively synthesize concepts, scientific processes, and/or theories from at least two scientific disciplines to help understand and/or solve the scientific question or issue. Students should be prepared for active discussion and research using primary literature. Prerequisites: at least 16 credits from the Natural Science division in at least two different disciplines or permission of the instructor.

Must be taken in sophomore year unless permission is granted by chair.

_____ ISCI 201 (2) spring only

_____ ESSS 273 Health and Fitness (4) fall only

LEVEL 3a: Building Depth and Breadth (20 credits)

No more than 12 credits from these 20 credits can be taken from one discipline. **Note that some courses may have prerequisites in addition to the courses taken in Level 1. It is the student's responsibility to verify that all prerequisites are complete prior to enrolling in upper division coursework.**

Biology (All 300 level BIOL courses excluding BIOL373A)

Exploring Medicine

_____ BIOL 3_____

_____ BIOL 3_____

_____ BIOL 3_____

Chemistry (All 300 level CHEM courses excluding

CHEM390 Science Ethics)

_____ CHEM 3_____

_____ CHEM 3_____

_____ CHEM 3_____

_____ CHEM 3_____

_____ CHEM 3_____

_____ CHEM 3_____

Computer Science (All 300 level CSCI courses)

_____ CSCI 3_____

_____ CSCI 3_____

_____ CSCI 3_____

Mathematics (All 300 level MATH courses)

_____ MATH 3_____

_____ MATH 3_____

_____ MATH 3_____

Integrative Science

_____ ISCI 310 (Applied Pathophysiology)

Physics (All 300 level PHYS courses)

_____ PHYS 3_____

_____ PHYS 3_____

_____ PHYS 3_____

Exercise Science

_____ ESSS306 (Kinesiology)

_____ ESSS308 (Exercise Physiology)

Nutrition

_____ NUTR 301 (Diet Health and Disease
Prevention)

_____ NUTR 302 (Physiology of Weight Regulation)

_____ NUTR 320 (Micronutrient Metabolism and
Nutritional Supplementation) (2 cr)

_____ NUTR 323 (Public Health Nutrition)

_____ NUTR 326 (Global Health and Nutrition)

_____ NUTR 330 (Nutritional Biochemistry)

Environmental Studies

_____ ENVR 300 (ENVR Topics--Natural Science):
300Q (Env. Health)

_____ ENVR 311 (Intro to GIS)

_____ ENVR 331 (Science of Global Climate Change)

_____ ENVR 333 (Sustainable Agriculture)

LEVEL 3b: Building Depth and Breadth: Additional coursework (8 credits)

An additional eight credits of upper division (300 level) coursework must be completed by the student. Numerous courses may count towards this requirement. The student may complete an additional eight credits of *natural science coursework*, which may or may not be included in the list above. In addition, students are encouraged to complete these credits with coursework from outside the natural science division IF THE COURSEWORK IS COHERENT WITH THE STUDENT'S TRACK, CONCENTRATION OR AREA OF STUDY. All upper division elective courses must be selected in consultation with the faculty advisor and approved by the Integrative Science chair.

____ XXXX 3 ____
 ____ XXXX 3 ____

LEVEL 4: Second Integration Point (2-4 Credits)

Students must complete one two or four-credit course intended to develop the ability to integrate and apply information from at least two disciplinary fields in order to solve a problem or explore complex issues in an original way. Developing effective written and oral communication and inquiry/analysis skills will also be a component of this course. ~~These courses cannot also be counted toward the level 3a or level 3b requirement.~~

- ____ ISCI 301 (2) fall only
- ____ ISCI 310 Applied Pathophysiology (4) fall only
- ____ NUTR 330 Nutritional Biochemistry and Assessment (4) fall only
- ____ ESSS 306 Kinesiology (4) fall only
- ____ ESSS 308 Exercise Physiology (4) spring only

LEVEL 5: Integrated Science Capstone (4 Credits)

In completing the Integrative Science Capstone, students will apply skills, abilities, theories, and/or methodologies gained through the Integrative Science curriculum to a new situation in order to solve a difficult problem or explore a complex issue in an original and interdisciplinary way, and effectively communicate the outcomes and implications of their work.

- ____ ISCI 378 (4) spring only
- ____ BIOL 397 Internship (4)
- ____ ESSS 397 Internship (4)

Should students apply for distinction in the major, they would enroll in one of the following sets of research. They must obtain an A for distinction in this coursework:

- ____ ESSS Research
 - ESSS 316 Research Methods (2) spring junior year
 - ESSS 395 Research Seminar I (1) fall senior year
 - ESSS 396 Research Seminar II (1) spring senior year
- ____ NUTR Research
 - NUTR 380 Research Seminar I (2) spring junior year (fall senior year if abroad)
 - NUTR 381 Research Seminar II (2) fall senior year
 - NUTR 396 Nutrition Research Capstone (2) spring senior year

*** No more than 12 credits can be counted toward another major or minor.**

	Year 1	Year 2	Year 3	Year 4
Fall				
Spring				

Common Curriculum requirements:

FYS I & FYS II ES EL Theo 111 FA HM & HM (different departments) FAE
 GL 111, 112, 211 GE IC TU NS MT SS