INTEGRATED SCIENCE MAJOR

Students must also complete the Undergraduate Registration Requirement (https://catalogs.northwestern.edu/undergraduate/requirements-policies/undergraduate-registration-requirement/) and the degree requirements of their home school.

Course  Title

Major Requirements (25.7 units)

First Year

COMP_SCI 111-0  Fundamentals of Computer Programming
CHEM 171-0  Advanced General Inorganic Chemistry
& CHEM 181-0  and Advanced General Inorganic Chemistry
& CHEM 172-0  Laboratory
& CHEM 182-0  and Advanced General Physical Chemistry
MATH 281-1  Accelerated Mathematics for ISP First Year
& MATH 281-2  and Accelerated Mathematics for ISP First Year
& MATH 281-3  and Accelerated Mathematics for ISP First Year
PHYSICS 125-1  General Physics ISP
& PHYSICS 125-2  and General Physics for ISP
& PHYSICS 125-3  and General Physics for ISP
& PHYSICS 126-1  and Physics for ISP Laboratory
& PHYSICS 126-2  and Physics for ISP Laboratory
& PHYSICS 126-3  and Physics for ISP Laboratory

Second Year

BIOL_SCI 240-0  Biochemistry, Molecular and Cell Biology - 1 for ISP
& BIOL_SCI 241-0  and Biochemistry, Molecular and Cell Biology - 2 for ISP
BIOL_SCI 232-0  Molecular and Cellular Processes Laboratory
or BIOL_SCI 221-0  Cellular Processes Laboratory
BIOL_SCI 233-0  Genetics and Molecular Processes Laboratory
or BIOL_SCI 220-0  Genetics and Molecular Processes Laboratory
CHEM 212-1  Organic Chemistry
& CHEM 232-1  and Organic Chemistry Laboratory I
CHEM 348-0  Physical Chemistry for ISP
EARTH 350-0  Physics of the Earth
MATH 381-0  Fourier Analysis and Boundary Value Problems for ISP
MATH 382-0  Complex Analysis for ISP
PHYSICS 339-1  Quantum Mechanics
& PHYSICS 339-2  and Quantum Mechanics

Third Year

ASTRON 331-0  Astrophysics ISP
BIOL_SCI 323-0  Bioinformatics: Sequence and Structure Analysis
or BIOL_SCI 341-0  Population Genetics
or BIOL_SCI 361-0  Protein Structure and Function
or BIOL_SCI 390-0  Advanced Molecular Biology
NEUROSCI 311-0  Biophysical Analysis of Neurons for ISP
PHYSICS 337-0  Physics of Condensed Matter
or PHYSICS 339-3  Particle and Nuclear Physics
STAT 383-0  Probability and Statistics for ISP

Honors in Integrated Science

Students eligible to pursue honors based on their overall performance in ISP courses will be so informed no later than fall quarter of senior year. Those who choose to pursue honors must then enroll with a faculty research adviser in at least 2 quarters of Undergraduate Research either in ISP (INTG_SCI 398-0) or an ISP-affiliated department (some of these credits may count toward the major; see the program director for details). At the beginning of May eligible students submit a senior thesis describing their research activities for consideration by the ISP committee.

Students whose theses and grades meet program criteria are recommended to the college for graduation with honors. For more information consult the program director and see Honors in the Major (https://catalogs.northwestern.edu/undergraduate/arts-sciences/#academicoptionstext).