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** Advanced General Inorganic Chemistry
- & **CHEM 172-0** Laboratory
- & **CHEM 182-0** Advanced General Physical Chemistry
  
- **MATH 281-1** Accelerated Mathematics for ISP First Year
- & **MATH 281-2** Accelerated Mathematics for ISP First Year
- & **MATH 281-3** Accelerated Mathematics for ISP First Year

**Second Year**

- **BIOL_SCI 240-0** Biochemistry, Molecular and Cell Biology - 1 for ISP
- & **BIOL_SCI 241-0** Biochemistry, Molecular and Cell Biology - 2 for ISP
- **BIOL_SCI 232-0** Molecular and Cellular Processes Laboratory
- **BIOL_SCI 239-0** Genetics and Molecular Processes Laboratory
- **CHEM 212-1** Organic Chemistry
- & **CHEM 232-1** 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** 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

**With permission, Undergraduate Research (INTG_SCI 398-0) may be substituted for up to 3 of the following courses:**

- **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
- **MATH 382-0** Complex Analysis for ISP

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**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).