



IUB General Education Common Ground

Foundations

- English Composition (EC) 3
- Mathematical Modeling (MM) 3

Breadth of Inquiry

- Arts & Humanities (A&H) 6
- Social & Historical (S&H) 6
- Natural & Mathematical Sciences (N&M) 5-6

World Languages (WL) & Cultures (WC) 6

Additional School Requirements

English Composition with a C or higher

- ENG-W 131, W170, CMLT-C 110 (all are EC)

Intensive Writing

- One College-approved Intensive Writing course

Natural Science

- Twelve credit hours chosen from PSY-P 155, PSY-P 211, COGS-Q 370 and/or any natural and mathematical science course from: AST, BIOL, CHEM, GEOL, and PHYS (most are also N&M)

English Composition and Intensive Writing (6 credits)

- ENG-W 131, ENG-W 170, or CMLT-C 110
(EC; C or higher required to fulfill School requirement)
- _____ Intensive Writing (see advisor for approved list)

Math Modeling (3 credits)

Satisfied by CS major Math requirement (see reverse: MATH-M 211, C- or higher, MM)

Arts & Humanities and Social & Historical (12 credits)

Select at least two courses for at least 6 credits from each area
Arts & Humanities (A&H)

- _____
- _____

Social & Historical (S&H)

- _____
- _____

Natural Sciences (12 credits)

Twelve credit hours chosen from PSY-P 155, PSY-P 211, COGS-Q 370, and/or any natural and mathematical science course from: AST, BIOL, CHEM, GEOL, and PHYS (most are also N&M)

- _____
- _____
- _____
- _____

World Languages and Cultures (3-14 credits) choose one of the following options:

1. Language Study: Two world language courses (same language) at the second year level, or equivalent proficiency (WL)
2. World Cultures: Two approved World Cultures courses (WC)
3. International Experience: An approved study abroad program for at least 6 credit hours outside of the US (WL/WC)

- _____
- _____

<http://gened.iub.edu/>

Strongly recommended, but not required (1 credit hour):

INFO-Y 100 Our academic/career advisors will help students explore the fields of Informatics and Computer Science, and the multiple careers available to students majoring in these fields. Students will engage in activities that help them to identify their personalities, values and interests and identify how they impact their academic and career choices. Ultimately, they will evaluate their personal, academic, and career goals, and cultivate their Personal Development Plan.

- ✓ You must receive a grade of C- or better in all major and minor requirements, and your GPA must be at least 2.0, both in your major and overall.
- ✓ A grade of C or higher is required in English Composition for admission to the School of Informatics and Computing.
- ✓ Please note that many courses have prerequisite requirements. It is the student's responsibility to fulfill these requirements.
- ✓ These requirements are for informational purposes only and subject to revision. Refer to the SoIC Undergraduate Bulletin for detailed information on these requirements and official graduation requirements.

Computer Science Major

Students must complete a minimum of 45 credit hours of computer science coursework, including the core, an area of specialization, and CS electives. At least 26 of the 45 hours must be at the 300 level or above. Minimum grade of C- in all CS/Math courses.

Computer Science Core Courses (15 credits)

- | | | | | |
|--------------------------|------|--------|---|---|
| <input type="checkbox"/> | CSCI | C/H211 | Introduction to Computer Science | 4 |
| <input type="checkbox"/> | CSCI | C212 | Introduction to Software Systems (P:CSCI-C211) | 4 |
| <input type="checkbox"/> | CSCI | C241 | Discrete Structures for Computer Science (P: CSCI-C211; R: MATH-M211) | 3 |
| <input type="checkbox"/> | CSCI | C343 | Data Structures (P: CSCI-C212; P/C: CSCI-C241) | 4 |

Specialization (Choose ONE Area – 13 to 16 credits- see Bulletin for Prerequisite)

Intelligent Systems Specialization

- | | | | | |
|--------------------------|---|------|---|-----|
| <input type="checkbox"/> | CSCI | B351 | Introduction to Artificial Intelligence and Computer Simulation, or | 3 |
| | CSCI | B461 | Database Concepts | 3-4 |
| <input type="checkbox"/> | Three of: CSCI B351 (if not used above), CSCI B355, CSCI B461 (if not used above), CSCI B490, CSCI P462, INFO I427, INFO I485, LING L445 | | | 9 |
| <input type="checkbox"/> | One of: CSCI B401 Fundamentals of Computing Theory, CSCI B403 Introduction to Algorithm, Design and Analysis, or CSCI P415 Introduction to Verification | | | 3 |

Foundations

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|--------------------------|---|------|----------------------------------|-----|
| <input type="checkbox"/> | CSCI | B401 | Fundamentals of Computing Theory | 3 |
| <input type="checkbox"/> | CSCI | B403 | Algorithm Design and Analysis | 3 |
| <input type="checkbox"/> | One of: CSCI P415 Introduction to Verification or CSCI B461 Database Concepts | | | 3 |
| <input type="checkbox"/> | Two of (in addition to BS Math requirement): CSCI C311, CSCI P423, MATH M453, MATH M455, MATH M301 or M303, MATH M365, MATH M471, MATH M584, or STAT S320 | | | 6-8 |
| | | | Introduction to Statistics | 6-8 |

Programming Languages

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|--------------------------|---|------|-----------------------|-----|
| <input type="checkbox"/> | CSCI | C311 | Programming Languages | 4 |
| <input type="checkbox"/> | Two of: CSCI C335, CSCI P423 (Recommended), CSCI P436, CSCI B441, CSCI B490 | | | 6-8 |
| <input type="checkbox"/> | One of: CSCI B401, CSCI B403, CSCI P415 | | | 3 |

Systems

- | | | | | |
|--------------------------|---|------|---------------------|-----|
| <input type="checkbox"/> | CSCI | C335 | Computer Structures | 4 |
| <input type="checkbox"/> | One of: P436 (Recommended), P438, P442, or P545, | | | 3-4 |
| <input type="checkbox"/> | One of: CSCI B443, CSCI B490, CSCI P434, CSCI P436, CSCI P438, CSCI P442, CSCI P545 | | | 3-4 |
| <input type="checkbox"/> | One of: CSCI B401, CSCI B403, CSCI P415 | | | 3 |

CS Electives (remaining credits to reach a minimum of 45 in the major; see your advisor, AAR, or appropriate Bulletin for an approved list of courses)

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|--------------------------|--|--|--------------------------|---|
| <input type="checkbox"/> | CSCI C, P, H, or B courses 200 or above | | <input type="checkbox"/> | INFO-I 101 (before or concurrent with CSCI-C 212) |
| <input type="checkbox"/> | CSCI-Y 390, Y391, Y399, Y499 (at most 6 hours) | | <input type="checkbox"/> | INFO-Y 395 Career Development (at most 1 hour) |
| <input type="checkbox"/> | CSCI-H 498 Honors Seminar (at most 1 hour) | | <input type="checkbox"/> | INFO-I 494-I 495 Capstone Project |
| <input type="checkbox"/> | MATH-M 471 and 472 | | | |

Mathematics Requirements (10-12 credits)

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|--------------------------|------|------|--|---|
| <input type="checkbox"/> | MATH | M211 | Calculus I (or equivalent proficiency) | 4 |
|--------------------------|------|------|--|---|

Two additional mathematical science courses from the following: MATH-M 212, MATH-M 213, MATH-M 300 and 400 level courses, MATH-T 336, MATH-T 403, ECON-E 370, PHIL-P 251, P 350, P 352, STAT S320. Courses cross-listed as MATH and CSCI and taken to fulfill a CS requirement will not count here.

- | | |
|--------------------------|-------|
| <input type="checkbox"/> | _____ |
| <input type="checkbox"/> | _____ |