HONORS INTEGRATIVE BIOLOGY CONCENTRATION

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Integrative Biology, Honors Integrative Biology Concentration

Honors Integrative Biology is designed for superior students wishing to pursue an intensive program in integrative biology and, concurrently, to gain a strong background in the physical sciences and mathematics. Admission is by interview in spring of the freshman year prior to registration for fall. An overall 3.0 GPA is required to apply for admission. Honors Integrative Biology provides preparation suitable for graduate and professional training in biology, as well as for biology careers in the private and public sectors.

E-mail: honors@sib.illinois.edu (ibhonors@life.illinois.edu)

Minimum required courses normally equate to 80-91 hours.

Students earning the Honors Integrative Biology Concentration will also earn the Chemistry minor.

Students pursuing a degree in Honors Integrative Biology will be allowed to earn a second degree in the Specialized Curriculum in Biochemistry. Students pursuing a degree in Honors Integrative Biology will not be allowed to double major in Molecular and Cellular Biology.

General education: Students must complete the Campus General Education requirements (https://courses.illinois.edu) including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

No more than 8 hours of credit in 100-level courses in IB or MCB may be counted toward graduation.

Students may count toward graduation no more than a combined maximum of 10 hours of IB 390 and IB 490 credit offered for independent study.

Substitutions or other changes in the requirements below may be made only by petition to and approval of the director of the Honors Integrative Biology Concentration.

Minimum hours required for graduation: 120 hours

Departmental distinction: Candidates for distinction must:

1. Consult with an IB Honors adviser no later than the beginning of their junior year to discuss their proposed research plan.
2. Have a minimum GPA of 3.25 when applying for distinction.
3. Present an acceptable written report on the research to the Integrative Biology Distinction Committee about two months prior to graduation. The research must have been an in-depth experience and produced substantial results to be considered eligible for distinction. Additional details on requirements, procedures, and deadlines are available at sib.illinois.edu/undergraduate/distinction (http://sib.illinois.edu/undergraduate/distinction).

Students must consult with their Integrative Biology honors adviser at least once each semester.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>IB 150</td>
<td>Organismal &amp; Evolutionary Biol</td>
<td>4</td>
</tr>
<tr>
<td>MCB 150</td>
<td>Molec &amp; Cellular Basis of Life</td>
<td>4</td>
</tr>
<tr>
<td>IB 270</td>
<td>Evolution of Molecules &amp; Cells</td>
<td>5</td>
</tr>
<tr>
<td>IB 271</td>
<td>Organismal Biology</td>
<td>5</td>
</tr>
<tr>
<td>IB 372</td>
<td>Ecology and Evolution</td>
<td>5</td>
</tr>
<tr>
<td>MATH 220</td>
<td>Calculus (Biocalculus section)</td>
<td>4-5</td>
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<tr>
<td>or MATH 221</td>
<td>Calculus I</td>
<td></td>
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<tr>
<td>MATH 231</td>
<td>Calculus II</td>
<td>3-4</td>
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<tr>
<td>or IB 494</td>
<td>Theoretical Biology + Models</td>
<td></td>
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Select one group of courses: 8-10

- CHEM 202 Accelerated Chemistry I
- CHEM 203 Accelerated Chemistry Lab I
- CHEM 204 Accelerated Chemistry II
- CHEM 205 Accelerated Chemistry Lab II

OR

- CHEM 102 General Chemistry I
- CHEM 103 General Chemistry Lab I
- CHEM 104 General Chemistry II
- CHEM 105 General Chemistry Lab II

Select one group of courses: 6-14

- CHEM 236 Fundamental Organic Chem I
- CHEM 237 Structure and Synthesis

OR

- CHEM 232 Elementary Organic Chemistry I
- CHEM 233 Elementary Organic Chem Lab I

At least six hours of advanced courses in Chemistry 6-8

- MCB 450 Introductory Biochemistry 3

Select one group of courses: 10

- PHYS 211 University Physics: Mechanics
- PHYS 212 University Physics: Elec & Mag

OR

- PHYS 101 College Physics: Mech & Heat
- PHYS 102 College Physics: E&M & Modern

An approved 300- or 400-level course that includes physical/math principles 5

An approved 300- or 400-level course in statistics 3

- IB 490 Independent Study (2 semesters) 7

- 300- or 400-level courses in the biological sciences 10

1 Continuation in the Integrative Biology Honors Concentration requires a grade of B or better in each of IB 270, IB 271, and IB 372 and a 3.0 overall cumulative GPA.

2 If IB 494 is taken instead of MATH 231, it will not count towards the requirement of 10 hours of 300- or 400-level courses in the biological sciences.

3 Introductory chemistry should be completed prior to enrolling in IB 270.
Recommended courses are: CHEM 312, CHEM 332, CHEM 360, CHEM 437, CHEM 440. Students should discuss alternate choices with the IB advising office. To earn the Chemistry minor students must choose 3 or 4 hour Chemistry courses, excluding research or independent study.

Recommended courses are: ATMS 421, ANSC 448, MCB 432 or IBH Director approved.

NRES 421 is recommended. Other suitable courses are CPSC 440 or STAT 400.

Independent study equivalent to IB 490 in non-IB programs must first be approved by Director of IBH Concentration.