INTEGRATIVE BIOLOGY: HONORS INTEGRATIVE BIOLOGY, BSLAS

for the degree of Bachelor of Science in Liberal Arts & Sciences Major in Integrative Biology, Honors Integrative Biology Concentration

Honors Integrative Biology is designed for 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. 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.

Distinction for Excellence in Research:

Students are eligible for graduation at the following levels: Distinction, High Distinction, or Highest Distinction. Distinction will be determined by the SIB Distinction Committee and the level of Distinction will be based on the information below. To be eligible for graduation with Distinction for Excellence in Research a student must:

- Be enrolled as an Integrative Biology or Integrative Biology Honors Major
- Have a completed distinction evaluation form submitted by their Faculty Research Advisor.
- Maintain a minimum 3.25 GPA within the major at the end of the penultimate semester.
- To be eligible for Distinction, students must give a poster presentation at the SIB Distinction Symposium or other approved venue.
- To be eligible for High or Highest Distinction, students must submit a written thesis and give an oral presentation at the SIB Distinction Symposium or other approved venue.
- Finally, all students regardless of Distinction level must either:

Complete two or more semesters of IB 390/IB 490 for 2-credit hours or more each semester. The student should enroll in IB 490 the semester they intend to graduate, which counts towards the two required semesters.

OR

Complete at least 180 hours of mentored research. The research experience must last a minimum of 20 weeks (the weeks need not be consecutive and summer research counts toward this total) and students should enroll in one semester of IB 490 for a minimum of 1-credit hour prior to or during the semester they intend to graduate. Example: a student could be eligible if they complete a 10-week summer research experience combined with enrolling in IB 490 the following spring semester, the same term they intend to graduate.

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Minimum hours for graduation is 120, to include a minimum of 40 hours of upper-division coursework, generally at the 300 and 400 level. These hours can be drawn from all elements of the degree.

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

Minimum required major and supporting course work: Normally equates to 80-88 hours. Twelve hours of 300- and 400-level 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.

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.

Students should discuss alternate CHEM 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.

Introductory chemistry should be completed prior to enrolling in IB 270.

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

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.

Code	Title	Hours
Orientation and Professional Development		
LAS 101	Design Your First Year Experience	1
OR		
LAS 100 & LAS 101	Success in LAS for International Students and Design Your First Year Experience	3
OR		
LAS 102	Transfer Advantage	1
Total Hours		**1 or 3**

Code	Title	Hours
Major Core Requirements and Electives		
IB 150	Organismal & Evolutionary Biol	4
MCB 150	Molec & Cellular Basis of Life	4
IB 270	Evolution of Molecules & Cells	5
IB 271	Organismal Biology	5
IB 372	Ecology and Evolution	5
MATH 220	Calculus (Biocalculus section)	4-5
or MATH 221	Calculus I	
MATH 231	Calculus II	3-4
or IB 494	Theoretical Biology + Models	

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
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. Select from these courses: CHEM 312, CHEM 332, CHEM 360, CHEM 437, CHEM 440		6-8
MCB 450	Introductory Biochemistry	3
Select one group of courses:		8-10
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 in statistics. Select from one of these courses: STAT 440, NRES 421, NRES 445, CPSC 440		3
IB 490	Independent Study	6
Advanced Biological Science Electives. Select from the following: IB 303, IB 329, IB 335, IB 348, IB 360, IB 361, IB 362, IB 364, IB 368, IB 390, IB 392, IB 401, IB 405, IB 411, IB 416, IB 420, IB 421, IB 426, IB 427, IB 430, IB 431, IB 432, IB 435, IB 438, IB 439, IB 440, IB 444, IB 450, IB 451, IB 452, IB 453, IB 461, IB 462, IB 463, IB 464, IB 467, IB 468, IB 471, IB 472, IB 473, IB 476, IB 478, IB 479, IB 480, IB 481, IB 482, IB 484, IB 494, IB 496, IB 497, ACE 310, ANSC 331, ANSC 363, ANSC 406, ANSC 431, ANSC 454, ANSC 464, ANSC 467, ANTH 346, ANTH 347, ANTH 379, ANTH 407, ANTH 408, ANTH 437, ANTH 438, ANTH 440, ANTH 441, ANTH 443, ANTH 444, ANTH 445, ANTH 447, ATMS 421, BIOC 446, BIOC 455, BIOP 401, CHLH 474, CPSC 407, CPSC 408, CPSC 412, CPSC 415, CPSC 416, CPSC 418, CPSC 426, CPSC 437, CPSC 440, CPSC 444, CPSC 454, CPSC 466, CPSC 480, CPSC 481, CPSC 485, FSHN 480, GGIS 379, GGIS 380, GGIS 477, GGIS 478, KIN 342, KIN 352, KIN 355, KIN 444, KIN 450, KIN 451, KIN 452, KIN 457, KIN 470, LA 370, MCB 300, MCB 301, MCB 314, MCB 316, MCB 317, MCB 320, MCB 354, MCB 364, MCB 400, MCB 401, MCB 402, MCB 403, MCB 404, MCB 406, MCB 408, MCB 410, MCB 413, MCB 419, MCB 421, MCB 424, MCB 426, MCB 428, MCB 429, MCB 430, MCB 431, MCB 432, MCB 433, MCB 434, MCB 435, MCB 436, MCB 442, MCB 446, MCB 460, MCB 462, MCB 465, MCB 466, MCB 471, MCB 480, MCB 493, NRES 302, NRES 325, NRES 340, NRES 351, NRES 362, NRES 402, NRES 407, NRES 409, NRES 415, NRES 416, NRES 418, NRES 419, NRES 420, NRES 421, NRES 427, NRES 429, NRES 438, NRES 454, NRES 455, NRES 465, NRES 471, NRES 475, NRES 482, NRES 487, NRES 488, PLPA 403, PLPA 405, PSYC 302, PSYC 313, PSYC 403, PSYC 404, PSYC 413, PSYC 414, PSYC 417, PSYC 421, PSYC 450, PSYC 451, PSYC 453, UP 406		10
Total Hours		**80-88**

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Sample Sequence

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a fourth level of a language other than English. See the corresponding section on the Degree and General Education Requirements page *(*http://catalog.illinois.edu/general-information/degree-general-education-requirements/*).*

First Year

First Semester	Hours	Second Semester	Hours
LAS 101	1	MCB 150	4
IB 150	4	CHEM 104 or 204	3
CHEM 102 or 202	3	CHEM 105 or 205	1
CHEM 103 or 203	1	General Education course or Composition I	3

Language Other Than English (3rd level)	4	Language Other Than English (4th level)	4
Composition I or General Education course	4		
	17		**15**

Second Year

First Semester	Hours	Second Semester	Hours
IB 270	5	IB 271	5
CHEM 232 or 236	4	CHEM 233 or 237	2
MATH 220 or 221	4	MATH 231 or IB 494	4
Free elective course	3	Advanced Biological Science Elective course from list	3
	16		**14**

Third Year

First Semester	Hours	Second Semester	Hours
IB 372	5	Advanced Chemistry course from list	3
PHYS 101 or 211	4	PHYS 102 or 212	4
General Education course	3	MCB 450	3
General Education course	3	IB 490	2
Free elective course	1	General Education course	3
	16		**15**

Fourth Year

First Semester	Hours	Second Semester	Hours
IB 490	2	IB 490	2
Advanced Biological Science Elective course from list	4	Advanced Biological Science Elective course from list	3
300-400 level Statistics course from list	3	Advanced Chemistry course from list	4
General Education course	3	General Education course	3
General Education course	3		
	15		**12**

Total Hours 120

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By the time they graduate, an Integrative Biology Honors major should be able to:

1. Synthesize and apply significant knowledge in Integrative Biology, including anatomy, development, ecology, evolution, genetics, molecular biology, physiology, and/or systematics.
2. Apply predictive models to biological phenomena and engage with the process of scientific inquiry.
3. Critically evaluate and communicate complex, dynamic scientific information.
4. Employ curiosity, inquiry, quantitative reasoning, and critical thinking in problem solving.
5. Create solutions for global and local biological challenges using interdisciplinary strategies.
6. Develop professional skills including ethics, proficiency in oral and written scientific communication, data analysis and interpretation, collaboration, and the ability to critically evaluate science-related news and information.

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School of Integrative Biology
School of Integrative Biology website (http://sib.illinois.edu/)
School of Integrative Biology faculty (https://sib.illinois.edu/directory/faculty/)

Advising
SIB Advising website (https://sib.illinois.edu/academics/undergraduate-programs/advising-resources/)
SIB Advising email (advising@sib.illinois.edu)

College of Liberal Arts and Sciences
College of Liberal Arts and Sciences website (https://las.illinois.edu/)

Admissions
University of Illinois Undergrad Admissions (https://www.admissions.illinois.edu/)