

# Interdisciplinary Science – Concentration in Biology College of Science

2022-2023

# **Program Progression Guide**

**Disclaimer**: The 2022-2023 Purdue West Lafayette catalog is considered the source for academic and programmatic requirements for students entering programs during the Fall 2022, Spring 2023, and Summer 2023 semesters. The Program Progression Guide assists students in the development of an individualized 8-semester plan. Students are encouraged to use this guide, myPurduePlan\* (online degree auditing tool) and the Student Educational Planner (SEP) as they work with their academic advisor towards the completion of their degree requirements.

**Notification**: Each student is ultimately responsible for knowing, monitoring and completing all degree requirements.

An undergraduate degree in the College of Science requires completion of the following degree requirements.

| University Degree Requirements           |  |  |   |                               |  |  |
|--|--|--|---|-------------------------------|--|--|
| Minimum 2.0 Cumulative GPA               | Minimum 120 Credits that fulfill                         |  | 32 Residency Credits (30000 and above) at a |                               |  |  |
|  | degree requirements                                      |  | Purdue University campus                    |                               |  |  |
| University Core Curriculum**             |  |  |   |                               |  |  |
| Human Cultures: Behavioral/Social        | rial Science   | • Oua  | ntitativa Raasoni                           | nσ                            |  |  |
| Human Cultures: Humanities               | ciai science   | <ul><li>Quantitative Reasoning</li><li>Science</li></ul> |   |                               |  |  |
| Information Literacy                     |  |  | nce, Technology & Society Selective         |                               |  |  |
| Oral Communication                       |  |  | ten Communicat                              |                               |  |  |
| University Core Curriculum               |  |  |   |                               |  |  |
| Course Listing                           |  |  |   |                               |  |  |
| Civic Literacy Proficiency - https://v   | vww.purdue.edu/pr  | <br>ovost/about/   | provostInitiati                             | ves/civics/                   |  |  |
|  |  |  |   |                               |  |  |
| Required Biology Concentration           |  |  |   |                               |  |  |
| Minimum 2.0 cumulative GPA.              |  |  |   |                               |  |  |
| Interdisciplinary Science Core           |  |  |   |                               |  |  |
| Detailed information regarding this requ | irement is found on pa                                   | ge 3.  |   |                               |  |  |
| Supporting Area                          |  |  |   |                               |  |  |
| This 18-credit requirement is determined | d by the student based                                   | on academic a  | nd career goals a                           | nd must be approved.          |  |  |
| College of Science Core Curriculum       |  |  |   |                               |  |  |
|  |  |  |   |                               |  |  |
| • Freshman Composition – 3 credits       |  |  | Mathematics - 6-10 credits                  |                               |  |  |
| • Technical Writing and Presentation - 3 |  |  | Statistics - 3 credits                      |                               |  |  |
| • Teaming & Collaboration (NC)           | Laboratory Science - 8 credits     Computing - 3 credits |  | Computing - 3 credits                       |                               |  |  |
| General Education - 9 credits            | Multidisc  | Multidisciplinary - 3 credits                            |   |                               |  |  |
| Degree Electives                         |  |  |   |                               |  |  |
| Any Purdue or transfer course approved   | to meet degree requir                                    | ements in acco   | rdance with indiv                           | vidual departmental policies. |  |  |

Consult the No Count course list for courses, which may not be used to meet any College of Science degree requirement.

<sup>\*</sup> This audit is not your academic transcript and it is not official notification of completion of degree or certificate requirements.

<sup>\*\*</sup> University Core Curriculum Outcomes may be met through completion of the College of Science Core curriculum. Students should consult with their academic advisors and myPurdue Plan for course selections.

# 2022-2023 Interdisciplinary Science - Concentration in Biology Degree Progression Guide

The College of Science has *suggested* the following degree progression guide for the Interdisciplinary Science – Concentration in Biology Degree. Students will work with their academic advisors to determine their best path to degree completion. Course pre-requisites are specific to this degree plan.

| Credits | Fall 1st Year                 | Prerequisite                                 | Credits | Spring 1st Year                                    | Prerequisite               |
|---------|-------------------------------|--|---------|--|----------------------------|
| 3-5     | Calculus Option I             | ALEKS 85+ or SATM 670/ACTM<br>29 requirement | 3-5     | Calculus Option II                                 | Calculus I C- or<br>higher |
| 3-4     | Science Core Option           |  | 3-4     | Science Core Option                                |                            |
| 4-5     | General Chemistry Selective I | Co-req Calc                                  | 4-5     | General Chemistry Selective II or Free<br>Elective | Varies                     |
| 4       | Biology Selective I           |  | 3-4     | Biology Selective II                               | Biology I                  |
| 0-1     | Free Elective                 |  | 0-2     | Biology Selective II or Free Elective              |                            |
| 15-18   |                               |  | 15-18   |  |                            |

| Credit | Fall 2nd Year          | Prerequisite  | Credits | Spring 2nd Year        | Prerequisite                              |
|--------|------------------------|---|---------|------------------------|---|
| 3      | BIOL 23100             | Biology Selective and<br>CHM 11600 or<br>equivalent | 3       | BIOL 24100             | BIOL 23100 and CHM<br>11600 or equivalent |
| 2      | BIOL 23200             | Co-req BIOL 23100                                   | 2       | BIOL 24200             | Co-req BIOL 24100                         |
| 3-4    | Science Core Option    |   | 3       | Supporting Area Course |   |
| 3      | Supporting Area Course |   | 3       | Science Core Option    |   |
| 3-4    | Free Elective          |   | 3       | Science Core Option    |   |
|        |                        |   | 3       | Science Core Option    |   |
| 15-16  |                        |   | 17      |                        |   |

| Credit | Fall 3rd Year          | Prerequisite | Credit | Spring 3rd Year        | Prerequisite                  |
|--------|------------------------|--------------|--------|------------------------|-------------------------------|
| 3      | Supporting Area Course |              | 2      | BIOL 28600             | Biology Selective I<br>and II |
| 3      | Science Core Option    |              | 3-4    | EAPS Selective Course  |                               |
| 3      | Science Core Option    |              | 3      | Supporting Area Course |                               |
| 3      | Science Core Option    |              | 3      | Science Core Option    |                               |
| 3      | Free Elective          |              | 3      | Science Core Option    |                               |
|        |                        |              | 1      | Free Elective          |                               |
| 15     |                        |              | 15-16  |                        |                               |

| Credit | Fall 4th Year  | Prerequisite                                 | Credit | Spring 4th Year  | Prerequisite |
|--------|--|--|--------|--|--------------|
| 3-4    | Fall Only Courses: BIOL 39500, 41500, 42000, 43600, 43800 or Free Elective | Varies                                       | 3-4    | Spring Only Courses: BIOL 32800 or 36700 + 36701 or 41600 or Free Elective | Varies       |
| 3      | Supporting Area Course   |  | 3      | Supporting Area Course   |              |
| 3      | Science Core Option  |  | 3-4    | Science Core Option  |              |
| 4      | Physics Selective I  | ALEKS 85+ or SATM 670/ACTM<br>29 requirement | 4      | Physics Selective II   |              |
| 2      | Free Elective  |  | 3      | Free Elective  |              |
| 15-16  |  |  | 16-18  |  |              |

| Science Core Curriculum Options   |  |  |
|---|--|--|
| (one course needed for each requirement unless otherwise noted)   |  |  |
| Options recommended for first- and second-year students  Options recommended for third- and fourth-year |  |  |
| Freshman Composition <sup>UC</sup>  | Technical Writing and Presentation <sup>UC</sup> (COM 217 recommended) |  |
| Computing (CS 17700 or CS 15900)  | Multidisciplinary Experience <sup>UC</sup>                             |  |
| Foreign Language and Culture <sup>UC</sup> (3 courses needed)   | General Education <sup>UC</sup> (3 courses needed)                     |  |
| Statistics  | Great Issues   |  |

# **Interdisciplinary Science Degree Requirements**

# **University Core Requirements**

The following requirements are met through completion of a student's degree requirements:

Written Communication

**Oral Communication** 

Information Literacy

Science Selective (2)

**Human Cultures Humanities** 

Human Cultures Behavioral/Social Science

**Quantitative Reasoning** 

Science, Technology & Society Selective

# Science Core Requirements (30-37 credits)

(3-4) Freshmen Composition

(3) COM 21700 - (satisfies Oral Communication)

(0-3) Teambuilding and Collaboration

- (3) Language I
- (3) Language II
- (3) Language and Culture III (satisfies Human Cultures Humanities)
- (3) General Education I (satisfies Human Cultures Behavioral/Social Science)
- (3) General Education II
- (3) General Education III
- (3) Great Issues
- (0-3) Multidisciplinary/Science, Technology & Society Selective

#### **Interdisciplinary Science Core Requirements** (38-48 credits)

(7-8) BIOL Selective - BIOL [11000 & 11100] or [12100 & 13100 & 13500]

(8-10) CHM Selective - CHM [11500 & 11600] or [12500 & 12600] (satisfies Science Selectives)

(3-4) Computer Science Selective - CS 15800, CS 15900, CS 17700, or CS 18000

(3-4) EAPS Selective - EAPS [10000, 10900/19100, or 11100] or EAPS [(22100 or 22500) and 23000]

(6-10) Calculus Selective— MA [16100 & 16200] or [16500 & 16600] or [22300 & 22400] or [MA 23100 & 23200] (satisfies Quantitative Reasoning)

(8-9) PHYS Selective - PHYS [17200 & (27200 or 24100/25200)] or [22000 & 22100]

(3) STAT Selective - STAT 35000, 50300, 51100

# **Supporting Area Requirement (18 credits)**

Courses may not overlap Core or Primary Area courses but may overlap the program requirements. The Supporting Area may be built on the numerous minors available to Science students or on any coherent grouping of courses with a central unifying theme. These might include Pre-Professional, scientific writing, sales, forensics, technical studies, international studies, science policy, ethics, women's studies, African-American studies, etc. The possibilities are very broad but any plan must be approved by the College of Science dean or designee.

# Electives (0-22 credits)

# Required Primary Area (12-17 credits) – Choose one area of eight:

#### **1. Biology** (15-17 credits)

- (3) BIOL 23100
- (2) BIOL 23200
- (3) BIOL 24100
- (2) BIOL 24200
- (2) BIOL 28600
- (3-5) BIOL 32800, 36600, 39500 (Macromolecules) or [43800 & 43900]

#### 2. Chemistry (16-18 credits)

(8-10) CHM [25500, 25501, 25600 & 25601] or [26505, 26300, 26605, & 26400]

- (4) CHM 24100
- (4) CHM 37200

# 3. Computer Science (16 credits)

MA 16100/16200 required in Core.

- CS 18000 required in Core.
- (3) CS 18200
- (3) CS 24000
- (4) CS 25000
- (3) CS 25100
- (3) CS elective at or above 30000 level

# 4. Earth, Atmospheric, and Planetary Science (15-16 credits)

- (3-4) EAPS 11100 or equivalent OR EAPS [22100 or 22500] & 23000, whichever is not taken in the core.
- (3) EAPS 11200 or any EAPS course at or above 20000 level
- (3) EAPS elective at or above 200 level
- (3) EAPS elective at or above 200 level
- (3) EAPS elective at or above 200 level

#### **5.** Mathematics (16-17 credits)

MA 16100/16200 required in Core.

- (4) MA 26100 or 27100
- (3-4) MA 36600 or 26200
- (3) MA 35100
- (3) MA 45300, 45000, 34100, or 44000
- (3) MA elective at or above 30000 level

# **6. Physics** (13-14 credits)

MA 16100/16200 required in Core.

PHYS [17200 & (27200 or 24100/25200)] required in Core.

- (4) MA 26100
- (3-4) PHYS 34200 or 34400
- (3) PHYS elective at or above 30000 level
- (3) PHYS elective at or above 30000 level

# 7. Statistics (12-13 credits)

MA 16100/16200 required in Core.

- (3) STAT 51200
- (3) STAT 51300 or 51400
- (3) STAT 22500, 31100, 41600, or 51600
- (3-4) STAT [41700, 51300, or 51400]; or MA 26100

# 8. Environmental Biology (17 credits)

- (3) BIOL 23100
- (3) BIOL 24100
- (2) BIOL 28600
- (3) BIOL 48300
- (3) BIOL 58500
- (3-5) BIOL 32800, 36600, 39500 (Macromolecules), or [43800 & 43900]

\*

Degree Works is knowledge source for specific requirements and completion.