Academic Advisement Report
UGRD.USCNC.BIOINBS.MCBIO
Undergraduate Career
College of Science Program
Bioinformatics Major (BS)
Molecular and Cellular Biology Emphasis
Requirement Term: Fall 2017

Undergraduate Graduation Requirements
All course work and requirements for this degree must be completed prior to the date the degree is awarded. The University of Arizona requirements to follow in this audit are required for graduation and awarding of the degree.

Curriculum:
1. The University of Arizona and the Arizona Board of Regents have sole discretion over all curricula changes.
2. Courses, programs & requirements may be suspended, deleted, restricted, or changed in any manner, at any time.
3. Students must remain currently informed about all policies & other info that bears on completing a degree.

Required Units:
Additional units will be required to complete this degree if a student:
A) is admitted to the UA with deficiencies;
B) changes his/her academic plan(s);
C) fails to meet minimum course/plan requirements;
D) ineffectively plans or fails to execute a course of study that leads directly to degree completion; or
E) Candidates for a second bachelor's degree at The University of Arizona with a different award date than the first must earn no fewer than 30 units of University Credit in addition to the units required for the first degree, and must meet all requirements for the second degree.

The following requirements must be met for graduation.

Units Required and Cumulative GPA
120 units are required at a 2.0 GPA. View the pdf report grid for units earned toward this degree and cumulative GPA.

Completing a second bachelor's degree at The University of Arizona requires no fewer than 30 units in addition to the units required for the first degree, and all requirements for the second degree must be met.

Upper Division Units
Not Satisfied: A minimum of 42 units of upper-division credit are required for this degree.

- Units: 42.00 required, 0.00 completed, 42.00 needed

Units in Residence
Not Satisfied: A minimum of 30 units in residence at The University of Arizona (excluding correspondence credit and credit by exam) is required.

- Units: 30.00 required, 0.00 completed, 30.00 needed

Final Units in Residence
A minimum of 18 of the final 30 units taken toward degree requirements must be in residence at The University of Arizona.
Consult with your academic advisor if you plan to use transfer credits to fulfill your degree requirements.

Correspondence and/or Exam Credit Limit
Satisfied: A maximum of 60 units of Correspondence Credit and/or Exam Credit may apply toward graduation.

- Units: 0.00 completed
Non Degree Seeking Limit
A maximum of 15 units completed as a non-degree seeking student may be used for fulfilling undergraduate degree requirements.
Units exceeding this limit (shown below) must be subtracted from the units required towards the degree and graduation requirements.

Community College Limit
Not Satisfied: A maximum of 64 units of community college course work may apply toward graduation. A minimum of 56 units of course work must be completed at a 4-year institution, military institution, or as test credit.

- Units: 56.00 required, 0.00 completed, 56.00 needed

Success Course Limit
Satisfied: No more than 3 units will apply toward a student's graduation requirements.
All Success courses taken can be seen below. Success Course units exceeding the 3 unit maximum must be subtracted from the total units, residency requirements and cumulative grade point average.

PE Activity Course Limit
Satisfied: No more than 3 units will apply toward a student's graduation requirements.
All PE activity courses taken can be seen below. PE Activity units exceeding the 3 unit maximum must be subtracted from the total units, residency requirements and cumulative grade point average.

Foundation Mathematics
Not Satisfied: Foundation Mathematics

GE Substantial Math Strand
Overall Requirement Not Satisfied: GE Substantial Math Strand

Calculus I
Not Satisfied: Complete 1 course. A maximum of 1 course can be taken from MATH 122B, 124 and 125; only one will be accepted towards this requirement.

- Courses: 1.00 required, 0.00 completed, 1.00 needed

Courses Available
MATH 122B, MATH 125

Calculus II

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Courses Available
MATH 122B, MATH 125

Calculus II

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Not Satisfied: Complete 1 course.

- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

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### Undergraduate General Education and Foundation Requirements

**Overall Requirement Not Satisfied:** Undergraduate General Education and Foundation Requirements

**Foundation Composition**

- **Not Satisfied:** Complete 1 of the following 4 Foundation Composition options:
  1. 3 Course Foundation Composition Sequence
  2. 2 course Foundation Composition sequence
  3. Honors Composition with grade of C or higher
  4. Honors Composition with a grade of D and Second Semester Composition.

Please note: Students who earn a grade of D in Honors Composition may choose to repeat the course in order to earn a higher grade to satisfy the requirement. Please consult with your major advisor.

Mid-Career Writing Assessment - Complete 2nd semester English Composition with a B grade or higher. Students who do not earn a grade of B or better in 2nd semester English Composition must also satisfy a college or department writing requirement. Consult your major advisor if you do not earn a grade of B in 2nd semester English Composition.

**Option 1: Foundation Composition - 3 Course Sequence**

- **Not Satisfied:** Complete 3 courses. Complete ENGL 106 AND ENGL 101/107 AND ENGL 102/108.

  - **Courses:** 3.00 required, 0.00 completed, 3.00 needed

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### Courses Available

- ENGL 101, ENGL 101A, ENGL 107, ENGL 107A, ENGL 102, ENGL 108, ENGL 106

**OR Option 2: Foundation Composition - 2 Course Sequence**

- **Not Satisfied:** Complete 2 courses. Complete ENGL 101/107 AND ENGL 102/108

  - **Courses:** 2.00 required, 0.00 completed, 2.00 needed

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Courses Available

ENGL 101, ENGL 101A, ENGL 107, ENGL 107A, ENGL 102, ENGL 108

OR Option 3: Honors Composition

Not Satisfied: Complete 1 course with a C or better.

- Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

ENGL 109H

Foundation Second Language - Second Semester Proficiency

Not Satisfied: Credit will not be given for a course at an equivalent or lower level than prior language credit earned. Course must be taken for a grade, not as pass/fail. Third semester or higher courses used to fulfill this requirement may also be used to fulfill other requirements. A grade of C or higher is required in the course that satisfies the second language requirement.

Demonstrate second semester proficiency in a second language by completing a sequence of courses through a second semester or higher level or by passing a language proficiency examination at the second semester level or higher.

Second Semester Language Course

Not Satisfied: Complete 1 course with a grade of C or better.


- Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

AIS 104B, AIS 307B, ARB 102, CHN 102, CRL 102, CRL 197A, FREN 102, FREN 112, GER 102, GRK 102, GRK 104, ITAL 102, ITAL 102Z, JPN 102, JUS 103B, LAT 102, LING 104B, LING 307B, MENA 103B, PORT 102, PRS 102, RSSS 102, SERP 370B, SPAN 102, SPAN 103, TURK 102

General Education Tier I

Overall Requirement Not Satisfied: Complete each of the following areas.

Tier I Individuals & Societies

Not Satisfied: Complete 2 courses, 6 units total. Transfer students with quarter system credits may satisfy Tier One requirements with 2 courses and 5.34 units.

- Units: 5.34 required, 0.00 completed, 5.34 needed
- Courses: 2.00 required, 0.00 completed, 2.00 needed

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Courses Available

(***), AFAS 150B1, ANTH 150B1, ART 150B1, ART 150B2, EDP 150B1, ENGL 150B1, ESOC 150B1, FREN 150B1, FSHD 150B1, FTV 150B1, GEOG 150B1, GER 150B1, GWS 150B1, GWS 150B2, GWS 150B3, GWS 150B4, GWS 150B5, HNRS 150B1, HNRS 150B2, ITAL 150B1, LAR 150B1, LAS 150B1, MAS 150B1, MAS 150B2, MIS 150B1, PA 150B1, PHIL 150B1, POL 150B1, RCSC 150B1, RCSC 150B2, RELI 150B1, RSSS 150B1, RSSS 150B2, SOC 150B1, SOC 150B2, SPAN 150B1, SPAN 150B2, TLS 150B1, AED 150A1, ANTH 150A1, ART 150A1, GER 150A1, HUMS 150A1, HWS 150A1, KING 150A1, MIS 150A1, PHIL 150A1, POL 150A1, PSY 150A1, AREC 150C1, AREC 150C2, ECON 150C1, GEOG 150C1, HIST 150C1, HIST 150C2, HIST 150C3, HIST 150C4, HIST 150C5, HIST 150C6, HNRS 150C1, JOUR 150C1, MASN 150C1, MASA 150C1, MASA 150C2, MIS 150C1, PA 150C1, PHIL 150C1, POL 150C1, POL 150C2, POL 150C3, RNR 150C1, SOC 150C1, SOC 150C2, TESL 150C1

**Tier I Traditions & Cultures**

Not Satisfied: Transfer students with quarter system credits may satisfy Tier One requirements with 2 courses and 5.34 units.

- **Units:** 5.34 required, 0.00 completed, 5.34 needed
- **Courses:** 2.00 required, 0.00 completed, 2.00 needed

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Courses Available


**General Education Tier II**

Overall Requirement Not Satisfied: Complete each of the following areas.

**Tier II Arts**

Not Satisfied: Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy Tier Two requirements with 2.67 units.

- **Units:** 2.67 required, 0.00 completed, 2.67 needed
- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

AFAS 218, AFAS 318, AFAS 371, ANTH 318, ARC 304, ARC 325, ARE 130, ARH 201, ARH 202, ARH 203, ARH 312, ARH 314, ARH 315, ARH 316A, ARH 316B, ARH 319, ARH 320, ARH 321, ARH 322, ARH 324, ARH 325, ARH 329, ARH 330, ART 203, ART 242, ART 329, ART 358, CLAS 310, CLAS 329, DNC 100, DNC 101, DNC 112A, DNC 112B, DNC 112C, DNC 143, DNC 144A, DNC 144B, DNC 144C, DNC 152A, DNC 152B, DNC 152C, DNC 175, DNC 176A, DNC 176B, DNC 177C, DNC 177D, DNC 200, DNC 276A, ENGL 201, ENGL 209, ENGL 210, ENGL 300, ENGV 300, FTV 252, FTV 375, HNRS 203H, HNRS 216, HNRS 218, HNRS 220, HNRS 222, ISTA 301, JPN 245, LAS 322, LAS 327,
Tier II Humanities

**Not Satisfied:** Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy Tier Two requirements with 2.67 units. Prerequisite course work in Tier 1 Traditions and Cultures (TRAD) must be completed prior to taking. If LAT 201 or 202 are used to fulfill Foundation Second Language Proficiency, they cannot be used to fulfill Tier II Humanities.

- **Units:** 2.67 required, 0.00 completed, 2.67 needed
- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

### Courses Available

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Tier II Individual & Societies

**Not Satisfied:** Complete 1 course, 3 units total. Transfer students with quarter system credits may satisfy Tier Two requirements with 2.67 units. Prerequisite course work in Tier 1 Individuals and Societies (INDV) must be completed prior to taking.

- **Units:** 2.67 required, 0.00 completed, 2.67 needed
- **Courses:** 1.00 required, 0.00 completed, 1.00 needed

### Courses Available

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Courses Available

Diversity Emphasis Course

Not Satisfied: One course must be taken that focuses on Gender, Race, Class, Ethnicity, Sexual Orientation or Non-Western Area Studies.

Courses used to fulfill this requirement may also be used to fulfill other requirements.

Diversity Emphasis Course

Not Satisfied: General Education Diversity Emphasis Course: Gender, Race, Class, Ethnicity, Sexual Orientation or Non-Western Area Studies.

· Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available


Additional Coursework

Courses listed in this section may include general elective credits, UA courses and transferable courses from other institutions. Consult with your advisor to determine if courses listed in this section may be used to fulfill a requirement or sub-requirement in your degree program.

Courses taken for Pass/Fail option can only count as elective credit. They cannot fulfill any General Education, Major, or Minor requirements.

BS in Bioinformatics

Overall Requirement Not Satisfied: Bachelor of Science in Bioinformatics
Bioinformatics Major Foundation Courses

Overall Requirement Not Satisfied: Foundation Courses

1. **First Semester Introductory Chemistry**
   
   **Not Satisfied:** Complete 4 units.
   
   - Units: 4.00 required, 0.00 completed, 4.00 needed

   Courses Available
   
   CHEM 151, Approved Transfer Course, CHEM 105A, CHEM 106A

2. **Second Semester Introductory Chemistry**
   
   **Not Satisfied:** Complete 4 units.
   
   - Units: 4.00 required, 0.00 completed, 4.00 needed

   Courses Available
   
   CHEM 152, Approved Transfer Course, CHEM 105B, CHEM 106B

3. **Organic Chemistry I Lecture**
   
   **Not Satisfied:** Complete 3 units.
   
   - Units: 3.00 required, 0.00 completed, 3.00 needed

   Courses Available
   
   CHEM 241A, CHEM 242A, CHEM 246A

4. **Organic Chemistry I Lab**
   
   **Not Satisfied:** Complete 1 unit.
   
   - Units: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

CHEM 243A, CHEM 247A

5. Organic Chemistry II Lecture
   **Not Satisfied:** Complete 3 units.
   - **Units:** 3.00 required, 0.00 completed, 3.00 needed

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Courses Available

CHEM 241B, CHEM 242B, CHEM 246B, Approved Transfer Course

6. Organic Chemistry II Lab
   **Not Satisfied:** Complete 1 unit.
   - **Units:** 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

CHEM 243B, CHEM 247B

7. Introductory Ecology and Evolutionary Biology
   **Not Satisfied:** Complete 4 units.
   - **Units:** 4.00 required, 0.00 completed, 4.00 needed

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Courses Available

ECOL 182L, ECOL 182R, Approved Transfer Course

8. Introductory Molecular and Cellular Biology
   **Not Satisfied:** Complete 4 units.
   - **Units:** 4.00 required, 0.00 completed, 4.00 needed

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Courses Available

MCB 181L, MCB 181R, Approved Transfer Course, MCB 181M

9. Introductory Computer Programming I
   Not Satisfied: Complete 1 course.
   - Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

CSC 110, ISTA 130

10. Introductory Computer Programming II
    Not Satisfied: Complete 1 course.
    - Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

CSC 120

Biinformatics Major Core Courses

Overall Requirement Not Satisfied: Biinformatics Major Core Courses

1. Major Core Requirements
   Not Satisfied: Complete 4 courses.
   - Courses: 4.00 required, 0.00 completed, 4.00 needed

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Courses Available

CSC 250, CSC 296B, CSC 345, ECOL 296B, ECOL 346, MCB 296B

2. Major Core Requirement Discrete Structure
   Not Satisfied: Complete 1 course.
   - Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

CSC 245, MATH 243

3. Statistics

Not Satisfied: Complete 1 course. Students with an emphasis in Ecology and Evolutionary Biology, Molecular and Cellular, or Systems Biology complete MATH 263.

- Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

MATH 263

Emphasis in Molecular and Cellular Biology

Overall Requirement Not Satisfied: Emphasis in Molecular and Cellular Biology

Molecular and Cellular Biology Emphasis Courses

Overall Requirement Not Satisfied: Molecular and Cellular Biology Emphasis Courses

1. Molecular and Cellular Emphasis Courses

Not Satisfied: Complete 3 courses.

- Courses: 3.00 required, 0.00 completed, 3.00 needed

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Courses Available

MCB 304, MCB 305, MCB 315

2. Molecular and Cellular Emphasis Courses 2

Not Satisfied: Complete 1 course.

- Courses: 1.00 required, 0.00 completed, 1.00 needed

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Courses Available

BIOC 384, MCB 301

3. Molecular and Cellular Elective Courses

Not Satisfied: Complete a minimum of 11 units.

- Units: 11.00 required, 0.00 completed, 11.00 needed

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Courses Available


Emphasis in Molecular and Cellular Graduation Requirements

Overall Requirement Not Satisfied: Emphasis in Molecular and Cellular Graduation Requirements

Mid Career Writing Assessment

Not Satisfied: Complete 2nd semester English Composition with a B grade or higher. Students who do not earn a grade of B or higher in 2nd semester English Composition must also satisfy a college or department writing requirement. Consult your major advisor if you do not earn a grade of B or higher in 2nd semester English Composition.

- Courses: 1.00 required, 0.00 completed, 1.00 needed

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Major GPA

Satisfied: A minimum 2.0 GPA is required in the major coursework.

- Units: 0.00 completed
- GPA: 2.000 required, 0.000 completed

Major Upper Division

Not Satisfied: A minimum of 18 units of upper-division major coursework must be completed.

- Units: 18.00 required, 0.00 completed, 18.00 needed
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**Major Residency**

*Not Satisfied:* A minimum of 18 units in the pre-major, supporting coursework, professional core, and/or major must be taken at the University of Arizona.

- **Units:** 18.00 required, 0.00 completed, 18.00 needed

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**Minor Optional**

*Satisfied:* A minor is optional for this major. Consult with your advisor to select a minor or discuss other options such as selecting a second major.