

2+2 Articulation Agreement for Howard Community College and Towson University

Associate's Degree: A.A. in Physical Science, Geology Concentration

Bachelor's Degree: B.S. in Geology

Effective Term: Fall 2020

Section 1: Course Completion Plan for Howard Community College

This section outlines the courses to take for the Howard Community College general education and program requirements in order to complete both Howard Community College and TU degrees within a total of 4 years and 120 credits. The following tables do not include any nontransferable or prerequisite coursework outside of the curriculum.

Table 1: General Education Courses Applied to TU Core Curriculum

| Howard CC Core Requirement | Howard CC Course to Take | Credits | Towson University Equivalent Course |
|--|---|---------|--|
| English Composition | ENGL 121 College Composition | 3 | ENGL 102 Writing for a Liberal Education |
| Mathematics | MATH 181 Calculus I | 4 | MATH 273 Calculus I |
| Arts & Humanities – Critical and Creative Thinking | Choose one of the following recommended courses: <ul style="list-style-type: none"> ▪ ENGL 207 Ethics in Literature ▪ PHIL 103 Introduction to Ethics ▪ PHIL 203 Civility & Virtue Ethics | 3 | Equivalency will vary by course: <ul style="list-style-type: none"> ▪ ENGL TLL English Elective ▪ PHIL 103 Introduction to Ethics ▪ PHIL TLL Philosophy Elective |
| Arts & Humanities – Oral Communications | Any Arts & Humanities Oral & Communications Core | 3 | Equivalency will vary by course. |
| Social & Behavioral Sciences – Critical & Creative Thinking | Any Social & Behavioral Sciences Critical & Creative Thinking course | 3 | Equivalency will vary by course. |
| Social & Behavioral Sciences Global Competency | Any Social & Behavioral Sciences Global Competency course | 3 | Equivalency will vary by course. |
| Biological & Physical Sciences – Scientific Reasoning | PHYS 110 General Physics I (Calculus) | 4 | PHYS 241 General Physics I Calculus-based |
| Biological & Physical Sciences – Scientific Reasoning w/ Lab | PHYS 111 General Physics II (Calculus) | 4 | PHYS 242 General Physics II Calculus-based |
| Information Literacy | Any Information Literacy course | 3 | Equivalency will vary by course. |
| Technological Literacy | Any Technological Literacy course | 3 | Equivalency will vary by course. |

| Howard CC Core Requirement | Howard CC Course to Take | Credits | Towson University Equivalent Course |
|----------------------------|--|---------|--|
| Program Requirement | CHEM 101 General Inorganic Chemistry I | 4 | CHEM 131 General Chemistry I and CHEM 131L General Chemistry I Lab |

Total general education applied to the TU Core Curriculum: 37 credits

Completing the courses in Table 1 will satisfy the general education program at Howard CC. TU will transfer these courses without a course-by-course match to the Core Curriculum requirements. See section 2 for details.

Table 2: Program Requirements and Electives Applied to TU Degree

| Howard CC Requirement | Howard CC Course to Take | Credits | Towson University Equivalent Course |
|-----------------------|--|---------|--|
| Program Requirement | MATH 182 Calculus II | 4 | MATH 274 Calculus II |
| Program Elective | CHEM 102 General Inorganic Chemistry II | 4 | CHEM 132 General Chemistry II & CHEM 132L General Chemistry II Lab |
| Program Elective | Take both courses: <ul style="list-style-type: none"> ▪ GEOL 107 Intro to Physical Geology ▪ GEOL 117 Intro to Physical Geology Lab | 4 | GEOL 121 Physical Geology |
| Program Elective | Take both courses: <ul style="list-style-type: none"> ▪ GEOL 108 Historical Geology ▪ GEOL 118 Historical Geology Lab | 4 | GEOL 123 Historical Geology |
| Program Elective | PHYS 120 Oceanography | 3 | GEOL T57 Oceanography |
| Program Elective | PHYS 121 Oceanography Lab | 1 | GEOL TLL Geology elective |
| Program Elective | CADD 108 Introduction to Geographic Information Systems (GIS) | 3 | GEOG 232 Introduction to Geographic Science |

Total program requirements applied to the TU degree: 23 credits

Total transferred to TU: 60 credits

Students may transfer a maximum of 64 credits. If students do not adhere to the courses outlined above in Tables 1 and 2, they are not guaranteed completion of the bachelor's degree in 2 years. Refer to section 2 for specific course details and transfer planning information.

Section 2: Howard CC Course Selection & Transfer Details

This section explains any specific course selections made in section 1 and provides transfer planning guidance specific to this degree plan. Students must follow the course selections outlined in this document. If students do not complete any or all of the courses outlined in this agreement, they will be required to complete outstanding requirements at TU.

GENERAL EDUCATION

Students must take the following courses for their general education requirements:

- **Mathematics:** Take **MATH 181** to satisfy TU major requirement of MATH 273.
- **Biological and Physical Sciences:** Take **PHYS 110 and PHYS 111** to satisfy TU major requirements of PHYS 241 and PHYS 242.
- **Arts and Humanities – Critical and Creative Thinking Core:** Students should take an ethics course to satisfy this requirement (ENGL 207, PHIL 103, or PHIL 203). This is a recommendation but not required. Students may take another course for this Core requirement but are strongly encouraged to complete one of the listed ethics courses.

The following information explains the transfer of students' general education courses:

- TU will recognize the courses in Table 1 (see section 1) as a completed general education program. Students will receive a core package that satisfies most of the TU Core Curriculum without the need for course-by-course placement in specific Core Curriculum requirements.
- Students will only need to complete one Core Curriculum requirements at TU: Advanced Writing Seminar (Core 9).

PROGRAM REQUIREMENTS

Students must take the following courses in order to also satisfy required courses in the major at TU:

- **Program Requirement:** Take **CHEM 101** to satisfy the major requirement of CHEM 131 and CHEM 131L.
- **Program Requirement:** Take **MATH 182** to satisfy the major elective requirement of MATH 274.

PROGRAM ELECTIVES

Students must take the following courses in order to also satisfy required courses in the major at TU:

- **CHEM 102**, which will satisfy the major requirements of CHEM 132 and CHEM 132L.
- **GEOL 107 AND GEOL 117**, which will satisfy the major requirement of GEOL 121. Please note that **BOTH** courses must be completed with a C or better to receive credit for GEOL 121 and satisfy the requirement.
- **GEOL 108 AND GEOL 118**, which will satisfy the major requirement of GEOL 123. Please note that **BOTH** courses must be completed with a C or better to receive credit for GEOL 123 and satisfy the requirement.

- **PHYS 120**, which will satisfy the required major elective of GEOL 357. Please note that this course will transfer as GEOL T57. See below regarding lower-level equivalents of upper-level course. **PHYS 121** is recommended but not required to receive credit for GEOL T57.
- **CADD 108**, which will satisfy the required major elective of GEOG 232.

LOWER-LEVEL EQUIVALENTS OF UPPER-LEVEL COURSES

A course number beginning with T indicates that it is a lower-level equivalent of an upper-level TU course. GEOL T57 will satisfy the major elective requirement but will not count toward the TU degree requirement for 32 upper-level units.

Section 3: Degree Requirements to Be Completed at TU

This section outlines the degree requirements for students transferring into the Geology major. Refer to section 4 for additional major requirements, recommendations, and university-wide degree requirements.

CORE CURRICULUM REQUIREMENTS: 3 UNITS

Core 9 Advanced Writing Seminar

MAJOR REQUIRED COURSES: 20 UNITS

GEOL 305 Environmental Geology (4 units)

GEOL 321 Structural Geology (4 units)

GEOL 331 Mineralogy (4 units)

GEOL 333 Petrology of Igneous and Metamorphic Rocks (4 units)

GEOL 443 Sedimentology and Stratigraphy (4 units)

MAJOR ELECTIVES: 7-8 UNITS

Students must complete TWO elective courses to satisfy the required electives for the major. Please note that both courses must be Geology (GEOL) courses.

GENERAL ELECTIVES: 29-30 UNITS

The total number of elective units required will be determined by the total units completed within the major. Electives can be additional major electives or courses for personal interests. Students may also consider adding a minor, which usually requires 18-24 units.

Section 4: Additional Requirements & Recommendations for TU Degree Completion

BACHELOR'S DEGREE REQUIREMENTS FOR ALL STUDENTS:

- A C (2.0) or higher is required in all major courses and prerequisites.
- A cumulative grade point average (GPA) of 2.0 is required.
- 32 units of the bachelor's degree must be completed at the upper level (courses numbered 300 or above).

Degree Completion Summary

| | |
|--|------------------|
| Total Units Required for B.S. Degree | 120 UNITS |
| Howard CC A.A. Degree in Physical Science Major – Geology Concentration | 60 |
| Completion of Core Curriculum at TU | 3 |
| Geology Coursework at TU | 27-28 |
| General Electives Taken at TU | 29-30 |