

Earth Sciences Focus

Associate in Arts - Direct Transfer Agreement (AA-DTA)

Knowledge about the planet we inhabit, the surrounding universe and the natural forces that impact our world adds value to our daily lives and provides the basis for interesting careers in a broad range of disciplines: astronomy, geology, meteorology and oceanography. Begin studies for an advanced degree leading to positions with government agencies or private industry as an independent consultant, teacher, or researcher.

For a roadmap that identifies the preferred sequencing of courses and other specific recommendations from faculty, please see the corresponding program map(s):

- [Earth Sciences Focus Associate in Arts - Direct Transfer Agreement \(AA-DTA\) \(lowercolumbia.edu/program-maps/stem/AADTA-Earth-Sciences\)](https://lowercolumbia.edu/program-maps/stem/AADTA-Earth-Sciences)

Degree Requirements

Total credits required to earn this degree: 90 in courses numbered 100 or above with a cumulative grade point average (GPA) of at least 2.0. A course cannot be credited toward more than one distribution or skill area.

LCC students must meet distribution requirements for bachelor degrees, associate degrees, and specific certificates. See [Diversity and Distribution Lists \(lowercolumbia.edu/publications/catalog/distribution-lists/\)](https://lowercolumbia.edu/publications/catalog/distribution-lists/) for more information.

General Education Requirements

- **Communications:**

15 credits: ENGL& 101 English Composition I **AND**
(ENGL& 102 Composition II **OR** ENGL& 235 Technical Writing) **AND**
(CMST& 220 Public Speaking **OR** CMST& 230 Small Group Communication).

- **Quantitative / Symbolic Reasoning Skills:**

5 credits – MATH& 107 or higher with the exception of MATH& 131.

- **Humanities:**

15 credits – Selected from at least two disciplines on the *Distribution List*. No more than 5 credits in foreign language at the 100 level, no more than 10 credits from any one discipline. No more than 5 credits in performance/skills courses are allowed. Drawing or photography recommended.

- **Social Sciences:**

15 credits – Selected from at least two disciplines on the *Distribution List*. No more than 10 credits from any one discipline.

- **Natural Sciences:**

15 credits – Selected from at least two disciplines on the *Distribution List*; must include 5 credits of lab courses. At least 10 credits in physical, biological and/or earth sciences. No more than 5 credits from Computer Science, Mathematics, and Engineering. Courses used to satisfy this requirement may not be used to satisfy the Quantitative Skills requirement. ANTH& 205, BIOL& 100 and 5 additional credits from physical and/or earth science are recommended. BIOL& 100 meets the laboratory requirement.

- **Diversity:**

5 credits – From the *Diversity Course List*. Courses that meet this requirement may also be used toward other graduation requirements. Diversity courses are listed in the quarterly schedule and identified by 'DIV' attached to the course title. Example: SPAN& 121 – Intro to Spanish I:DIV.

- **Electives:**

25 credits - See advisor for approved list of electives. No more than 15 credits may be taken from the Restricted Course List.

Recommended Electives

Course Code	Course Title	Number of Credits
ASTR& 101	Intro to Astronomy	5
BIOL 130	Biodiversity of Pacific Northwest	5
CHEM& 161*	General Chemistry w/Lab I	5
CHEM& 162*	General Chemistry w/Lab II	5
CHEM& 163*	General Chemistry w/Lab III	5
ERSI 104	Introduction to Earth Sciences	5
GEOL& 101	Intro to Physical Geology	5
GEOL 118	Historical Geology	5
OCEA& 101	Intro to Oceanography	5

AA-DTA Outcomes

Upon the completion of the AA DTA, students will be prepared for transfer to a four-year institution for their intended career pathway, and have the following skills and abilities:

Global Skills (assessed at degree level):

- Communication: Express ideas and information in writing and speaking in a manner that is clear and appropriate to the audience, and read and listen effectively.
- Critical Thinking: Apply objective, valid methods of inquiry and problem-solving to draw rational, ethical, and coherent conclusions.
- Quantitative Literacy: Reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations.
- Teamwork: Facilitate a team's ability to achieve a desired goal or outcome.

General education outcomes (assessed at course level):

- Diversity: Examine the causes and expressions of difference, power, and discrimination.

- Humanities: Explore how people process, document, and express their social and cultural experience.
- Social Science: Examine society, behavior, and relationships among individuals within a society.
- Natural Science: Develop familiarity with various aspects of the physical world and scientific explanations of observed phenomena.

Area of study outcomes:

- Interpret and use various kinds of maps, globes, charts, and graphs.
- Apply scientific knowledge and techniques to current environmental issues.
- Describe basic earth processes in an interdisciplinary context.
- Effectively communicate earth sciences concepts.
- Demonstrate familiarity with global and regional geology and geography.

Notes

Revised June 2024 (effective Summer 2024)

*It is recommended that sequence courses be completed at one institution.

MATH& 141 and 142 are highly recommended.

Program planning is based on information available at the time of preparation. It is the student's responsibility to meet with their LCC advisor *and* with an advisor at the college to which they plan to transfer for specific requirements. Consult the LCC catalog for LCC graduation requirements.

Most four-year universities require one year of a single foreign language as a graduation requirement.