

Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Berkeley
2022-2023 General Catalog, Semester

From: De Anza College
2022-2023 General Catalog, Quarter

Ecosystem Management & Forestry, Lower Division B.S.

PROGRAM

The **Ecosystem Management & Forestry** (EMF) major at the University of California at Berkeley is designed to prepare students to manage forests and wildlands while sustaining ecological integrity and producing vital ecosystem services. Offered by the Department of Environmental Science, Policy and Management (ESPM), the program combines a foundation in the relevant natural and social sciences with explicit hands-on learning opportunities. Students completing this major will be prepared to engage in the challenge of managing forest and natural resources in a rapidly-changing world. The topics students can choose to concentrate on include wildlife and conservation biology, ecosystem restoration, rangeland management, water policy, fire science, and environmental justice.

Students in the EMF major select between two specializations:

The **Forestry specialization** is accredited by the Society of American Foresters and provides four years of qualifying education or professional experience for licensing as a professional forester in California. The goals of the Professional Forestry specialization are very closely associated with the educational requirements of the forestry profession and prepare our students for careers in forestry or closely related natural resource fields.

The **Natural Resource Management specialization** provides students with greater flexibility to explore subjects in ecology, physical environment, monitoring and measurement, and management and policy. When students graduate with a Forestry degree major from UC Berkeley, they will have the basic knowledge and skills to assess and manage forest resources.

Graduates with the Forestry specialization should have basic competencies as defined by the Society of American Foresters' requirements of accredited degree programs. Graduates with the Natural Resource Management specialization will have similar competencies focused in their chosen area of concentration.

For more information on this major:

Ecosystem Management & Forestry
Student Academic Advisor
Office of Instruction & Student Affairs
Rausser College of Natural Resources
260 Mulford Hall
crs.emf.ugrad@berkeley.edu
(510) 642-0542
website:
<https://nature.berkeley.edu/advising/majors/forestry-and-natural-resources>

For more information on the Rausser College of Natural Resources:

<http://nature.berkeley.edu>

For more information on admission to UC Berkeley:

<http://admissions.berkeley.edu>

For more information on majors at UC Berkeley:

Berkeley Academic Guide: <http://guide.berkeley.edu>

REQUIREMENTS

PREPARATION FOR TRANSFER AT THE JUNIOR LEVEL

Transfer applicants **must** complete the minimum admissions requirements by the end of the **spring** term preceding fall enrollment at Berkeley, and are encouraged to complete as many additional lower division requirements as possible. Exceptions are highly unlikely.

NOTE: The ESPM Environmental Science Core, ESPM Social Science Core, Geographic Information Systems and Statistics requirements may be taken at UC Berkeley if no course is articulated at the student's home institution.

Please pay particular attention to how courses from your community college articulate to UC Berkeley. If courses for a particular subject are articulated as a group (for example, a 3-course series at your college may articulate to a 2-course series at UC Berkeley), you will need to take all of the courses noted in order for the articulation to work. If you have questions about articulation, please contact our Office of Instruction and Student Affairs, College of Natural Resources at crs.emf.ugrad@berkeley.edu.

In general, students will be evaluated on:

- the strength of academic preparation and the completion of lower division requirements
- GPA in the required courses
- cumulative GPA
- the personal statement

MINIMUM ADMISSIONS REQUIREMENTS

In addition to the requirements below, students must also complete the Reading & Composition requirement. IGETC Certification will satisfy both halves of the Reading & Composition requirement, but IGETC is not required if students complete Reading and Composition through articulated coursework.

ECOSYSTEM MANAGEMENT AND FORESTRY

(For both Forestry and Natural Resource Management specializations)

Chemistry 1A & 1AL or Chemistry 3A & 3AL

Biology 1B

Math 16A (or Math 1A)

Math 16B (or Math 1B)

Statistics 20 or 21

Economics 1 (Micro- and macro-economics)

Recommended:

Earth & Planetary Science 50, Geography 40

BIOLOGY

Ecosystem Management & Forestry requires BIOLOGY 1B.

ECONOMICS

Ecosystem Management & Forestry requires ENVECON C1 or ECON 1 or ECON 2.

Berkeley's ECON 1 covers macro-economics and micro-economics.

Berkeley's ECON 2 covers macro-economic and micro-economics.

MATHEMATICS

Ecosystem Management & Forestry requires MATH 16A & 16B or MATH 1A & 1B.

CHEMISTRY

Ecosystem Management & Forestry requires CHEM 1A & 1AL or CHEM 3A & 3AL

PHYSICAL SCIENCE

Ecosystem Management & Forestry requires EPS 50, GEOG 1, or GEOG 40.

READING & COMPOSITION

Must complete Reading and Composition prior to transfer.

Courses comparable to Berkeley's READING & COMPOSITION (R&C) 1A and 1B.

STATISTICS

Ecosystem Management & Forestry requires STAT 20 or STAT 21 (STAT 20 or STAT 21 may be completed at UC Berkeley)

To ensure full articulation of transfer coursework: if a series of courses at a community college is required (e.g., Chemistry 101 + 102 + 103 = Chemistry 1A, 1AL + 1B at UC Berkeley), all the courses in the series must be completed, and must (unless otherwise indicated) be completed at the same community college. Partial completion of the series (e.g., 2 of the 3 required courses) may result in no credit toward the requirement(s), and completion of series courses at different community colleges is not guaranteed to satisfy the requirement. Courses taken out of series will be evaluated by college faculty during the transfer admissions process.

AP TEST CREDIT

The Ecosystem Management & Forestry major will accept AP credit for the following courses:

- AP Biology, with a score of 4 or 5 = Bio 1B
- AP Calculus AB, with a score of 3, 4, or 5 = Math 1A or Math 16A
- AP Calculus BC, with a score of 3 or 4 = Math 1A or 16A
- AP Calculus BC, with a score of 5 = Math 1A/16A and Math 1B/16B
- AP Chemistry, with a score of 4 or 5 = Chemistry 1A & 1AL
- AP Economics (Micro) with a score of 4 or 5 = Env Econ C1/Econ C3
- AP English Literature, with a score of 3 = Entry Level Writing requirement
- AP English Literature, with a score of 4 = First half of Reading & Composition (English R1A)
- AP English Literature, with a score of 5 = Both halves of Reading & Composition (English R1A and R1B)
- AP English Language, with a score of 3 = Entry Level Writing requirement
- AP English Language, with a score of 4 or 5 = First half of Reading & Composition (English R1A)
- AP Environmental Science, with a score of 4 or 5 = ESPM Environmental Science Core

Please note that substituting AP scores for science and math coursework is accepted, but not recommended. Students who use AP scores for these requirements may struggle in subsequent coursework.

Please refer to the Rausser College of Natural Resources website for more information about substitutions for the English R1A and R1B requirements:

<https://nature.berkeley.edu/handbook>

READING AND COMPOSITION REQUIREMENT

ENGLISH R1A - Reading and Composition (4.00)



EWRT 1A - Composition and Reading (5.00)

--- Or ---

EWRT 1AH - Composition and Reading - HONORS (5.00)

--- Or ---

ESL 5 - Advanced Composition and Reading (5.00)

ENGLISH R1B - Reading and Composition (4.00)



EWRT 1B - Reading, Writing and Research (5.00)

--- Or ---

EWRT 2 - Critical Reading, Writing and Thinking (5.00)

--- Or ---

EWRT 1BH - Reading, Writing and Research - HONORS (5.00)

--- Or ---

EWRT 2H - Critical Reading, Writing and Thinking - HONORS (5.00)

MATHEMATICS

Select 1 Sequence(s) from the following

MATH 16A - Analytic Geometry and Calculus (3.00)



MATH 1A - Calculus (5.00)

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)

MATH 16B - Analytic Geometry and Calculus (3.00)



MATH 1B - Calculus (5.00)

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

MATH 1A - Calculus (4.00)



MATH 1A - Calculus (5.00)

--- And ---

MATH 1B - Calculus (5.00)

- *Regular and honors courses may be combined to complete this series*

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)

--- And ---

MATH 1BH - Calculus - HONORS (5.00)

- *Regular and honors courses may be combined to complete this series*

MATH 1B - Calculus (4.00)



MATH 1B - Calculus (5.00)

--- And ---

MATH 1C - Calculus (5.00)

- *Regular and honors courses may be combined to complete this series*

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

--- And ---

MATH 1CH - Calculus - HONORS (5.00)

- *Regular and honors courses may be combined to complete this series*

STATISTICS

Select 1 Course(s) from the following

STAT 20 - Introduction to Probability and Statistics (4.00)



No Course Articulated

- *This course has a prerequisite of one semester of calculus*

STAT 21 - Introductory Probability and Statistics for Business (4.00)



No Course Articulated

- *This course has a prerequisite of one semester of calculus*

CHEMISTRY

CHEM 1A - General Chemistry (3.00)
 --- And ---
CHEM 1AL - General Chemistry Laboratory (2.00)

← Articulates as a Series Only

CHEM 1A - General Chemistry (3.00)
 --- And ---
CHEM 1AL - General Chemistry Laboratory (2.00)
 --- And ---
CHEM 1B - General Chemistry (4.00)

←

CHEM 1A - General Chemistry (5.00)
 --- And ---
CHEM 1B - General Chemistry (5.00)
 --- And ---
CHEM 1C - General Chemistry and Qualitative Analysis (5.00)
 • *Regular and honors courses may be combined to complete this series*

--- Or ---

CHEM 1AH - General Chemistry - HONORS (5.00)
 --- And ---
CHEM 1BH - General Chemistry - HONORS (5.00)
 --- And ---
CHEM 1CH - General Chemistry and Qualitative Analysis - HONORS (5.00)
 • *Regular and honors courses may be combined to complete this series*

--- Or ---

CHEM 3A - Chemical Structure and Reactivity (3.00)
 --- And ---
CHEM 3AL - Organic Chemistry Laboratory (2.00)

←

CHEM 12A - Organic Chemistry (5.00)
 --- And ---
CHEM 12B - Organic Chemistry (5.00)

CHEM 3A - Chemical Structure and Reactivity (3.00)
 --- And ---
CHEM 3AL - Organic Chemistry Laboratory (2.00)
 --- And ---
CHEM 3B - Chemical Structure and Reactivity (3.00)
 --- And ---
CHEM 3BL - Organic Chemistry Laboratory (2.00)

← Articulates as Course-to-Course Only

PHYSICAL SCIENCE

Select 1 Course(s) from the following

EPS 50 - The Planet Earth (includes lab) (4.00)

←

GEOL 10 - Introductory Geology (5.00)

GEOG 40 - Introduction to Earth System Science (4.00)

←

GEO 1 - Physical Geography (4.00)

BIOLOGY

BIOLOGY 1B - General Biology (Plant Form & Function, Ecology, Evolution) (4.00)



BIOL 6A - Form and Function in the Biological World (6.00)

--- And ---

BIOL 6C - Ecology and Evolution (6.00)

--- Or ---

BIOL 6AH - Form and Function in the Biological World - HONORS (6.00)

--- And ---

BIOL 6C - Ecology and Evolution (6.00)

--- Or ---

BIOL 6A - Form and Function in the Biological World (6.00)

--- And ---

BIOL 6CH - Ecology and Evolution - HONORS (6.00)

--- Or ---

BIOL 6AH - Form and Function in the Biological World - HONORS (6.00)

--- And ---

BIOL 6CH - Ecology and Evolution - HONORS (6.00)

BIOLOGY 1A - General Biology Lecture (Cells, Genetics, Animal Form & Function) (3.00)

--- And ---

BIOLOGY 1AL - General Biology Laboratory (2.00)

--- And ---

BIOLOGY 1B - General Biology (Plant Form & Function, Ecology, Evolution) (4.00)



Articulates as Course-to-Course Only

ECONOMICS

Select 1 Course(s) from the following

ECON C3 - Introduction to Environmental Economics and Policy (4.00)
Same-As: ENVECON C1



ECON 1 - Principles of Macroeconomics (4.00)

--- And ---

ECON 2 - Principles of Microeconomics (4.00)

ECON 1 - Introduction to Economics (4.00)



ECON 1 - Principles of Macroeconomics (4.00)

--- And ---

ECON 2 - Principles of Microeconomics (4.00)

- *Regular and honors courses may be combined to complete this series*

--- Or ---

ECON 1H - Principles of Macroeconomics - HONORS (4.00)

--- And ---

ECON 2H - Principles of Microeconomics - HONORS (4.00)

- *Regular and honors courses may be combined to complete this series*

ECON 2 - Introduction to Economics, Lecture Format (4.00)



No Course Articulated

ESPM ENVIRONMENTAL SCIENCE CORE COURSE

Select 1 Course(s) from the following

ESPM 2 - The Biosphere (3.00)



No Course Articulated

ESPM 6 - Environmental Biology (3.00)



No Course Articulated

ESPM C10 - Environmental Issues (4.00)
Same-As: LNS C30V



ESCI 19 - Environmental Biology (5.00)

ESPM 15 - Introduction to Environmental Sciences (3.00)



ESCI 1 - Environmental Science (4.00)

ESPM C46 - Climate Change and the Future of California (4.00)



No Course Articulated

ESPM SOCIAL SCIENCE CORE COURSE

Select 1 Course(s) from the following

ESPM C11 - Americans and the Global Forest (4.00)



No Course Articulated

Same-As: LNS C30U

ESPM C22AC - Fire: Past, Present and Future Interactions with the People and Ecosystems of California (4.00)



No Course Articulated

Same-As: ANTHRO C12AC

ESPM 50AC - Introduction to Culture and Natural Resource Management (4.00)



No Course Articulated

ESPM 52 - History of Native American Land, Colonialism, and Heritage Preservation (3.00)



No Course Articulated

ESPM 60 - Environmental Policy, Administration, and Law (4.00)



ES 6 - Introduction to Environmental Law (4.00)

GEOGRAPHIC INFORMATION SYSTEMS

ESPM 72 - Introduction to Geographic Information Systems (3.00)



No Course Articulated

END OF AGREEMENT