COLORADO COLLEGE

Environmental Studies & Science Program

Student Handbook

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Land Acknowledgement

The Colorado College Environmental Studies and Science Program acknowledges that our educational programs operate from the traditional and unceded territory of the Ute and other Native Peoples, including the Apache, Arapaho, Comanche, and Cheyenne. Furthermore, many of the disciplines of environmental studies and sciences have reinforced exclusive and extractive practices that have marginalized Indigenous peoples and diverse ways of knowing.

Today, the CC Environmental Studies Program strives to honor the original peoples of the places where we work, learn, educate, and conduct research. We seek to respect Native Peoples' voices and knowledge systems, and to uphold our collective responsibility to the land and to Indigenous peoples' histories, sovereignties, and futures.

Mission Statement & Learning Goals

The Colorado College Environmental Studies Program prepares its majors to understand their connection to the environment, acquire the skills to explore scientific and human interrelationships in the global ecosystem, and pursue interdisciplinary approaches to problem solving. We offer two integrated majors in Environmental Science and Environmental Studies, and a disciplinary track in Environmental Chemistry.

The **ENVIRONMENTAL SCIENCE MAJOR** has the following *goals*:

The Environmental Science major prepares students to investigate the Earth system with a particular focus on how humans interact with the environment. Students acquire tools from multiple scientific disciplines to solve problems at the interface of society and the environment.
Learning Outcomes:

- Students demonstrate understanding of the connections between Earth spheres across spatial and temporal scales including:
    - the dynamics of complex systems
    - the flows and transformations of energy and matter between spheres
- Students can articulate:
    - how humans impact connections between and within spheres,
    - the inseparability of human and earth systems,
    - and the implications of these for human well-being and environmental justice
- Students can discuss the ways scientific knowledge is historically and socially constructed
- Students utilize critical thinking, data analysis, scientific writing and communication, and field/lab methods to analyze environmental questions
- Students engage with diverse stakeholders to address socially relevant environmental problems

The **ENVIRONMENTAL STUDIES MAJOR** has the following *goals*:

The Environmental Studies major prepares students to investigate the complexity of socio-ecological relationships. Students use approaches from multiple disciplines across the social sciences, humanities, and natural sciences to pursue interdisciplinary inquiry and problem-solving. Students will be able to articulate the ways institutions, societies, and individuals respond to and shape environmental outcomes.

Learning Outcomes:

Upon completion of the major, students will be able to articulate the following:

- How institutions, values, ideas, and power relations shape the relationships between humans and the biophysical environment
- How current social, cultural, and ecological conditions are shaped by changes over time and across space
- Possible pathways for more sustainable and just outcomes

Important Dates & Events

- Students are encouraged to declare their EV major as soon as they have decided to do so, but during the sophomore year at the latest, so that they can plan their major requirements appropriately and receive important EV Program announcements.
    - To declare an EV major, students need a faculty advisor in the Program with whom they confer before declaring. It is recommended that students take EV128 and EV145 at a minimum before declaring the EV major on either track.
- Each fall semester, (usually during block 4) a meeting of all declared junior majors will be announced for organizing potential senior capstone choices.
- Each spring we meet for **EV Day**: an afternoon-long series of presentations, including EV majors presenting their senior thesis. All EV majors are encouraged to attend, and others are welcome.
- **Junior year**: students should begin planning their senior year - plan possible research experiences, attend EV seminars, etc.
- **Senior year**: students must take senior capstone course and, if approved/selected, finish senior thesis before the end of block 7.
- EV majors have the option of writing a senior thesis (on top of the capstone course) and attempting to graduate with distinction.

Major & Minor Requirements

We offer three majors, **Environmental Science, Environmental Science - Chemistry Emphasis,** and **Environmental Studies**. Listed below are the requirements for each of these majors.

The Environmental Studies and Science Program also offers an **Environmental Studies minor**. The minor is advised by faculty affiliated with the Environmental Studies and Science Program and can complement any major offered by Colorado College.

Majors

Environmental Science

[14.5 units]

- Introductory framing (2 units):
  - EV145 Environment and Society
  - EV128 Introduction to Global Climate Change
- Foundational courses in natural science (4 units):
  - MA126 Calculus
  - MA117 Statistics (OR BE220 Biostatistics and Experimental design OR EV228 Analysis of Environmental Data)
  - CH107 General Chemistry 1 OR EV110 Introduction to Environmental Chemistry
  - EV212 Energy (PR CH107 or EV110)
- Earth Systems Core (4 units):
  - GY140 Intro to Earth Systems or GY 150 Environmental Geology
  - EV209 Ecology and the Environment (PR: EV128, MA126)
  - EV351 Hydrology (PR EV212)
  - EV333 Atmospheric Science (PR EV212)
- Natural Science elective courses (3 units):
  - Any 3 EV Natural Science Courses at 300 or 400 level (independent study at 300 or 400 level may count on a case-by-case basis if approved by advisor. An explicitly EV focused 300 or 400-level course in GY, OBE, PC, CH, MA may also count, if approved by EV academic advisor.)
- EV Social Science or EV Humanities Elective (1 unit):
  - Any 200, 300, or 400 level EV Social Science or EV Humanities class
- Capstone (0.5 units):
  - EV421 Environmental Synthesis
- Thesis (optional for the major, but required for distinction):
  - EV499 Thesis (PR: COI & appropriate research exp.)

Environmental Studies

[14.5 units]

- Introductory framing (5 units):
  - EV128: Introduction to Global Climate Change
  - EV145: Environment and Society
  - MA125 or 126: Calculus
  - One additional 100, 200, or 300-level Environmental Science, Geology, or Organismal Biology and Ecology course, to be agreed upon with your advisor
  - One course in Economics: either EC100: Principles of Economics (required for more advanced Economics courses) OR EC101: Principles of Microeconomics OR EC102: Principles of Macroeconomics
- 1 of the following Environmental Policy courses (1 unit):
  - EV271: U.S. Environmental Law & Policy
  - EV274: U.S. Environmental Politics & Policy
- 1 of the following 300-level Policy/Economics courses (1 unit):
  - EV373/PS321: Public Policy Making
  - EV341: Ecological Economics
  - EV356/PS356: Global Environmental Policy
- 1 of the following Environmental Justice/Environmental Equity courses (1 unit):
  - EV274/PS274: Cities, Sustainability, and Environmental Justice
  - EV276/SO130: Environmental Sociology
  - EV282/PH248: Contesting Climate Justice
  - SW220: Environmental Justice in the Southwest (WI)
  - EV375: Community Forestry
  - EV301/SW301: Political Ecology of the Southwest (WI)
- 2 of the following Environmental Humanities courses (2 units):
  - EV281/PH246: Environmental Ethics
  - EV255/HY255: Nature and Society
  - EV285/EN230: Introduction to Literature and Environment
  - EV273/HY212: American Environmental History
  - EV342/HY200: Sustainable Development & Global Inequality
  - EV260: Topics in Environmental Humanities
- 4 EV Social Science, Humanities, or Natural Science electives, ≥2 of which are 300-level (4 units)
  - Environmentally focused courses from outside the Environmental Program may count as electives with advisor approval. EV391: Junior Research Seminar is required as one of the four electives for students writing a thesis.
- Capstone (0.5 units):
  - EV421: Environmental Synthesis
- EV499 Thesis (optional for the major, but required for distinction; PR: EV391)

Environmental Science Chemistry Emphasis [14.5 units]

- Foundational courses in natural science (2 units):
  - MA126: Calculus 1
  - PC241: Intro Physics 1
- Chemistry Core Courses (4 units):
  - CH107: General Chemistry 1 OR CH117: General Chemistry 1 with Environmental Emphasis (recommended)
  - CH108: General Chemistry 2
  - CH250: Structures of Organic Molecules
  - CH241: Intro to Analytical Chemistry
- Environmental Studies Core Courses (3 units):
  - EV128: Introduction to Global Climate Change
  - EV145: Environment and Society
  - Any 200-, 300-, or 400-level EV Social Science or EV Humanities course
- Elective Courses (5 units total):
  - Chemistry Electives (2-3 units):
    Choose at least 2 of the following courses, for 5 total electives
    - CH251: Reactions of Organic Molecules
    - CH266: Fundamentals of Physical Chemistry (recommended)
    - CH275: Foundations of Inorganic Chemistry (recommended)
    - CH351: Synthesis of Organic Molecules
    - CH342: Introduction to Instrumental Methods (recommended)
    - CH382: Biochemistry I
    - CH383: Biochemistry II
    - CH366: Chemical Equilibrium and Kinetics
    - CH367: Quantum and Statistical Mechanics
    - CH475: Advanced Inorganic Chemistry
  - Environmental Science Electives (2-3 units):
    Choose at least 2 of the following courses, for 5 total electives:
    - GY150: Environmental Geology or GY140 Introduction to Earth Systems
    - GY211: Earth Materials
    - GY335: Earth System Geochemistry
    - EV209: Ecology and the Environment
    - EV307: Stream Ecology
    - EV315: Atmosphere-Biosphere Interactions
    - EV333: Atmospheric Dynamics
    - EV351: Hydrology
    - BE365: Plant Physiology
    - BE375: Environmental Microbiology
    - BE422: Biogeochemistry and Ecosystem Ecology
    - EV431: Atmospheric Chemistry

        - Other Environmental Science courses with Chemistry emphasis upon approval from advisor

- Capstone (0.5 units)
    - EV421: Environmental Synthesis

- Thesis (optional for the major, but required for distinction):
    - EV499: Senior Thesis (PR: COI & appropriate research exp.)

Minor

Environmental Studies

[6 units]

- Introductory courses (2)
    - EV128 Introduction to Global Climate Change
    - EV145 Environment and Society
- Electives (4)
    - Electives are drawn from the following three areas: Environmental Science, Environmental Humanities, or Environmental Social Sciences, and must meet the following distribution requirements:
        - 3 courses in one area, with one of these at the 300-level
        - 1 course from a second area

      <u>Area One: Environmental Science</u>
      Any EV science course can count toward this requirement. Recommended courses include:

        - EV209: Ecology and the Environment
        - EV211: Human Impacts on Biogeochemical Cycles
        - EV212: Energy: Environmental Thermodynamics and Energetics
        - EV228: Analysis of Environmental Data
        - EV311: Water: Hydrology, Aquatic Chemistry, and Ecology
          EV431: Atmospheric Chemistry

      <u>Area Two: Environmental Social Science</u>
      Any EV social science course can count toward this requirement, as well as a number of courses in other departments.

        - EV260: Topics in Environmental Social Sciences
        - EV271: U.S. Environmental Policy
        - EV341: Ecological Economics
        - EV352/SW352: Waters of the West
        - EV375: Community Forestry
        - PS272/EV272: Cities, Sustainability, and Environmental Justice
        - PS321/EV373: Public Policymaking

- PS334/EV334: The U.S. Environmental Movement
- PS356: Global Environmental Policy
- EV276/SO130: Environmental Sociology
- SW220: Environmental Justice in the Southwest
- SW272: Nature, Region, and Society of the Southwest
- SW301: Political Ecology of the Southwest

Area Three: Environmental Humanities
The following courses count toward this requirement:

- EV281: Environmental Ethics
- EV261: Topics in Environmental Humanities
- EN280: Literature and the Environmental Imagination
- EV282: Contesting Climate Justice
- HY212/EV273: American Environmental History
- HY255/EV255: Nature and Society

How to Declare An EV Major Or Minor

To declare an EV Studies or EV Science major, or an EV Studies minor, you will need to contact either (1) an EV professor or (2) the EV Administrative Assistant to first express your intent to declare. If you contact the EV Administrative Assistant, they will assign you an advisor based on the faculty advisors' availability. At that point, you should plan to arrange a meeting with your advisor to discuss your goals and your progress towards the major or minor.

Only AFTER you've confirmed your advisor, you will need to submit a major declaration form through the registrar's office. Forms here: https://www.coloradocollege.edu/offices/registrar/forms.html

- **Declare a Single Major,** if you are declaring an EV Studies or EV Science major
- **Declare a Double Major**, if you are declaring an EV Studies or Science major alongside another major
- **Declare a Department Minor**, if you are declaring an EV Studies minor

The forms will ask you to fill out the courses required courses that you've already completed in the major/minor, as well as the courses still to be taken. Please include both the course number and name in the form and make sure to check that the total number of units completed + the total number of units remaining equals the total units required for the major (14.5 units for EV Studies and EV Science) or minor (6 credits). Use the checklists of requirements above to double-check before submitting your form to the registrar.

Note, for double majors, as per Colorado College policy:

- Both departments must approve the option.
- In no case may more than three courses within the majors overlap.
- The student must have an advisor in each major.

Once you've submitted your major, double major, or minor declaration form, it will be processed by the registrar and sent to both your advisor(s) and the Program Chair(s) to review and sign. Once signed, your CC Student Record will be updated, and your new advisor will have access to your academic record. You should allow up to 10 business days for processing before checking on the status. Make sure to give yourself plenty of time if you are worried about missing a deadline.

Advice on Scheduling Courses For an EV Major

The EV Program requires that a student earn a C- or higher in the 15 required courses. Many of these courses must be taken in a prescribed order. We recommend that you try to take at least 4 courses each year that apply to the major. Furthermore, students who want to **study abroad** have to plan carefully, as many study abroad programs do not provide credit towards the major.

The department strives to offer sufficient sections of all courses to meet the needs and desires of our students; however, there is high demand for most EV courses. By college policy, EV faculty generally hold to course limits. If you are on the waitlist for a course you need/want, please email the professor teaching the course before (preferred) or on the first day of class to express your interest in the course and ask about the possibility of enrolling in their course. Faculty are not obligated to overload any course, however, so you should not expect that to happen.

Extracurricular activities, independent research blocks (EV 293/EV393/493/499) and summer research experiences are also important considerations in planning for post-graduate degree programs or employment following graduation. Independent research is increasingly considered for admission to graduate programs, and is highly recommended if seeking to apply to Ph.D. programs. Furthermore, students earning high enough grades to qualify to graduate with distinction in Environmental Studies or Environmental Science should consider completing a senior thesis (EV499), as it is required to be considered for graduating with distinction. More information on senior thesis options is offered below, under "Senior Capstone Experience."

Policy on Off-Campus and Transfer Credits For EV Major Requirements

Study Abroad

EV faculty view semesters abroad as an opportunity to gain international and cross-cultural experience, an important part of a liberal arts education, and to gain experience in environmental studies. Please visit the website of CC's Center for Global Education and Field Study to learn about CC's policies for study abroad, search available programs, find submission deadlines, etc. While many students do a semester abroad, many others do not.

Before you narrow your options for off-campus study too far, be sure to talk with your adviser in EV to discuss the fit of program(s) fit with your academic goals, the quality of the program(s), and your expectations for EV credit.

How many credits can count towards your major or minor?

Since many non-CC programs have substantial non-EV components and because we value EV courses at CC, **you can only transfer 2 credits from non-CC programs to your EV major or 1 credit to your EV minor**. In most cases, these credits are in the form of 200-level electives. If you are interested in an off-campus or study abroad course substituting for a major requirement or counting as an upper-level elective, see below. To get credit for a 300- or 400-level elective in either the Environmental Science or Environmental Studies majors, you need to submit a syllabus to your major advisor. That advisor can then take it to the Director and/or another EV faculty member whose field of study is the closest match for a decision.

Pre-approved study abroad courses

Many of the study abroad programs most popular with EV students have been pre-approved to count as either substitutes for a required EV course or as electives. You can find **pre-approved courses here**: https://www.coloradocollege.edu/offices/globalandfieldstudy/global-education/semesters-off-campus/credit-transfer/course-approval-database.html.

To get credit for a specific course required for the major that is *not* on this list, you need to submit a syllabus to your major advisor. That advisor can then take it to the faculty member whose class is being substituted for a decision.

General study abroad suggestions

- Plan for substantial lead-time as you will need to complete an online proposal/approval form with CC Global Education and meet the deadlines for studying abroad. They will then request approval from your academic adviser.
- Before participating in an off-campus program for EV credit, you must declare as an EV major, take at least one EV course toward the major, and discuss with your EV adviser how a program fits with your educational goals.
- Students usually go abroad in their junior year, but occasionally as second-year student.
- Grades do not transfer to CC transcripts (except ACM programs); only credits are listed. You must receive a grade of C or higher to receive credit.
- Only very rarely does research from these programs meet requirements for a senior thesis.

Transfer Credits From Previous Institutions

Courses completed prior to enrolling in college, *e.g.,* in a gap year or semester, often do not count towards EV majors. Important exceptions include college credit given for the majors' required math classes (*e.g.,* a score of 4 or 5 on the AP Calculus exam will fulfill the MA 125/MA126 requirement).

For transfer students, the EV Program will work with you to count as many of the courses you completed at your previous institution toward the major as possible. We cannot do this until you have declared an EV Science or EV Studies major. Once you declare your major, you will work with your major advisor and the Program Director or Associate Director to determine which courses we can count. You will need to provide syllabi for all the courses you wish to have count for the major.

Senior Capstone Experience

There are two options for completing your senior capstone experience:

1. Complete the **senior capstone course (EV421)** during the last academic year prior to graduation
2. Complete a **senior thesis** on an independent research project (*optional*) + complete the **senior capstone course**

EV421: Environmental Synthesis

(required for all senior EV Studies, EV Science, and EV Science-Chemistry Emphasis majors)

All EV Studies and Science Program majors, including those who decide to complete a Senior thesis, are required to complete the Senior Capstone course (EV421: Environmental Synthesis). This course will typically be facilitated by the EV Program Faculty Chair. The capstone course is designed to be an integrative experience across the program's three majors (Environmental Science, Environmental Science - Chemistry Emphasis, and Environmental Studies). The capstone course must be completed during the final year of a student's time at Colorado College.

EV421 emphasizes professional development considerations as they relate to building on the skills and knowledge gained through coursework in the EV Studies and Science Program. The course is offered as a semester-long 0.5 unit extended format course to be taken in either the fall or spring semester of senior year. The extended format is particularly useful in that it enables all seniors to come together around shared themes as well as enable smaller, focused group discussions.

If you have questions concerning the capstone course requirement, please see your academic advisor or the EV Program Director.

EV499: Senior Thesis

(optional)

A senior thesis is not required for the Environmental Studies or Science majors, though it is necessary to successfully complete a thesis and receive an A to be eligible to graduate with distinction. For students who wish to write a senior thesis, there are **two standard options**:

1) The student may conduct research with a CC faculty member or through a Research Experience for Undergraduates (REU) hosted by another institution or another research-centered internship over the summer between their junior and senior years. The student will then take one thesis block (EV499: Senior Thesis) during their senior year to write up the results of the research into a polished thesis. Students can take a second block (EV493: Independent Research) if one thesis block is not enough to complete the work, but this will be an exception rather than the standard.

2) Students who are unable or choose not to do research over the summer will spend two blocks during their senior year working on their thesis, with the first block being an independent research block (EV493) and the second block being a thesis writing block (EV499).

All students are highly encouraged to present their research orally at EV Day, usually held during the first or second Friday of Block 8.

Note: Environmental Studies students must take EV391 Junior Research Seminar in the spring semester of their junior year in order to complete a thesis their senior year.

Timeline & Procedures

Students are encouraged to talk to EV faculty members about research opportunities throughout their sophomore, and junior years. Each year late in the fall semester or early in spring semester, the EV program invites junior students to a meeting where EV faculty formally introduce students to research opportunities in their laboratories and other opportunities for mentored research outside of CC, such as REUs. During this meeting, the EV program also reviews the senior thesis sign-up procedures with the junior students.

To register for a thesis, students must obtain and fill out the thesis declaration form from the program administrative assistant, and return the form before the deadline, generally by the last day of block 6. The key components of the process are:

1. Student identifies a first reader of the thesis among the EV program faculty who will serve as the thesis advisor,
2. Student and the first reader agree on a thesis topic and a timeline for thesis completion
3. Topic is recorded on the declaration form and the first reader faculty signs the form indicating they have committed to being the primary thesis advisor.
4. Faculty have the right to decline being the first reader (based on their expertise and workload)
5. Student and the first reader identify a potential second reader of the thesis.
6. Student obtains consent from the second faculty to be a second reader of the thesis
7. Student and the second reader discuss the role of the second reader including deadlines on drafts.
8. Second reader signs the thesis declaration form.

Research to Support the Senior Thesis

Typically, thesis research is conducted during the summer following junior year, but it may also be conducted throughout the course of a student's senior academic year. Research is often conducted under the guidance of the first reader of the thesis. However, research may also be conducted as part of mentored research at another institution (*e.g.,* an REU; see below). The details of the research arrangements must be approved by the first reader before the thesis declaration form is submitted. Limited funds exist at CC to support senior thesis research. The first reader will discuss the availability of these resources with the student prior to signing off on the thesis.

First & Second Reader Roles

First reader: The first reader serves as the primary advisor to a student's senior thesis project. Typically, the first reader will supervise the research leading up to the thesis. If the research is done at another institution, the first reader will communicate with the student about research design and expectations.

The first reader mentors the student during the data analysis stage and throughout the writing of the thesis itself. This typically takes the form of several drafts. It is essential that the first reader and the student establish a detailed timeline for drafts leading up to the completion of the thesis.

Second reader: At a minimum, the second reader will read the completed thesis paper at its final stage and confer with the first reader to determine a final grade for the thesis. More typically, the second reader will read a draft of the thesis close to the final stage and provide comments. It is also within the scope of the second reader to provide insights and mentoring at any other stage of the research, from collecting data to data analysis, and/or commenting on rough drafts. The student and the second reader should discuss expectations regarding the level of involvement of the second reader during the thesis declaration stage.

Thesis Presentation

Students seeking distinction must present their thesis orally during EV Day in a high-quality presentation that has been carefully rehearsed under the guidance of the first reader. Students not seeking distinction may also present at EV day if they wish either orally (depending on availability of time in the schedule) or as a poster.

Thesis Submission

Students will submit the final draft of their senior thesis, with title page (title page format in Appendix X below) signed by the thesis first and second reader, by the last day of Block 7.

Upon approval from your thesis advisor/first reader, the completed thesis should be submitted to the library as a PDF/A (.pdf extension) to Tutt Library using the thesis submission form linked on the following webpage: https://coloradocollege.libguides.com/digitalCC/ThesisSubmissionTips

To view archived EV Senior Theses, see the EV Student Senior Thesis Repository on Digital CC here: https://digitalccbeta.coloradocollege.edu/pid/coccc:5101

Undergraduate Research Opportunities

Independent research (EV293, EV393, EV493)

Independent research blocks allow students opportunities to pursue a research project under supervision of a faculty member for credit. Faculty specialties are briefly described on the Environmental Program's website. The timing of projects is determined by the student and advisor, but credit is awarded in a single block. Students may use either EV393 or EV493 (*i.e.* only one unit) towards their upper-level elective environmental science major requirement. EV293 is best used for second or early third year students, prior to any capstone plans in either track.

Begin talking with a faculty member in the area of your interest before you consider enrolling in EV393 (one block project) or EV493 (completed in conjunction with senior thesis work). An EV faculty member must agree to work with you before you can register for either course. If a faculty member agrees to

supervise your research, the Registrar will create a course for you. We strongly encourage all students who complete independent research to present their research on EV Day. Talk to your research advisor about this opportunity. Permission from your advisor and/or Program Chair is required if conducting research off-campus under supervision of a non-CC faculty member. Note: no more than 1 unit of independent research can be used toward either of the EV majors.

Faculty-Student Collaborative Research

Many faculty members hire research students during the academic year and/or summer. Check the People page on the EV website for links to faculty webpages and descriptions of their research interests. If you are interested in working with a professor, contact them directly. Our faculty have active and diverse ongoing research in which students can gain valuable research experience and faculty can also help students develop their own project. We encourage collaborative student-faculty research projects and can provide some support via the Grant Lyddon Fund with additional funding available elsewhere on campus. Many of these funding pools require faculty support, so it is important to start talking to professors early. Collaborative research opportunities provide excellent experience for students interested in graduate school or those planning on becoming part of a research team upon graduation.

Senior Thesis (EV499)

Students planning on professional careers requiring research experience are encouraged to consider completing a senior thesis (note this, alone, does not fulfill the capstone requirement). Research performed in EV393, EV493 or as part of an off-campus research program (*e.g.* an REU) can be the basis of a senior thesis (note students may only count one credit of independent research towards the major requirements, *i.e.* EV499 or EV493/393). Please see the section above for more details on completing a senior thesis.

Research Experience for Undergraduates (REU) Programs

There are also special summer-long Research Experience for Undergraduates (REU) programs sponsored by the National Science Foundation (NSF). This NSF-sponsored scholarship program is typically held for 8-10 weeks each summer for U.S. citizens at universities all over the country in nearly every scientific discipline. Additionally, many federal laboratories and even private-sector companies offer summer research projects. These programs are hosted by a parent institution and conduct nationwide searches for students every winter with deadlines typically between early-January and mid-March.

Below are some helpful links to find relevant REU opportunities:

- NSF Earth Sciences: https://bit.ly/2sRCV7D
- NSF Atmospheric and Geospace Sciences: https://bit.ly/2B4fTik
- NSF Biological Sciences: https://bit.ly/2RVcJn0
- NSF Ocean Sciences: https://bit.ly/2G2BRpb
- NSF Polar Programs: https://bit.ly/2G5nmkk
- List of programs that takes undocumented students: http://www.matthewrcover.com/undocumented-in-stem.html

You can also search on the NSF website (nsf.gov) for specific topics or simply google "REU + topic" or "undergraduate research opportunity + topic" (*e.g.* "REU sustainable agriculture"). Keep in mind most of these programs require one or two letters of recommendation and a short essay. Ask your letter writers early! For more tips on applying to REUs: https://bit.ly/2Wq5aYr

There are also many summer research opportunities with researchers at other institutions that are not official "REU" opportunities but provide similar experiences. These are often great ways to do research with someone else and then partner with a faculty member on campus to analyze your data for your senior thesis. The best way to find these opportunities is to talk to faculty members, subscribe to list-servs, and/or check job sites. For example, subscribe to the ECOLOG-L listserv, or check out opportunities posted on professional society pages (http://ecophys-jobs.org/undergrad.html, https://eos.org/jobs-support/student-opportunities).

Departmental Employment Opportunities

Students may occasionally be employed as graders for an EV Program course. This can be a beneficial experience for those intending to pursue a career in teaching or a graduate program that may require/offer teaching assistantships. Students interested in becoming a grader for any course should contact the faculty member for that course and discuss available opportunities.

NOTE: All Students who work and receive wages from the EV Department budget must fill out the proper form in the Financial Aid Office before they can be hired. Final selection of students for department jobs will be made by the EV Department.

Funding for Undergraduate Work & Research Opportunities

Aside from The Colorado College student aid program, there are other available funds for financial assistance in this department.

Linnemann Scholars & Grant Lyddon Fund

The Colorado College Environmental Studies and Science Program has received generous gifts from the Grant Lyddon Foundation and from the Linnemann Family to support collaborative research between students and EV faculty members. The aim of the program is to support faculty in their research activities while providing students with first-hand research experience as undergraduates. The research should aim foster a mentor-apprentice relationship between the faculty member and the student and to expose the student to the processes of scholarly inquiry and discovery that characterize the life of a scholar/teacher.

These funds provide stipends for full-time student summer research for up to 10 weeks. Stipends are commensurate with other College summer research funding. Additional funds will be provided for research travel, presenting research at conferences, etc.

Keller Family Venture Grants

The Venture Grant Committee awards funds for research projects under the guidance of a professor. Funds may also be granted to permit students and faculty to attend scientific meetings and conferences. Application forms and further information are available in the Dean's office or here: https://www.coloradocollege.edu/other/venturegrants/

EV Program Policy on Contributions to Venture Grant Funding

The Keller Family Venture Grants provide students up to $1500 (up to $3000 for groups) for student research projects. Individual students or groups may apply for up to $500 in Matching Funds if they also receive financial support from another department or office. To support the Venture Grant needs of our majors, the Environmental Studies & Science Program is willing to provide up to $500 in funding per project. Applications for the funds must meet the following requirements:

- Applicant(s) must be EV major(s);
- The additional funds must be justified by the project's budget;
- The Venture Grant research must be environmentally-focused; and
- Priority will be given to research that support theses or that build on EV coursework

Total EV funds to support Venture Grants are limited and will be capped at $1500 per year, available on a rolling basis. To apply, e-mail your full application along with answers to the above requirements to sgelbman@coloradocollege.edu. Applications will be assessed blockly by EV Faculty.

Student Departmental Awards

Outstanding Environmental Science Student Award

Each year the EV faculty selects one senior major as outstanding environmental science track student. Among other things, grades, research quality, and academic contributions/presence in the program are all facets of this award. Winners will be announced at Honors Convocation each spring. The award is monetary and presented to the recipient.

Outstanding Environmental Studies Student Award

Each year the EV faculty selects one senior major as the outstanding environmental science track student. Among other things, grades, research, and contributions/presence in the program are all facets of this award. Winners will be announced at Honors Convocation each spring. The award is monetary and presented to the recipient.

Outstanding EV Student Service Award

The outstanding service award may be awarded annually to the student who has made the greatest community and/or on-campus contributions that reflect the mission of the EV Studies Program. The student does not have to be a senior. The award is announced at Honors Convocation each spring, and a monetary gift is presented to the recipient.

Distinction in Environmental Studies

A senior EV major who completes a high-quality senior thesis (as indicated by grade of A), presents it orally at EV Day, and has a grade point average in at least the top 10% of the EV program is eligible to receive Graduation with Distinction. This honor will be recorded on the student's official transcript and noted on the commencement program at graduation. If a student meets the senior thesis and presentation requirements, but does not have a high enough grade point average, they will not receive Graduation with Distinction, but the successful completion of the senior thesis requirements will become part of the student's official transcript under Senior Thesis.

Alcohol & Drug Policy

The Environmental Studies and Sciences Program follows the same policies on alcohol and drugs as Alcohol is not permitted on or in any other campus property or facility unless it is at a pre-approved function. This includes academic buildings, athletic facilities, and outdoor locations. In addition, alcohol is prohibited for both players and officials at indoor or outdoor intercollegiate, intramural, or club sport activities. In maintaining a drug-free workplace and campus, Colorado College prohibits the unlawful manufacture, distribution, dispensation, possession, or use of illicit drugs or alcohol on its campus or as part of any of its activities.

Appendices

Appendix I: Checklist of Important Items & Events

Use this checklist to track your progress through the requirements for the EV major and graduation

1. Spring of Sophomore Year
   - A. Obtained an advisor in EV [ ]
   - B. Applied for Major in EV [ ]
   - C. If pre-health, have a file in pre-health advising office [ ]
   - D. If pre-K-12 education, have contacted Education Department chair [ ]

2. Fall of Each Year
   - EV Majors Meeting (typically held in Block 1) [ ]

3. Spring of Each Year
   - ▪ Attend EV Day (typically held in Block 8) [ ]

4. Preregistration of Junior Year
   - ▪ Check graduation requirements before scheduling senior year [ ]

5. Spring of Junior Year
   - ▪ Attend Juniors Meeting (typically held in Block 4) [ ]
   - ▪ Make plans for senior thesis, Graduation with Distinction, if desired [ ]
   - ▪ If considering graduate school, find 5-6 appropriate programs and learn about their admissions requirements and application deadlines [ ]

6.. Senior Year Capstone Experience
   - A. Environmental Synthesis (EV491) AND/OR Thesis (EV499) [ ]
   - B. Students who are attempting to graduate with distinction (honors) in EV
     - ▪ Register for senior thesis [ ]
     - ▪ Sign up to present at EV Day [ ]
     - ▪ Turn in beautiful final, signed copy of thesis [ ]

7. Items to Consider during Senior Year (if planning to go to graduate school at some time):
   - A. Register for GRE General test (you can take it later as well) [ ]
   - B. Request letters of recommendation [ ]

Appendix II: *Sample Thesis Cover Page*

[TITLE OF THESIS]

A Thesis

Presented to

The Faculty of the Environmental Studies and Science Program

Colorado College

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Arts in [Environmental Science] or [Environmental Studies]

By

[Name of Student]

May [Year]

_____

[Name of thesis advisor]
[title, Colorado College]

_____

[Name of second reader]
[title, Colorado College/other organization]