

# 2022-2023 ACADEMIC CATALOG

Unity College  
Distance Education



# Academic Year 2022-2023

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## A Note from President Khoury

Unity College Distance Education Students,

Welcome to Unity College! We are so happy you have chosen us to be your partner in your educational journey.

Here at Unity College, we believe that every student should have an affordable, accessible and flexible education that is anchored in sustainability science and fortified by the liberal arts and sciences and we believe that a 21<sup>st</sup> century education integrates modern technology with sustainability science and the liberal arts while fully preparing students for a career, new venture or graduate school. But being a student at Unity College goes beyond what we can offer you. It requires you to do your part in ensuring your success, and that means embodying the core values Unity College is built on including respect, integrity, social responsibility, community, resiliency, cultural competency, innovation, and accountability.



By joining Unity College, you are joining a team of people who are determined to make powerful and positive changes on the environment, now and in the decades to come. As a student at Unity College you are showing your own commitment to not just an education, but an education that will help create a more sustainable world for current and future generations! Congratulations!

I hope you find your time with us rewarding and thank you for choosing Unity College!

If you need help or have questions, please reach out to your Distance Education Concierge or Distance Education Advisor.

In Unity,

A handwritten signature in blue ink, which appears to read "Melik Peter Khoury". The signature is stylized and fluid.

Dr. Melik Peter Khoury

Unity College President

## SECTION 1: INTRODUCTION

### The Unity College Mission

Through the framework of sustainability science, Unity College provides a liberal arts education that emphasizes the environment and natural resources. Through experiential and collaborative learning, our graduates emerge as responsible citizens, environmental stewards, and visionary leaders.

### The Unity College Distance Education Catalog

The Distance Education Catalog contains the policies, procedures, and guidelines applicable to the Distance Education Strategic Education Business Unit (SEBU) at Unity College as reviewed and approved by the Unity College Distance Education administrative team. The Unity College Distance Education SEBU currently oversees all online baccalaureate and graduate programs. All students in those programs/courses will follow the policies and procedures outlined in this catalog.

Unity College views the *Unity College Distance Education Catalog* as the primary contract between the College and the student. Students must follow the graduation requirements from the catalog in effect at the time of their matriculation, or students may elect to fulfill the requirements of any subsequent catalog, provided they were enrolled at the time the catalog was published. In either case, the catalog is to be considered in its entirety; students may not fulfill part of their program requirements from one catalog and another part from another catalog. Unity College reserves the right to change any of the statements made in the catalog by reasonable notice in a supplement or replacement publication.

Distance Education Baccalaureate Programs: Distance Education baccalaureate online programs involve engagement in a small-class setting, with active-learning, and highly engaged instructor feedback and support. Baccalaureate students can expect to see organized, engaging courses that teach knowledge and skills professionals need to succeed in the 21st century.

Distance Education Graduate Programs: The most visible activity of distance education graduate work is the intellectual interaction of faculty and students involved in learning and devoted to advancing professionalism in their fields. Supporting these endeavors are academic leaders who are committed to providing an atmosphere in which distance education can flourish.

By accepting admission to Unity College, students indicate that they are responsible for adhering to the policies and procedures that govern their education at Unity College. The requirements of the baccalaureate and graduate programs at Unity College have been instituted so that students, faculty, and administrators are



guided by a shared set of expectations for education. We sincerely hope that awareness of these requirements allows each student a fruitful educational experience at Unity College.

## Statement of Accreditation

Unity College is fully accredited by the New England Commission of Higher Education (NECHE) Commission on Institutions of Higher Education (CIHE). NECHE is located at 3 Burlington Woods Drive, Suite 100, Burlington, MA 01803-4514. NECHE may also be contacted by telephone at (781) 425-7785 or through their website at <http://cihe.neasc.org>.

## SECTION 2: ADMISSIONS GUIDELINES

### Baccalaureate Admissions Requirements

To enroll in a Unity College Distance Education baccalaureate program, students must meet the following criteria:

- Have graduated High School [or equivalent]
- Acknowledge awareness of and agreement with the [minimum skills for success at Unity College](#)

To be considered for admission into the Distance Education baccalaureate program, a student must submit the following:

- A Unity College Distance Education baccalaureate application for admission
- Verification of successful high school completion [upon request].

While unofficial transcripts are accepted during the admissions process, college credits may only be transferred to Unity College through the submission of an official college transcript. Official transcripts are received from an authorized third party or directly from another institution.

If the student fails to provide official transcripts to Unity College, transfer credit will not be awarded, and the student may be enrolled in Unity College courses that would have otherwise been fulfilled through transfer at time of enrollment. The Department of Education may, without notice, require Unity College to obtain the student's official transcripts for financial aid eligibility.

### Admissions Requirement for Homeschooled Students

A homeschooled applicant for admission is required to submit one of the following for review:

- 1) A homeschooled transcript
- 2) A portfolio that has been evaluated by a third party [e.g., a certified teacher]
- 3) A composite SAT score of 1050 or higher; or a composite ACT score of 18 or higher

### Graduate Admissions Requirements

All students applying for entry into either a Unity College Distance Education graduate program or certificate eligible for financial aid are required to produce evidence of having earned a Bachelor's degree from an accredited institution and

- (1) have a minimum baccalaureate cumulative GPA of 2.75 or higher; or
- (2) have earned a minimum grade of B (3.0) in at least 6 credits of Master's level courses from an accredited institution.

Students must also submit all additional application requirements which include a copy of their resume, unofficial transcripts, and their academic essay. No other materials are required. Any fees associated with the application are waived.

- For students who do not meet (1) or (2) above: A student whose baccalaureate GPA is between a 2.5 and 2.75 may appeal for entry into one of the graduate programs by submitting an additional essay outlining the struggles they encountered during their baccalaureate program and explaining their reason for having a GPA below 2.75. They must also describe in their essay how they plan to be successful if granted entry into one of Unity College's Distance Education graduate programs. This supplemental essay will be reviewed, and a decision will be made regarding acceptance into a graduate program.
- A student with a cumulative baccalaureate GPA below 2.5 may enroll as a non-degree seeking students in their desired Masters program. Upon successful completion of 6 credits of coursework in which the student has earned a minimum grade of B, the student will be admitted to the Masters program.

### Pre-Requisite Courses for Select MPS Programs

Students must have the following classes before admittance into the Master of Professional Science in Wildlife Conservation and Management, Professional Wildlife Biologist Track: one statistics class and one ecology or wildlife biology or natural resource management class. There are no prerequisites for the Master of Professional Science in Wildlife Conservation and Management, Conservation and Management Track.

Students must have the following classes before admittance into the Master of Professional Science in Environmental Science program: one statistics class and one geology or soil science or earth science class.

Students must have the following classes before admittance into the Master of Professional Science in Marine Science program: one statistics class and one marine biology or biology or oceanography class.

### Graduate Priority Admissions

Students who have completed a bachelor's degree with a minimum GPA of 2.75 from Unity College Distance Education and Hybrid Learning are eligible for automatic acceptance into one of our Master of Professional Science programs. If the graduate application is submitted within 6 months of degree completion, the essay and resume requirements will be waived.

To ensure immediate acceptance after degree conferral, we encourage students to take program specific prerequisite courses as electives during their baccalaureate program.

Students applying after the 6-month window of automatic acceptance eligibility will follow our regular graduate admissions process.

## Readmission to the College

Students enrolled in a degree program may continue to work toward their degree program under the requirements that were in effect at the time they matriculated, providing there have been no breaks of more than twelve (12) months. Students who have a break of more than twelve months must apply to be reinstated to the Distance Education program and meet requirements of the catalog in effect at the time they are reinstated. After 12 months of inactivity, students must contact their academic advisor to express their intent to re-enroll in classes. Students who had a break in attendance for up to two (2) years due to military service are readmitted to their original program and catalog requirements, as long as the program is still active in Distance Education. The College reserves the right to make substitutions for courses that are no longer offered.

## Transfer of Credits

Baccalaureate students may transfer a maximum of 90 baccalaureate credits into baccalaureate programs at Unity College. Students must earn a 'C-' (1.7) or higher for the credit to be accepted for transfer. The credit-granting institution must also be accredited by a Department of Education-recognized regional or national accrediting body. If an institution is accredited by a DOE recognized agency but has programs and/or courses which are not eligible for Title IV funding, that coursework is not transferable for credit. Some coursework may not be eligible for credit transfer, including remedial/fundamental coursework.

Advanced Placement® (AP®) exams are eligible for transfer credit and count toward the 90-credit maximum for baccalaureate students. A minimum score of 4 is required to earn credit for mathematics and biology courses. For all other courses, a minimum score of 3 is sufficient.

College Level Examination Program® (CLEP®) exams are also eligible for transfer credit and count toward the 90-credit maximum for baccalaureate students. Unity College considers College Board recommendations for minimum scores when processing transfer credit.

DSST® is a credit-by-examination program often utilized by members of the military. DSST® scores can be submitted to earn college credit toward a degree program. Unity College will consider current ACE® recommendations for the minimum passing score and amount of credits to be awarded.

Unity College accepts credits from the International Baccalaureate Diploma Programme for courses graded with a 5 or higher if applicable to the student's major at the college. International Baccalaureate credits are subject to transfer credit limitations.

GED® exams may be eligible for transfer credit and count toward the 90-credit maximum for baccalaureate students. Unity College considers the recommendations



of the American Council on Education (ACE®) guidelines for minimum scores when processing transfer credit. Students may receive up to 3 credits of math elective, 3 credits of biology elective, 3 credits of humanities elective, and 1 credit of general electives based on individual test subject scores.

Active and former military members may receive transfer credit by submitting a Joint Services Transcript. Courses will be evaluated per ACE® recommendations and can be applied to the major (if relevant) or toward general electives.

Students enrolled in a baccalaureate certificate may not transfer more than 25% of that certificate's required credits.

Unity College reserves the right to determine the eligibility of transfer credits. Transfer credits count only toward the total earned hours, not baccalaureate grade point averages.

Graduate students may transfer a maximum of nine (9) graduate credits into graduate master's programs at Unity College. All coursework transferred must apply to the degree requirements of the program the student is enrolled in. Students must earn a 'B' (3.0) or higher for the credit to be accepted for transfer. The credit granting institution must also be accredited by a recognized regional or national accrediting body. Credits should be transferred at the time the student is admitted and will be reviewed by the Registrar's Office, in consultation with the deans. Transfer credits count only toward the total earned hours, not graduate grade point averages. Transfer of credits from other approved graduate programs will be considered on a case-by-case basis by the Registrar's Office in consultation with the Deans.

### Transfer of Credits for Prior Learning

Baccalaureate students may apply to earn credit for experience outside of coursework. Students may receive up to 30 credits toward a program through Credit for Prior Learning and no more than a total of 90 credits combined with Prior learning and Transfer credits. Students must apply through the Credit for Prior Learning Assessment process. All applicants must submit a portfolio that justifies the credits requested for award. The Distance Education Curriculum and Assessment Task Group reviews submitted portfolios and provides a recommendation to the Vice President of Distance Education [VPDE]. The VPDE is responsible for the final decision. The following categories are ways that students may qualify to receive through prior learning experiences:

- Credit for professional licenses and credentials earned
- Credit of a prepared portfolio documenting skills and knowledge
- Credit for exams, trainings, or certifications received

Portfolio must include the following information:

- Course Information – includes the learning outcomes for the specific course

you are challenging

- Summary Sheet – matches each course learning outcome to your experience and supporting evidence
- Resume and Biographical Essay – provides an overview of your learning experiences related to the course
- Narrative – demonstrates how you have achieved each course learning outcomes
- Documentary Evidence – supports your claim to knowledge of the learning outcomes

Graduate students may apply to earn credit for experience outside of coursework. Students may only receive up to 6 credits toward a program through Credit for Prior Learning and no more than a total of 9 credits combined with Prior learning and Transfer credits. Students must apply through the Credit for Prior Learning Assessment process. All applicants must submit a portfolio that justifies the credits requested for award. The Distance Education Curriculum and Assessment Task Group [DECA] reviews submitted portfolios and provides a recommendation to the Vice President of Distance Education [VPDE]. The VPDE is responsible for the final decision. The following categories are ways that students may qualify to receive through prior learning experiences:

- Credit for professional licenses and credentials earned
- Credit of a prepared portfolio documenting skills and knowledge
- Credit for exams, trainings, or certifications received

Portfolio must include the following information:

- Course Information – includes the learning outcomes for the specific course you are challenging
- Summary Sheet – matches each course learning outcome to your experience and supporting evidence
- Resume and Biographical Essay – provides an overview of your learning experiences related to the course
- Narrative – demonstrates how you have achieved each course learning outcomes
- Documentary Evidence – supports your claim to knowledge of the learning outcomes

### Transfer of Credits from a Quarter System

Unity College recognizes that some students may transfer in credits earned from a quarter credit system. To convert quarter hours to semester hours, multiply the number of quarter credits earned by 2/3. For example, a course earned at 4.5 quarter credits converts to 3 semester credits.

When the conversion of credit hours completed results in a fraction, the number of credit hours will be rounded up for the benefit of the student by 0.5 semester credits. For example, a course earned at 4 quarter credits converts to 2.67 semester credits, which is rounded up to 3 semester credits. A course earned at 5 quarter credits converts to 3.33 semester credits, which is rounded up to 3.5 semester credits.

### International Transfer Credit

International transcripts must be evaluated by a NACES®- or AICE®-approved agency to determine U.S. credit equivalency. Unity College will not consider foreign credits for transfer without the agency evaluation.

## Student Immunization Policy

### State of Maine Requirements

Maine law (20A M.R.S.A. 6358, Chapter 262) states that all public and private post-secondary institutions in the State of Maine must require, for all certificate and degree seeking students participating in face-to-face learning, proof of immunization or document immunity against five specific illnesses: diphtheria, tetanus, measles, mumps, and rubella.

Per Maine law, evidence of immunization or immunity can be demonstrated by the following:

1. A certificate of immunization from a physician, nurse, public health official, or school health provider who has administered the immunizing agent(s) to the student must specify the immunizing agent and the date(s) on which it was administered. Secondary school health records may also be accepted as proof of immunization under this rule, in lieu of certificates of immunization, as long as the secondary school health records were compiled and maintained as official documents, were based on certificates of immunization, and state, at a minimum, the month and year that the immunizations was administered.
2. Laboratory results or medical records demonstrating immunity will be considered acceptable evidence of meeting the purpose of this requirement. Secondary school health records may be accepted as proof of immunity if they contain copies of the laboratory evidence of immunity.

Beginning September 1, 2021, students are no longer eligible to claim religious or philosophical exemptions.

**The only exemption to this requirement is for students enrolled in a distance education program who do not physically attend any classes or programs at a school facility.**

Unity College requires immunization records for all certificate and degree seeking students where in-person learning is either an option or requirement of the SEBU.

### College-Specific Requirements

In addition to the immunization requirements of the State of Maine, Unity College Enterprise or SEBUs may require additional immunization(s) based on location, program of study, or public health concerns.



## SECTION 3: EXPENSES AND FINANCIAL AID

### Cost of Attendance

Baccalaureate courses cost \$470 per credit hour. Books, software, hardware, and other materials are not included in the credit hour cost and must be purchased separately.

Graduate courses cost \$650 per credit hour. Books, software, hardware, and other materials are not included in the credit hour cost and must be purchased separately.

Military Differential Tuition: All distance education courses are reduced by 10% for veterans or active military members and their dependents.

### Billing

Students will be billed for each term after registering for their courses, and all student accounts must be settled and any financial aid in place before the end of the add/drop period (day 3 of the term). Any outstanding balance will lead to automatic withdrawal from courses. Any outstanding balance must be paid prior to future enrollment.

### Payment Plans

Unity College offers the following payment plan options:

Baccalaureate 5-Week Terms:

A baccalaureate student may select a payment plan per 5-week term. The fee for the plan is \$10 per term and the remaining bill is split across 3 payments. The first payment is due by the start of the course. The second payment is due week two and the third payment is due week five.

Graduate 8-week terms:

A graduate student may select a payment plan per 8-week term. The fee for this plan is \$35 per term and the remaining bill is split across 6 payments. The first payment is due by the first day of the course. The remaining payments are due weeks 2 through 6.

Custom Payment plans:

Advisors may work with students to set up customized payment plans. These plans may be spread across multiple terms and may be requested by the student or to be available to assist a student who may owe a prior balance that may impact a student's ability to attend a future term.

## Failure to Pay

Failure to pay bills in full when due may result in revocation of Unity College privileges, including but not limited to: issuance of grades and/or transcripts, registration for subsequent terms, participation in graduation ceremonies, and participation in registered classes and examinations. It is imperative that a student contact Student Financial Services if any charges are disputed.

## Refund Policy

Distance Education students who drop a course, whether they are active or not, before the end of the add/drop period are eligible for a 100% tuition refund for that course. After midnight of the last day of add/drop, students are no longer eligible for a refund.

If a student takes no action to drop a course and stops participating in the class during the add/drop period, the institution will take action to withdraw the student and the student will be held accountable for the total cost of the course.

### Fast-Track Refund Policy

Students who are eligible for a refund may use the Fast-Track Refund process to purchase required course materials and educational resources including books and supplies at the start of a term.

Fast-Track Refunds are issued electronically by the Business Office and availability of a Fast-Track Refund is dependent upon the student:

- having a completed financial aid package with a refund projected to be on their account.
- being enrolled in direct deposit through the student portal. If student is unable to provide bank information, the student should be referred to Student Financial Services [SFS]. SFS will attempt to determine the barrier. If no ACH solution can be determined, a paper check will be requested by SFS.
- completing the Fast-Track Refund Request form.

In exceptional circumstances, when no ACH solution can be determined, the Executive Director of Student Financial Services may request the student receive a paper check.

## Failure to Participate

See the Class Participation/Attendance policy in Section 4 of this document for more information.

## Financial Aid

Your federal need will be determined based on the income and asset information you provide on the Free Application for Federal Student Aid (FAFSA) online at [fafsa.gov](https://fafsa.gov). Choose Unity's College Code (006858) to ensure that the federal application data will be transmitted to the Financial Aid Office. Please respond promptly to requests for additional information or clarification concerning your aid

application.

### Onboarding DE Students with Financial Aid Policy

All incoming students must complete the FAFSA application and required documents, including Promissory Notes and Entrance Counseling sessions before the end of the add/drop period of their first term. The Concierge Team will advise the students of this requirement during the application process and orientation leading up to the start of the term. Students who have not provided all required documentation necessary to disburse aid by the last day of add/drop will be dropped from their first course by their concierge, and their enrollment will be deferred to the next 5-week term.

### Return to Title IV

Students receiving any federally sponsored financial aid, such as Federal Pell Grants, or Federal Stafford Loans, are subject to a separate Federal policy pertaining to the amount of those federal funds they may retain when they withdraw from the college during an academic semester. This policy, called The Return of Title IV Funds Policy, prorates available aid based on the amount of the semester completed. Written examples of the refund calculations are available upon request from Student Financial Services, as well as any further information that may be needed pertaining to the refund or return of Title IV Funds process. Whenever applicable refunds are determined and any federally sponsored programs are involved, the following federally prescribed order of refund distribution is required Prescribed by Law and Regulation TOTAL REFUND:

1. Unsubsidized Federal Stafford Loan
2. Subsidized Federal Stafford Loan
3. Federal Perkins Loan
4. Federal PLUS Loan
5. Federal Pell Grant
6. FSEOG
7. Other Title IV Aid Programs

### Financial Aid Available for Distance Education Students

#### Pell Grant

Matriculated baccalaureate students who complete a FAFSA may be eligible for the Pell Grant. This need-based award does not need to be paid back.

#### Federal Supplemental Education Opportunity Grant

Matriculated baccalaureate students who receive Pell Grant are eligible for this grant based on fund availability. This award is to Pell-eligible students.

#### The Direct Subsidized Loan Program

Matriculated baccalaureate students enrolled in three (3) or more credit hours per 5-week term may complete a FAFSA for consideration for this loan. The maximum annual award is based on the student's year in college. The total baccalaureate amount a student may receive is \$23,000.

Repayment on the Subsidized Loan starts no sooner than six (6) months after you graduate or fall below half-time status. There is a ten-year repayment period and other re-payment options.

#### The Direct Unsubsidized Loan Program

Matriculated baccalaureate students enrolled in three (3) or more credit hours per 5-week term may complete a FAFSA for consideration for this loan. The maximum annual award is based on the student's year in college. The total baccalaureate amount a student may receive is \$34,500.

Matriculated graduate students enrolled in three (3) or more credits per 8-week term may complete a FAFSA for consideration for this loan. The maximum annual unsubsidized loan is \$20,500. More information about the Direct Unsubsidized Loan will be provided to qualifying students.

The Unsubsidized Loan starts to accrue interest after payment to your account. While in College, you can elect to pay interest on an Unsubsidized Loan, or have it added to the principal. Repayment on the Unsubsidized Loan starts no sooner than six (6) months after you graduate or fall below half-time status. There is a ten-year repayment period and other re-payment options.

NOTE: Financial Aid is not available for non-degree seeking candidates.

## Private Loans

Private loans may be an option if no other sources of financial aid are available. Unity College is not permitted to provide counsel about which private loans to choose. For help on this matter, please visit: <http://www.Unity.edu/FastChoice>.



## SECTION 4: ACADEMIC POLICIES

### Definition of a Distance Education Credit

Unity College policy defines one baccalaureate credit hour as a semester hour, the standard measure of progress toward a degree at most institutions. For most standard lecture courses, it represents 50 minutes of faculty-directed instruction and 2 hours of self-directed class work each week for a traditional 15-week semester (i.e., one 3 credit baccalaureate class is approximately 135 hours of student work). The table below demonstrates how this standard is applied to Unity College's baccalaureate term calendar. This credit hour definition follows the guidelines for awarding semester credit hours from the US Department of Education and the New England Commission of Higher Education. While online courses do not have specified time in a physical class, they require an analogous amount of work to a semester credit hour.

Credit Hours	Minimum total required faculty-directed instruction hours	Minimum total student-directed instructional hours	Total Minimum Instructional Hours	Hours per week for 5-week term
3	45	90	135	27

Graduate students are expected to perform not only additional work beyond baccalaureate expectations, but to submit work that is more in-depth and of higher quality as befits a graduate-level course. Thus, one 3-credit graduate course requires approximately 180 hours of work in an eight-week term.

Credit Hours	Minimum total required faculty-directed instruction hours	Minimum total student-directed instructional hours	Total Minimum Instructional Hours	Hours per week for 8-week term
3	60	120	180	22.5

### Definition of a Non-Credit Course

Non-credit offerings may be stand-alone courses or instructional programs that do not offer academic credit. The term "program," in this policy, refers to a series of non-credit

courses that may lead to a culminating non-credit certification or credential. Non-matriculated students participating in non-credit courses are considered non-degree students. Non-credit courses will appear on the official Unity College transcript, but do not have final letter grades. Individual assignments, projects, or coursework may receive feedback and/or assessment as relevant to the content and structure of the course. Non-credit courses may be offered simultaneously as a for-credit course; in this case, a student must be registered for the for-credit course by the end of the add/drop period in order to receive academic credit. Participation in non-credit offerings will not yield credit and cannot be converted to academic credit after the fact.

### Course Load and Status

The maximum load for all DE baccalaureate students is limited to 6 credit hours per 5-week term. Any increases to the recommended maximum load are contingent upon course availability and must be approved by an Academic Dean. Students taking 24 credits per year (within the eight 5-week terms) are considered full-time. Students who qualify for financial aid must maintain full-time status in order to receive maximum awards. Students enrolled part-time may qualify for a reduced amount of financial aid.

The maximum load for all DE graduate students is limited to 6 credit hours per 8-week term. Any increases to the recommended maximum load are contingent upon course availability and must be approved by the Dean. To complete the Master of Professional Science program in one year, a student must enroll in 6 credits for five consecutive terms. To receive maximum financial aid for those who qualify, graduate students must be enrolled in at least 15 credits per year.

Students should contact their Advisors if they have questions about how part-time enrollment will impact their financial aid awards.

### Non-Degree Graduate Courses

Students who have completed at least 90 credits of baccalaureate work, including at least 12 credits at the 300-level or above, may enroll into graduate level courses for up to 9 credits. Students currently enrolled in a Unity College DE baccalaureate program may not apply financial aid towards tuition for non-degree graduate courses.

### Course Registration

Students will register for courses by working with their Distance Education Concierge/Advisor to select courses that are appropriate for their degree completion. Based on the student's academic plan, the Distance Education Team will register the student for courses.

### Course Cancellation

No courses in a specific term are guaranteed and the College may cancel courses due to low enrollment and other circumstances prior to a term start. If this occurs,

the College will immediately notify the students to discuss options, and the student's advisor will work with the appropriate Academic Dean to find a substitution. Any payments made for canceled courses will be refunded or applied to a different course within the College.

### Add/Drop Courses

During the first three class days, students may add or drop courses for the current term. Students should contact their advisor in order to add or drop a course. Reducing or increasing credit hours during the three add/drop days will result in an appropriate tuition and financial aid change.

### Attendance/Class Participation

Active participation in a course is necessary for student success and a lack of activity may have implications on billing and financial aid. Participation in a Distance Education course is evidenced through posting to the discussion board, or the submission of a quiz, test or assignment. Students who fail to participate in their distance education course within the first three [3] days of the term will be automatically dropped from the course. After the Add/Drop period, students must maintain their participation to stay enrolled in their courses.

Students in 8-week courses are required to complete at least one academic activity every 10 days. Students in 5-week courses are required to complete at least one academic activity every 6 days. Students who do not demonstrate academic activity during this time frame will be administratively withdrawn from the course, with an effective date based on their last academic activity for the course.

Students who stop participating after the withdrawal deadline will be withdrawn from the course and a grade of 'WF' will be entered on their record.

Academic activity does not include a] Logging into an online class b] Reading/watching content without posting or submitting an assignment, test or quiz c] posting a response to a Discussion from a prior module or week; or d] speaking with an instructor or advisor to participate in academic counseling or advising.

A student cannot self-certify academic activity.

Course participation, also considered academic activity, is tracked and documented through the Distance Education's learning management system, Canvas. Unity College Distance Education does not allow students to audit a class for no credit.

### Withdrawal from a DE Course

Students who wish to withdraw from a course must do so by the deadlines in the academic calendar by emailing the course instructor and their Distance Education Advisor who will work with the Registrar to complete the course withdrawal. Financial aid awards may be recalculated based on the date of withdrawal, as determined by the student's last day of activity. It is the student's responsibility to contact Financial

Services to determine any changes to their award.

A student is considered unofficially withdrawn [ceased attendance without providing official notification or expressed intent to withdraw] if a distance education staff member notifies the Registrar that the student is no longer in attendance, and continued academic activity cannot be established by Unity College.

### Leaves of Absence and Time Limitation for Degree Completion

Distance Education baccalaureate students will have ten (10) consecutive calendar years from their date of matriculation to complete their program of study. Graduate students will have five (5) consecutive calendar years from date of matriculation to complete their program of study. Students who do not meet this deadline will be required to reapply for admission and will be subject to current availability of courses and programs, as well as any new program requirements.

Students who wish to remain unenrolled for more than two consecutive terms, should communicate their intent to the Distance Education Advisor in writing. Any student who does not register for classes for two (2) consecutive terms, but is otherwise eligible to continue study, will remain enrolled in the program, but will temporarily lose access to email, CAMS portal, and library services. Account access will be reinstated when the student returns and registers for coursework.

Any student who is inactive for more than one calendar year will be administratively withdrawn from the College and must reapply for admission (see Readmission to the College). Extensions with cause may be requested of the Executive Director of Enrollment Management and are subject to final approval by the Vice President of Distance Education.

### Withdrawal from the College

To withdraw from the College is to first contact their Distance Education Advisor. The Advisor will work with the Registrar to complete the withdrawal. The student will be asked to complete an electronic Withdrawal from the College Form upon receipt. All grades for courses in progress as of the withdrawal date are recorded as "W" and all relevant offices and instructors will be notified. Courses whose end date has passed and for which all work has been completed will still receive the grade earned before the withdrawal. Students are considered officially withdrawn when they complete the withdrawal process.

### Medical Withdrawal from the College

A student may request a medical withdrawal when an illness or injury occurs that makes it impossible for them to complete their course (when an incomplete arrangement is not possible) or continue in their current program of studies.

A medical withdrawal may be used in response to matters of both physical and mental health. To be recorded as a medical withdrawal, documentation from a licensed medical practitioner must be submitted to the Executive Director of Enrollment Management outlining the nature of the illness or injury and affirming the

student's inability to remain enrolled. Requests should be submitted prior to the end of the term and documentation from a medical professional submitted within 30 days of the end of the term, to be considered and recorded on the academic record. Under extreme circumstances, requests outside of this timeframe may be considered with the approval of the Vice President of DE. Decisions will be communicated to the student within 10 business days after all documentation has been received.

Medical withdrawals from a course will be dated according to the student's last day of participation as recorded by the submission of graded work in a course. The regular refund policy of the College does apply, regardless of the reason for withdrawal. When granted, medical withdrawals will be recorded as a grade of "W" and not be computed in the student's grade point average (GPA). Otherwise, the student will receive their earned grade or a "WF", depending on the last date of activity. Medical withdrawals from the program between terms will be dated according to when the request was received.

Depending on the circumstances leading to the request, a student may be encouraged to take additional terms away from the College to address their health-related needs before seeking to return. This may be a required condition of the withdrawal. In some cases, the college may also request confirmation that the student has addressed these issues and is ready to return to full participation in their educational program before enrolling in future terms, which may include documentation from a licensed healthcare practitioner.

## Date of Withdrawal

A student is considered "withdrawn" as of the day they begin the official withdrawal process or notify their Advisor or designee of their withdrawal. Official notice must be written or emailed. In the case of written notice, the date of withdrawal will be the date the written notice is received. Students who do not provide official notice will have their last date of recordable academic activity used as their date of withdrawal.

Academic activity includes [but is not limited to]:

- Submitting academic assignments
- Participating in online discussions

Academic activity does not include:

- Logging into online classes/discussions without active participation
- Speaking with an instructor or advisor to participate in academic counseling or advising

A student cannot self-certify academic activity. Unity College must be able to establish the date via electronic record. If a student is unable physically or mentally to begin the withdrawal process the school may use the date of the related circumstance [such as an automobile accident] or the date of last academic activity.

## Grading Policy

Baccalaureate Grading Scale

A	(94-100%)	Excellent
A-	(90-93.9%)	
B+	(87-89.9%)	
B	(84-86.9%)	Good
B-	(80-83.9%)	
C+	(77-79.9%)	
C	(74-76.9%)	Satisfactory
C-	(70-73.9%)	
D	(60-69.9%)	Poor, but Passing
F	(0-59.9%)	Failing

Graduate Grading Scale

A	(94-100%)	Excellent
A-	(90-93.9%)	Very Good
B+	(87-89.9%)	Good
B	(84-86.9%)	Satisfactory
B-	(80-83.9%)	Satisfactory, but needs improvement
C+	(77-79.9%)	Needs improvement
C	(74-76.9%)	Unsatisfactory
C-	(70-73.9%)	Poor
F	(0-69.9%)	Failing

### W – Withdrawal (No credit)

Recorded but not calculated as part of the GPA. Distance Education Faculty may not give a grade of “W.” That grade designation is applied by the Registrar’s office.

### WF – Withdrawal Failure (No credit)

Withdrawal Failure. No credit. Shows the student withdrew after the deadline to withdraw published on the academic calendar. Factors into GPA as a failing (F) grade. Distance Education Faculty may not give a grade of “WF.” That grade designation is applied by the Registrar’s office.

### I – Incomplete (No credit)

An Incomplete “I” is a temporary grade which may be given at the instructor’s discretion with the approval of the Dean to a student when illness, necessary absence, or other reasons beyond the control of the student prevent completion of course requirements by the end of the academic term. To submit an Incomplete grade, please contact the course instructor to initiate the paperwork.

If a student does not complete the work before the start of the next term, they may not enroll in classes for future terms. Work must be completed by the end of the next term, or the incomplete grade will automatically be changed to the grade earned.

Distance Education Faculty considering granting a final grade of "I" must follow the incomplete grade policy and work with the student to complete the request and submit it to the Academic Dean. A grade of "I" is not factored into a student's GPA. Credits for an "I" grade are factored into attempted (but not completed) credits for the student's cumulative completion rate.

Incomplete grades may be given only in the following circumstances:

- **80%** of all coursework must be completed with a satisfactory grade;
- An illness or other extenuating circumstance legitimately prevents completion of required work by the due date;
- Required work may reasonably be completed in an agreed-upon time frame;
- The incomplete is not given as a substitute for a failing grade;
- The student initiates the request for an incomplete grade before the end of the academic term;
- The instructor and student complete the "Application for Incomplete Grade" form before the end of the academic term.

Appropriate grades must be assigned in other circumstances.

**The following provisions for incomplete grades apply:**

- The faculty member initiates the digital "Application for Incomplete Grade" in consultation with the student, Assistant Registrar, and the Dean.
- The course work may be completed while the student is not enrolled.
- If Incomplete grades are not resolved by the following academic term, Incomplete grades will change to the grade earned and affect GPA. The Dean reserves the right to make exceptions to this policy on a case by case basis.
- An Incomplete grade may not be considered passing for purposes of determining academic standing, federal financial aid eligibility, or other purposes.
- Students who receive an incomplete grade in a course cannot re-register for the course in order to remove the "I".
- If the faculty member is not available to grade the incomplete work, the Dean will grade it or find a designee.

### Calculating Grade Point Average (GPA)

To determine a graduate student's grade point average (GPA), Unity College uses the following system of quality points:

Letter Grade	4.0 Scale
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D	1.0
F	0.0

### Change of Final Grade

Except for the grade of "Incomplete," final course grades are not changed after submission to the Registrar except to correct an entry error, or in the result of a successful student grade appeal (see Appeal of Final Course Grade below).

### Change of Final Course Grade - Process for Instructors

If an error has been made in the calculation or transcription of the original grade, the instructor will notify the Dean of the error, and the corrected grade will be sent to the Registrar's Office to be processed. An instructor who wishes to change a grade for any other reason must send the request with documentation to the Dean for consideration. The Dean will review the evidence, seek additional information if necessary, and decide the appropriate course of action. If the change is approved, the Dean will forward the change to the Registrar's Office with the appropriate documentation.

### Appeal of Final Course Grade - Process for Students



If a student disagrees with their final grade for a course, they may initiate a conversation about it with the instructor. After this conversation, should a student wish to appeal the final course grade, they may appeal the grade to the Academic Dean. The student should contact their academic advisor. The appeal form must be emailed to the Dean no later than 30 days after the final grade was submitted. The Dean will review the appeal along with any other supporting documentation and information provided by the student and the instructor and decide on the appeal within 10 business days.

## Repeating Courses

Students with a need to earn a higher grade may repeat a previously taken course. While the grades for both the first and subsequent attempts will remain on the student's transcript and the academic record, the highest grade will be used in computing the cumulative grade point average. Credit can only be earned once for a course, unless specifically stated otherwise in the course description. Courses completed with a grade of C or higher may only be repeated once. Students should be aware that financial aid will cover retaking a previously passed course once.

See the Honor Code policy in the [Student Handbook](#) for guidelines about when prior work may be submitted in a repeated course.

## Class Standing

Class standing is determined by the number of credits completed by the student, including those accepted in transfer from other institutions based on the ranges below.

Freshman: 0-29 credits

Sophomore: 30-59 credits

Junior: 60-89 credits

Senior: 90+ credits

## Baccalaureate Term Based Honors – Dean's List

Students will be eligible for recognition if they have earned a minimum GPA of 3.5 and successfully completed at least 9 credits in the 4 terms leading up to the time of award. The Dean's List will be published twice per year, in January and June, once grades have been verified. All grades recorded in the period of consideration must be a C+ or higher (no incompletes) for students to be eligible.

## Academic Standing

Unity College has a combined Academic Standing and Title IV Satisfactory Academic Progress [SAP] policy, referred to as the Satisfactory Academic Progress [SAP] policy. Students are assessed for SAP at least biannually, in alignment with each financial aid payment period—although financial aid is disbursed each term, the award year is divided into two payment periods. A student's academic standing and financial aid

eligibility may be impacted at the biannual reviews. Additional reviews will be performed for students in an Academic Warning or Academic Probation status.

## Review Cycle

### Graduate students:

- The biannual reviews will take place at the end of the first payment period (second term) in the academic year and again at the end of the second payment period (fourth term) in the academic year.
- Students on Academic Warning will also be reviewed at the end of the third term in the academic year.
- Students on Academic Probation will be reviewed at the end of each term.

### Baccalaureates:

- The reviews will be at the end of each payment period, every fourth completed term. A new student will be reviewed at the completion of their fourth term [the first payment period] in and again at the end of their eighth term taken [the second payment period] and at every fourth completed term after that.
- Students on Academic Warning will also be reviewed at the end of their seventh term.
- Students on Academic Probation will be reviewed at the end of each term.

## Minimum Standards for Satisfactory Academic Progress

- Cumulative Grade Point Average [CGPA]: maintaining a minimum cumulative GPA, based on program level:
  - Graduate students: 3.00
  - Baccalaureate students: 2.00
- Completion Rate: maintaining the appropriate completion pace, based on program level:
  - Graduate degree student: 75%
  - Baccalaureate degree students: 67%
- Maximum Time Frame: mathematically able to complete a degree program in a timeframe of no more than 150 percent of the program's average length in terms of credits.

## Calculating Minimum Standards for Satisfactory Academic Progress

- Cumulative Grade Point Average: is determined by summing the grade points for Unity courses in all terms and dividing by the total number of credit hours attempted in all terms [total grade points divided by total credit hours = CGPA]. An Incomplete grade will not be considered passing for purposes of determining satisfactory academic progress.
- Completion Rate: The number of credits earned divided by the number of credits attempted. Total attempted credits include the number of credits a

student is enrolled in at the end of the Add/Drop period of each semester, and cumulatively includes all accepted transfer credits. Grades of "I" [Incomplete] will be used in this calculation as attempted credits, but not earned credits.

- Maximum Time Frame: Examples: A bachelor's degree program with 120- credit requirement would have, at most, 180 attempted credits covered by financial aid.

## Academic Standing

Students must meet the minimum standards for SAP at each biannual review. Students who meet all three components of the minimum standards for SAP are considered in good academic standing. Students who fall below one or more of the minimum standards for SAP at the first biannual review, and are not already on Academic Probation, will be placed on Academic Warning until the next payment period. Students on Academic Warning who remain below the minimum standards for SAP at end of the warning review [3rd term for Grad and 7th term for UG] will receive a second notice that they remain on Academic Warning and are in jeopardy of academic suspension and losing financial aid eligibility. Students on Academic Warning who remain below one or more of the minimum standards for SAP at the second biannual [4th term for Grad and 8th term for UG] review will be placed on Academic Suspension. Students on Academic Suspension have the right to appeal, requesting their enrollment and financial aid be reinstated due to extenuating circumstances that prevented them from making satisfactory academic progress. Extenuating circumstances include:

- Illness or injury to the student or close relative; or
- Death of an immediate family member or close associate; or
- Other unusual mitigating circumstances.

To appeal, a student must submit a letter explaining the circumstances that prevented them from meeting SAP criteria. The appeal must include what has changed that will allow the student to obtain SAP at the next evaluation and may include any supporting documentation. The SAP Appeals Task Group will review any appeals initiated by a suspended student and received within the timeframe stipulated in the suspension notification. All appeals must be submitted to registrarsoffice@unity.edu. If an appeal is granted, the student will be placed on Academic Probation until they meet the minimum standards for SAP. Only in extenuating circumstances should a student use the same reason for subsequent appeals. The appeal decisions are final. Students may appeal a maximum of three times as a baccalaureate student and three times as a graduate student. The fourth suspension instance, a student will be considered Academically Dismissed from the College. An Academically Dismissed student is subject to the College's Dismissal policy. Students on Academic Probation will be given an Academic Plan, specific to their program level, they must achieve each term while they are working to meet the minimum standards for SAP. Each term, students on Academic Probation will be reviewed for progress towards meeting the minimum standards for SAP and for

meeting the requirements of the Academic Plan. Probationary students who meet the minimum standards for SAP will be moved to good academic standing.

- Probationary students who meet the requirements of the Academic Plan yet remain below one or more of the minimum standards for SAP, will remain on Probation until the minimum standards for SAP are achieved, these students do not need to submit appeals if they are progressing as required in the Academic Plan.
- Probationary students who don't meet the terms of their Academic Plan and continue to fall below one or more of the three criteria for SAP, will be placed on Academic Suspension. These students will need to submit an appeal to continue their studies and financial aid.

### Academic Plans for Students on Probation

Graduate Students on Academic Probation must complete all registered courses, each term, with at least a B [no incompletes or withdrawals].

Baccalaureate Students on Academic Probation must complete all registered courses, each term, with at least a C [no incompletes or withdrawals].

### The Right to Suspend or Dismiss

The College reserves the right to suspend or dismiss a student from the College at any time when academic work is unsatisfactory or when conduct is deemed detrimental to the teaching and learning goals of the College community. This suspension or dismissal can be put into place at any time during the academic year and does not require the formal Satisfactory Academic Progress review to have taken place.

## Graduation

### Application for a Degree

Unity College confers degrees each term to students completing their degree requirements. Applications are accepted on a rolling basis prior to the conferral of the degree. Upon receipt of the application to the Registrar's office, students will be billed a \$100 fee. The application and fee must be submitted in order to confer a degree, even if the student does not plan to attend a commencement ceremony.

Degrees are posted in the student information system within two weeks from the last day of a student's final term, given that the student has applied for degree conferral. Diplomas will be mailed within thirty (30) days of the conferral date once the academic records are certified and all financial obligations to the College have been resolved.

### Participation in a Commencement Ceremony

Unity College celebrates Commencement with an official ceremony each May. There is a smaller ceremony each December. Baccalaureate, and master's degree-seeking students are eligible to participate in a commencement ceremony if they have met all academic requirements for their degree or will be within six (6) credits of completing their degree requirements by the date of the ceremony.

Students may only participate in one ceremony per earned degree and must participate within one (1) year of degree conferral.

Certificate students at both the baccalaureate and graduate levels are not eligible to participate in a commencement ceremony.

Diplomas are mailed to the students and are not handed out at the commencement ceremony. Students participating in the ceremony will receive diploma covers.

Students who are eligible and wish to participate in a commencement ceremony must:

1. Submit an application for degree.
2. Have a degree audit completed by the Registrar's office.
3. Pay the \$100 fee.

Students that apply after November 1 to participate in December may not have their information published in commencement materials (program, slideshow) or receive regalia prior to the ceremony.

Students that apply after March 30 to participate in May might not have their information published in commencement materials (slideshow) or receive regalia prior to the ceremony. After April 10, they may also fail to appear in the program.

### Academic Honors

Honor designations for baccalaureate degrees are cum laude, magna cum laude, and summa cum laude.

Cum laude is awarded to a degree candidate who graduates with a minimum GPA of 3.50 in all course work taken at Unity College.

Magna cum laude is awarded to a degree candidate who graduates with a minimum GPA of 3.7 in all course work taken at Unity College.

Summa cum laude is awarded to a degree candidate who graduates with a minimum GPA of 3.90 in all course work taken at Unity College.

### Replacement Copies of Diplomas

Graduates may submit a request for a replacement diploma through the Registrar's Office. Replacement diplomas shall carry all information contained on the original,

except that all signatories will be current administrators. Graduates requesting a replacement diploma will be subject to the current fee for such diplomas.

### Unclaimed Diplomas

Unclaimed, undeliverable, or withheld diplomas are retained in the Registrar's Office for a period of (5) five years, after which they may be destroyed. Graduates wishing to replace an unclaimed, destroyed diploma must request a replacement diploma as described above.

### Second Bachelor's Degree

A student who has completed a bachelor's degree from an accredited institution may pursue a program leading to a second bachelor's degree at Unity College. This includes students who have graduated with a bachelor's degree from the Unity College Flagship campus. In this case, the student must complete the following requirements to earn a Unity College bachelor's degree:

1. Complete the Environmental Professional Core (15 credits)
2. Complete the Major Core for the program (credits dependent on major)
3. Earn a minimum of 30 credits at Unity College
4. Maintain a cumulative GPA of 2.00 or higher
5. Some programs may require the completion of identified prerequisite courses. If a student has not completed the course(s) identified in their previous degree, they may be required to take them at Unity College.

### Second Master's Degree

Students enrolled in one master's degree program may wish to pursue a second master's degree at Unity College. For students pursuing two master's degrees, up to 9 credits may be shared between the two degrees. Students must complete at least 21 credits of unique coursework for each degree. This requirement applies to students pursuing a second master's degree after completing a first master's. If the two programs do not have 21 credits of unique coursework already, students may be required to take additional courses to meet the minimum credit requirement.

## SECTION 5: BACCALAUREATE ACADEMIC PROGRAMS

### Requirements for All Bachelor's Degree Programs

Each Distance Education baccalaureate academic program is comprised of four elements:

#### General Education Core (27-37 credits; requirements are program-specific)

General education core requirements help learners to build broad foundational skills related to communication, analysis, and critical thinking and support their exploration of diverse academic disciplines, including language, social sciences, natural sciences, and arts.

The following Unity College courses satisfy the General Education **Humanities** requirement. Transfer courses in the areas of literature, history, cultural studies, religion, or philosophy also meet this requirement.

1. ENVJ 201 Understanding Diversity and the Environment
2. ENVJ 203 History of Creating Environmental Social Change
3. ENVJ 301 Fire and Culture
4. HUMN 103 Environmental Documentary Films
5. SUST 301 Sustainable Horticulture Practices in Indigenous Communities

The following Unity College courses satisfy the General Education **Social Sciences** requirement. Transfer courses in the areas of anthropology, economics, geography, political science, psychology, sociology also meet this requirement.

1. ECON 301 Microeconomics for Ecological Sustainability
2. ECON 303 Macroeconomics for a Sustainable Planet
3. ENVS 303 Social Science for Environmental Professionals
4. PSYC 101 Introduction to Psychology
5. PSYC 301 Environmental Psychology
6. SOCI 101 Introduction to Environmental Sociology

#### Environmental Professional Core (13 credits)

These five courses provide opportunities for learners to develop and apply foundational skills necessary to address complex environmental problems in collaborative and professional contexts.

#### \*Major Core (27-42 credits; requirements are program-specific)

The major core courses enable learners to develop and apply core knowledge and skills specific to each program.

#### \*Electives (28-50 credits)

In order to earn a bachelor's degree, students must complete a total of 120 credits.

The number of elective credits in each program is equal to 120 minus the total of General Education, Environmental Professional Core, and Major Core requirements. Learners can enroll in any of the baccalaureate courses in the DE catalog that are not already required by their program to fulfill the remaining credits needed for degree completion.

Learners will achieve the following outcomes through completion of the requirements within the General Education Core and Environmental Professional Core:

- Identify and use strategies for expanding knowledge through research, data analysis, and reflection.
- Develop and share observations using appropriate modes of expression.
- Analyze complex environmental issues from multiple perspectives.
- Assert an ethical framework to guide personal, civic, and professional life.
- Develop a leadership plan to guide career success.

By completing the Major Core, learners will achieve discipline-specific outcomes that are described at the top of each program-specific page within this catalog.

*\* Excluding the Environmental Studies program. Note that the distribution of credit requirements for the Environmental Studies program is unique due to the substantial overlap between outcomes within the Environmental Professional Core and the Major Core for this program.*

## Animal Health and Behavior

The B.S. in Animal Health and Behavior degree prepares students for careers at zoos and aquariums, in the veterinary fields, as animal welfare officers, and for a future focused on the care and well-being of wild and captive animals around the world. This degree provides students with the essential knowledge and professional skills to succeed in settings such as veterinary medicine degree programs, companion and wild animal care facilities, wildlife rehabilitation, and preserves.

Graduates of the B.S. in Animal Health and Behavior will be able to:

1. Explain biological, ethical, psychological, medical, legal, and social concepts underlying the care and maintenance of wild and captive animals.
2. Choose and demonstrate appropriate laboratory techniques used in the care of animals in both wild and captive settings.
3. Identify and explain the training, health, and habitat needs for optimal wild or captive animal health.
4. Critically evaluate information using scientific and quantitative reasoning skills.

### General Education Core

BIOL 103 Biology: Foundations of Life



BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders **or**

COMM 403 Environmental Crisis Communication

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 101 College Algebra for Environmental Professionals **or**

MATH 105 Precalculus

MATH 201 Statistics for Environmental Professionals

PSYC 101 Introduction to Psychology

An Arts course

A Humanities course

A Language course

#### Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **or**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

#### Program Core

ANIM 103 Animal Training and Care

ANIM 205 Animal Nutrition

ANIM 301 Animal Husbandry and Genetics

ANIM 302 Animal Comparative Anatomy

ANIM 304 Animal Comparative Physiology

ANIM 305 Animal Health and Disease

ANIM 307 Designing Captive Animal Environments

ANIM 401 Animal Care Technical Skills

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

BIOL 301 Animal Behavior: The Evolution, Ecology, and Social Behavior of Animals

42 credits of general electives

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Animal Science

The B.S. in Animal Science prepares students to apply animal biology, chemistry, nutrition, and physiology to the study of animal breeding and genetics, growth, behavior, and management. The curriculum can be applied to a great variety of species, from livestock to companion animals to pets. The animal science major provides excellent preparation for students who wish to find positions immediately upon graduation, as well as those who plan to enter graduate or veterinary schools to obtain advanced degrees.

Graduates of the B.S. in Animal Science will be able to:

1. Describe basic principles of animal genetics, nutrition, reproduction and physiology, and explain how they inform best practices in animal husbandry
2. Apply knowledge of animal husbandry, behavior and handling techniques to effectively interact with animals in a safe and humane manner.
3. Describe the breadth of animal sciences in terms of the variety of career paths, the diversity of the animal industries, and the many roles of animals in society.
4. Use scientific methods in solving 'real-world' problems including collecting and evaluating information, forming predictions, collecting and interpreting data and implementing action.
5. Effectively use communication skills (both oral and written) to build and sustain professional relationships and engage in productive discourse and/or work related to challenging issues with animals at local, national, and/or international levels.

### General Education Core

BIOL 103 Biology: Foundations of Life

BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

CHEM 101 Chemistry I

CHEM 102 Chemistry I Laboratory

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders **or**

COMM 403 Environmental Crisis Communication

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 201 Statistics for Environmental Professionals **or**

MATH 215 Calculus

An Arts course

A Humanities course

A Language course

A Social Science course

#### Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **or**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

#### Program Core

ANIM 205 Animal Nutrition

ANIM 301 Animal Husbandry and Genetics

ANIM 302 Animal Comparative Anatomy

ANIM 304 Animal Comparative Physiology

BIOL 301 Animal Behavior: The Evolution, Ecology, and Social Behavior of Animals

BIOL 310 Microbiology

BIOL 315 Cell Biology

CHEM 103 Chemistry II

CHEM 104 Chemistry II Laboratory

CHEM 201 Organic Chemistry I

CHEM 202 Organic Chemistry I Laboratory

CHEM 301 Biochemistry  
CHEM 302 Biochemistry Laboratory  
32 credits of general electives

*Please work with your advisor to choose your required track.*

Companion Animal Care and Training Track

ANIM 103 Animal Training and Care  
ANIM 306 Understanding the Role of Emotional Support and Service Animals

Sustainable Livestock Management Track

ANIM 310 Sustainable Livestock Health, Nutrition, and Care  
ANIM 410 Sustainable Livestock Management

Equine Science and Management Track

ANIM 315 Equine Health, Nutrition, and Care  
ANIM 415 Horse Facility Management

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Environmental Science and Climate Change

The B.S. in Environmental Science and Climate Change degree enables students to work effectively as environmental inspectors, consultants, engineers, or urban/regional planners. Learning through the lens of climate change adaptation and mitigation, this program also prepares students with a sound understanding of modern environmental issues and the professional skills needed for effective functioning in modern natural resource organizations.

Graduates of the B.S. in Environmental Science and Climate Change will be able to:

1. Assess the political, legal, economic, and social dynamics associated with environment issues and the management of environmental issues.
2. Draw on cross-disciplinary knowledge in the biological, physical, and social sciences to propose, evaluate, and explain management solutions to environmental problems.
3. Explain pressing environmental issues through the lens of climate change.
4. Choose and implement appropriate laboratory techniques for environmental analysis
5. Evaluate information using scientific and quantitative reasoning skills.

General Education Core

BIOL 103 Biology: Foundations of Life

BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 201 Statistics for Environmental Professionals

An Arts course

A Humanities course

A Language course

A Social Science course

Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **or**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

Program Core

BIOL 201 Organisms that Sustain the Earth: Understanding Plants

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

CHEM 101 Chemistry I

CHEM 102 Chemistry I Laboratory

ENCJ 305 Natural Resource Law and Policy

ESCI 101 Geology and Our Environment

ESCI 301 Soil Analysis

ESCI 303 Hydrology, Wetlands, and Water Policy

ESCI 305 Environmental Remediation and Toxicology

ESCI 401 Environmental Science Field Techniques

MATH 401 Statistics for Wildlife Professionals or

ENVS 303 Social Science for Environmental Professionals.

44 credits of general electives

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Environmental Studies

The B.S. in Environmental Studies at Unity College prepares students for a wide range of environmental careers. This transdisciplinary program provides students with a holistic understanding of environmental issues. The program teaches students to use tools and perspectives from a variety of disciplines including the natural sciences, the social sciences, and the humanities to understand the causes and consequences of environmental problems. Graduates will be able to enter a wide variety of environmental careers.

Graduates of the B.S. in Environmental Studies will be able to:

1. Explain their role as environmental actors and citizens in a global context.
2. Describe and explain core environmental concepts through the perspective of multiple disciplines.
3. Consider the perspectives of multiple stakeholders and draw on knowledge of society, ecology, and the economy to propose and/or evaluate solutions to environmental problems.
4. Explain the importance for, and process for, consensus building and working with groups to solve environmental problems.

### General Education Core

COMM 101 Writing for Environmental Professionals or

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders or

COMM 403 Environmental Crisis Communication

ENVS 201 The Warming Planet: Understanding Climate Change

An Arts course

A Humanities course

A Language course

A Life Science course

A Quantitative Skills course

A Social Science course

Program Core

COMM 203 Environmental Communication **or**

COMM 401 Using Social Media in a Global World

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

74 credits of general electives

*Please work with your advisor to choose your electives and/or a potential concentration. For concentrations, please see the subsection for "Baccalaureate Concentrations".*

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Marine Biology and Sustainable Aquaculture

The B.S. in Marine Biology and Sustainable Aquaculture prepares students for a broad range of careers helping protect, preserve, maintain, and grow marine organisms and environments. Graduates can obtain employment immediately after graduation with private firms, aquariums, and various government agencies as marine animal trainers, aquaculture scientists, and fisheries technicians. This degree provides students with a broad emphasis on both marine biology and aquaculture and encompasses coursework with the rigor to prepare students for further study in graduate school or even starting their own aquaculture enterprise.

Graduates of the B.S. in Marine Biology and Sustainable Aquaculture will be able to:

1. Explain the underlying biological principles and functioning of marine and aquatic organisms at structural levels ranging from molecular to ecosystem.

2. Choose and implement appropriate laboratory and field techniques used in marine organismal observation, research, management, and care, including those in wild, cultured, and farmed settings.
3. Compare and contrast the major types and components of aquaculture systems, species, and factors as they relate to both environmental and systematics sustainability.
4. Create local, regional, and global solutions to environmental problems in marine biology and aquaculture.
5. Critically evaluate information using scientific and quantitative reasoning skills.

General Education Core

BIOL 103 Biology: Foundations of Life

BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders **or**

COMM 403 Environmental Crisis Communication

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 101 College Algebra for Environmental Professionals **or**

MATH 105 Precalculus

MATH 201 Statistics for Environmental Professionals

An Arts course

A Humanities course

A Language course

A Social Science course

Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **or**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone



Program Core

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

CHEM 101 Chemistry I

CHEM 102 Chemistry I Laboratory

MBAQ 105 Introduction to Oceanography

MBAQ 201 Form and Function of Unique Marine Ecosystems

MBAQ 203 Global Diversity of Freshwater and Marine Resources Used in Sustainable Harvest

MBAQ 301 Sustainable Aquaculture Techniques I: Growing Shellfish and Finfish

MBAQ 303 Sustainable Aquaculture Techniques II: Crustaceans and Pathobiology

MBAQ 307 Ichthyology and Fish Health

MBAQ 310 Marine Mammal and Seabird Biology\*

MBAQ 315 Diversity of Marine and Aquatic Vegetation\*

MBAQ 401 Field Research in Marine Biology and Aquaculture\*

38 credits of general electives

*\*Includes hands-on laboratory or field component option*

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Sustainable Business Management

Unity College's B.S. in Sustainable Business Management will prepare students to be innovative sustainability business leaders. This program will provide practical expertise and professional skills to students interested in a profession that advances the sustainable business movement.

Graduates of the B.S. in Sustainable Business Management will be able to:

1. Identify and evaluate sustainable solutions to challenges related to business practices and/or products
2. Apply ethical approaches to decision making.
3. Apply business concepts and approaches for managing organizational change and managing and leading people.
4. Work effectively individually and in groups.

General Education Core

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders

ECON 301 Microeconomics for Ecological Sustainability

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 201 Statistics for Environmental Professionals

An Arts course

A Humanities course

A Language course

A Life Science course

Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation or

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice or

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

Program Core

COMM 401 Using Social Media in a Global World

ECON 303 Macroeconomics for a Sustainable Planet

ENVS 101 Sustainable Solutions to Globalization

FINC 301 Environmental Accounting

FINC 401 Financing a Sustainable World

MGMT 201 Understanding the Sustainable Business Landscape

MGMT 301 Starting Your Small Non-Profit

MGMT 403 Global Chain Supply Operations: Greening Your Business

MGMT 405 Using Data for Sustainable Business Decisions

MKTG 301 Environmental Marketing and Branding

50 credits of general electives

*Please work with your advisor to choose a potential concentration.*

#### Adventure Ecotourism Concentration

TOUR 201 Recreation, Sport, and Ecological Tourism

TOUR 203 Minimal Impact Tourism for a Sustainable World

TOUR 301 Ecotourism Risk Management and Legal Liability

#### Hemp Industry and Science Concentration

HEMP 201 Law, Society, and the Cannabis, Hemp, and CBD Industry

HEMP 203 The Science of Hemp and CBD Processing

HEMP 301 Hemp Products, Production Systems, and Distribution

#### Renewable Energy Concentration

RNRG 101 Introduction to Green Energy: Politics and Implementation

RNRG 201 Renewable Energy: Science, Technology, and Management

RNRG 301 Successful Management of Wind and Solar Renewable Energy Projects

#### Sustainable Food and Farming Concentration

SUFA 200 Farm to Table: Exploring Food Production Systems

SUFA 201 Sustainable Farm Management

SUFA 301 Sustainable Agriculture for Small Farms

College Wide Requirements: A minimum of 120 earned credit hours, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above.

## Sustainable Horticulture

Horticulturalists select, manage, and improve plants and plant products cultivated in a variety of settings, from fields to greenhouses to vertical hydroponic systems. In the Sustainable Horticulture program, learners will develop skills in integrated pest management, seed storage, disease management, safe use of fertilizers, herbicides and pesticides, and the design of plant growing systems. They will also have an opportunity to develop small business skills including financial planning and management and product marketing and apply them to the development of a business plan for a horticulture product or service. Program graduates will be

prepared to apply their knowledge of climate-smart agricultural practices in a variety of careers including agronomy, farming, greenhouse management, hydroponics, and seed production.

Graduates of the B.S. in Sustainable Horticulture will be able to:

1. Apply concepts of horticulture science to select, manage, and improve plants and their products.
2. Describe the social, spiritual, economic, and cultural importance of plants to historical and contemporary communities of people.
3. Select and apply methods for identifying, monitoring, and responding to horticultural problems.
4. Explain how global issues, including climate change, energy use, water availability, and/or food safety impact sustainability of horticultural systems.
5. Apply principles of accounting, business law, labor, marketing, and personnel management to a horticultural business.

### General Education Core

BIOL 103 Biology: Foundations of Life

BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

CHEM 101 Chemistry I

CHEM 102 Chemistry I Laboratory

CHEM 103 Chemistry II

CHEM 104 Chemistry II Laboratory

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders **or**

COMM 403 Environmental Crisis Communication

ECON 303 Macroeconomics for a Sustainable Planet

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 101 College Algebra for Environmental Professionals **or**

MATH 105 Precalculus

SUST 301 Sustainable Horticulture Practices in Indigenous Communities

An Arts course

A Language course

Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **or**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

Program Core

BIOL 201 Organisms that Sustain the Earth: Understanding Plants

BIOL 315 Cell Biology

BIOL 320 Plant Genetics

BIOL 325 Plant Pathology

BIOL 330 Integrated Pest Management

CHEM 205 Applications of Chemistry for Horticulture

ENVJ 307 Food Systems and Social Justice

ESCI 301 Soil Analysis

HORT 301 Growing Hydroponic and Aquaponic Crops

HORT 401 Climate-Smart Agriculture

MGMT 301 Starting Your Small Non-Profit

SUFA 201 Sustainable Farm Management

SUFA 301 Sustainable Agriculture for Small Farms

28 credits of general electives

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Wildland Fire Science and Management

Many of the world's ecosystems depend on fire for regeneration and to maintain biodiversity. The Bachelor of Science in Wildland Fire Science and Management focuses on understanding and managing fire to preserve and protect fire-dependent ecosystems, as well as to protecting ecosystems from wildfire damage. This degree

program provides students with a deep understanding of fire science, ecology, management, and policy to assess fire environment and behavior and connect these concepts to environmental consequences facing the planet. Graduates of the program will have the academic skills and knowledge to prepare them for jobs in the wildland fire industry as Forestry Technicians, Wildland Fire Specialists, and Fuel Analysts.

Graduates of the B.S. in Wildland Fire Science and Management will be able to:

1. Explain the impact of fire on naturally occurring processes in wildland ecosystems, including water and mineral cycles, energy flow, and plant and animal succession.
2. Develop strategic and operational plans for the use of fire in wildland ecosystems management.
3. Demonstrate knowledge of laws and policies governing the management and restoration of public and private wildlands.
4. Recognize and consider the influence of culture and the needs of diverse entities on strategies for wildland fire management.

#### General Education Core

BIOL 103 Biology: Foundations of Life

BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

CHEM 101 Chemistry I

CHEM 102 Chemistry I Laboratory

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders **or**

COMM 403 Environmental Crisis Communication

ENVJ 310 Fire and Culture

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 201 Statistics for Environmental Professionals

PHYS 201 Physics 1

PHYS 202 Physics 1 Laboratory

An Arts course

A Language course

A Social Science course

Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **or**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

Program Core

BIOL 201 Organisms that Sustain the Earth: Understanding Plants

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

BIOL 335 Ecology of Fire-Dependent Ecosystems

BIOL 340 Forest Ecology

BIOL 345 Rangeland Ecosystems

ENCJ 305 Natural Resource Law and Policy

ESCI 201 Meteorology

ESCI 405 Wildland Fire Operations & Planning

EVHS 210 Fire Protection and Safety

GISC 101 Introduction to Geographic Information Systems (GIS)

GISC 201 Geographic Information Systems for a Changing World

GISC 405 GIS Applications in Fire Ecology

31 credits of general electives

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Wildlife Conservation

The Bachelor of Science in Wildlife Conservation degree enables students to work effectively as wildlife biologists, managers, and ecologists for government agencies, environmental non-profits, and environmental consulting businesses. This program emphasizes sustainable management of wildlife species through consideration of the applicable social, economic, and environmental concepts. This program also prepares students with sound understanding of modern environmental issues and the professional skills needed for effective functioning in modern natural resource

organizations.

Graduates of the B.S. in Wildlife Conservation will be able to:

1. Describe fundamental ecological, social, legal, and economic concepts underlying modern wildlife management.
2. Identify species of plants, birds, and mammals of management concerns.
3. Describe significant life history traits of plants and animals that influence wildlife habitat management.
4. Identify management strategies for disease control in wildlife populations
5. Demonstrate ability to choose and implement appropriate field techniques used in wildlife management.

### General Education Core

BIOL 103 Biology: Foundations of Life

BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

COMM 101 Writing for Environmental Professionals **or**

COMM 201 Multimedia Communication for Environmental Professionals

COMM 303 Communicating to Stakeholders

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 101 College Algebra for Environmental Professionals **or**

MATH 105 Precalculus

MATH 201 Statistics for Environmental Professionals

An Arts course

A Humanities course

A Language course

A Social Science course

### Environmental Professional Core

EVPC 100 Ecoliteracy

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **or**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **or**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership



EVPC 490 Transdisciplinary Capstone

Program Core

BIOL 201 Organisms that Sustain the Earth: Understanding Plants

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

ENCJ 305 Natural Resource Law and Policy

MATH 401 Statistics for Wildlife Professionals

WCON 201 Plant and Wildlife Interactions

WCON 301 Human Dimensions of Wildlife Conservation

WCON 303 Life History and Identification of Birds and Mammals

WCON 305 Wildlife Conservation Genetics

WCON 307 Humans, Parasites, and Wildlife: Understanding the Impact of Insects on Wildlife

WCON 403 Habitat Management for Wildlife

WCON 405 Wildlife Population Management

39 credits of general electives

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*

## Baccalaureate Concentrations

Concentrations are an optional component of the baccalaureate degree. While the College will seek to support students pursuing concentrations, course availability is not guaranteed. Students must graduate with all their degree components at the same time; a concentration cannot be retroactively added to an awarded degree based on the completion of additional coursework.

### ANIMAL HEALTH AND BEHAVIOR CONCENTRATION

A concentration in Animal Health and Behavior is available to all programs except Animal Health and Behavior.

*Select any four of the following:*

ANIM 103 Animal Training and Care

ANIM 205 Animal Nutrition

ANIM 301 Animal Husbandry and Genetics

ANIM 302 Animal Comparative Anatomy

ANIM 304 Animal Comparative Physiology  
ANIM 305 Animal Health and Disease  
ANIM 307 Designing Captive Animal Environments  
ANIM 401 Animal Care Technical Skills

ADVENTURE ECOTOURISM CONCENTRATION

TOUR 201 Recreation, Sport, and Ecological Tourism  
TOUR 203 Minimal Impact Tourism for a Sustainable World  
TOUR 301 Ecotourism Risk Management and Legal Liability

BIOMEDICAL SCIENCES CONCENTRATION

*Select any 12 credits from the following. Selected concentration courses must be distinct from student's program core courses.*

ANIM 303 Animal Science Medical Terminology  
BIOL 310 Microbiology  
BIOL 315 Cell Biology  
CHEM 201 Organic Chemistry I  
CHEM 202 Organic Chemistry I Laboratory  
CHEM 203 Organic Chemistry II  
CHEM 204 Organic Chemistry II Laboratory  
CHEM 301 Biochemistry  
CHEM 302 Biochemistry Laboratory  
MATH 215 Calculus  
PHYS 201 Physics I  
PHYS 202 Physics I Laboratory  
PHYS 203 Physics II  
PHYS 204 Physics II Laboratory

EMERGENCY DISASTER MANAGEMENT CONCENTRATION

A concentration in Emergency Disaster Management is available to all programs except Environmental Emergency Management and Law Enforcement.

*Select any four of the following:*

EMGT 203 Social Justice Issues in Emergency Management  
EMGT 301 Public Policy and Planning for Emergency Management and Law Enforcement

EMGT 305 Planning and Responding to Natural Disasters

EMGT 307 Planning and Responding to Cyberthreats and Terrorism

EMGT 403 Implementation of Emergency Management: Simulation and Exercises

ENCJ 201 Law Enforcement and Emergency Management in the Age of Globalization

ENCJ 305 Natural Resource Law and Policy

ENCJ 401 Environmental Compliance, Regulation and Mitigation

#### ENVIRONMENTAL GIS CONCENTRATION

A concentration in Environmental GIS is available to all programs except Environmental Geospatial Technologies.

*Complete both courses below*

GISC 101 Introduction to Geographic Information Systems (GIS)

GISC 201 Geographic Information Systems for a Changing World

*Complete one of the courses listed below*

CIST 101 Introduction to Coding for Environmental Applications\*

GISC 301 Applied Spatial Analysis and GIS Application

GISC 303 Conservation Cartography and Visualization

GISC 305 Environmental Impact Using Remote Sensing

GISC 307 Field Data Collection for GIS

*\*Students who elect to take CIST 101 for the concentration will be required to take an additional course to fulfill the general education language requirement.*

#### ENVIRONMENTAL JUSTICE AND SOCIAL CHANGE CONCENTRATION

A concentration in Environmental Justice and Social Change is available to all programs except Environmental Justice and Social Change.

*Select any three of the following:*

ENCJ 305 Natural Resource Law and Policy

ENVJ 201 Understanding Diversity and the Environment

ENVJ 203 History of Creating Environmental Social Change

ENVJ 301 Energy Justice: Local to Global Perspectives

ENVJ 303 American Government: Foundations in Environmental Law

#### ENVIRONMENTAL HEALTH AND SAFETY CONCENTRATION

A concentration in Environmental Health and Safety is available to all programs except Environmental Health and Safety.

*Complete all courses below:*

EVHS 205 Occupational Safety and Health

EVHS 210 Fire Protection and Safety

EVHS 305 Construction Safety

ENVIRONMENTAL HEALTH AND WELLNESS MANAGEMENT CONCENTRATION

A concentration in Environmental Health and Wellness Management is available to all programs except Environmental Health and Wellness.

*Complete all courses below:*

EVHW 105 Introduction to Human Health

EVHW 205 Health Literacy and Promotion for Leaders

EVHW 305 Employee Benefits for Wellness **or**

EVHS 205 Occupational Safety and Health

HEMP INDUSTRY AND SCIENCE CONCENTRATION

HEMP 201 Law, Society, and the Cannabis, Hemp, and CBD Industry

HEMP 203 The Science of Hemp and CBD Processing

HEMP 301 Hemp Products, Production Systems, and Distribution

LARGE ANIMAL STUDIES CONCENTRATION

ANIM 310 Sustainable Livestock Health, Nutrition, and Care

ANIM 410 Sustainable Livestock Management

ANIM 315 Equine Health, Nutrition, and Care

ANIM 415 Horse Facility Management

MARINE BIOLOGY AND SUSTAINABLE AQUACULTURE CONCENTRATION

A concentration in Marine Biology and Sustainable Aquaculture is available to all programs except Marine Biology and Sustainable Aquaculture.

*Select any four of the following:*

MBAQ 105 Introduction to Oceanography

MBAQ 201 Form and Function of Unique Marine Ecosystems

MBAQ 203 Global Diversity of Freshwater and Marine Resources Used in Sustainable Harvest

MBAQ 301 Sustainable Aquaculture Techniques I: Growing Shellfish and Finfish

MBAQ 303 Sustainable Aquaculture Techniques II: Crustaceans and Pathobiology

MBAQ 307 Ichthyology and Fish Health

MBAQ 310 Marine Mammal and Seabird Biology

MBAQ 315 Diversity of Marine and Aquatic Vegetation

MBAQ 401 Field Research in Marine Biology and Aquaculture

RENEWABLE ENERGY CONCENTRATION

RNRG 101 Introduction to Green Energy: Politics and Implementation

RNRG 201 Renewable Energy: Science, Technology, and Management

RNRG 301 Successful Management of Wind and Solar Renewable Energy Projects

SUSTAINABLE BUSINESS CONCENTRATION

A concentration in Sustainable Business is available to all programs except Sustainable Business Management.

*Select any four of the following:*

FINC 301 Environmental Accounting

FINC 401 Financing a Sustainable World

MGMT 201 Understanding the Sustainable Business Landscape

MGMT 301 Starting Your Small Non-Profit

MGMT 303 Strategic Management for Social Change

MGMT 403 Global Supply Chain Operations: Greening Your Business

MGMT 405 Using Data for Sustainable Business Decisions

MKTG 301 Environmental Marketing and Branding

SUSTAINABLE FOOD AND FARMING CONCENTRATION

A concentration in Sustainable Food and Farming is available to all programs except Sustainable Horticulture.

SUFA 200 Farm to Table: Exploring Food Productions Systems

SUFA 201 Sustainable Farm Management

SUFA 301 Sustainable Agriculture for Small Farms

WILDLIFE ECOLOGY

A concentration in Wildlife Ecology is available to all programs except Wildlife Conservation.

*Select any four of the following:*

BIOL 201 Organisms that Sustain the Earth: Understanding Plants

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

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WCON 201 Plant and Wildlife Interactions

WCON 303 Life History and Identification of Birds & Mammals

WCON 305 Wildlife Conservation Genetics

WCON 307 Humans, Parasites, and Wildlife: Understanding the Impact of Insects on Wildlife

## SECTION 6: GRADUATE ACADEMIC PROGRAMS

### Requirements for All Master's Degree Programs

The overarching goal of the Master of Professional Science (MPS) programs at Unity College is to train students at an advanced level in sustainability science with attention to professional application.

Each MPS program includes a discipline-specific core (15 credits) and a Professional Masters Core requirement (15 credits). The Professional Masters Core curriculum provides learners with opportunities to:

- Use leadership and management skills to accomplish goals in a professional context.
- Use appropriate modes of communication when engaging with diverse stakeholders.
- Recognize and consider ethical implications of decisions and actions in professional settings.
- Identify, network, and become involved in a professional organization that connects with disciplinary professionals.
- Apply knowledge from courses taken and research conducted to produce a capstone research project that aligns with professional career goals.

The discipline-specific core requirements enable learners to develop and apply knowledge and skills related to their chosen academic program. These outcomes are listed in the program-specific descriptions that follow.

### Master of Professional Science: Animal Science and Behavior

Using a transdisciplinary process, the MPS in Animal Science and Behavior program provides students with a deep understanding of human-animal interactions with emphasis on animal companionship, behavior, and welfare. With coursework that develops leadership and management skills, the program prepares students for employment as animal trainers, animal shelter managers, and animal service providers.

Graduates in the Master of Professional Science: Animal Science and Behavior program will:

1. Evaluate sources of risk to humans and animals in their interactions, as well as processes to minimize risk or harm.

2. Design and evaluate training protocols that incorporate low stress and least intrusive training techniques for animals.
3. Analyze and differentiate the rules, regulations, laws and training for companion, service, emotional support, and therapy animals.
4. Apply theoretical and practical knowledge of animal nutrition to optimize animal welfare.

Degree requirements:

30 credits earned

21 credits earned at Unity College

3.00 minimum cumulative graduate level grade point average

Professional Skills Core

PROF 505 Strategic Management of Innovation

PROF 510 Communication for Environmental Professionals

PROF 515 Ethical Practice and Policy

PROF 590 Capstone I

PROF 690 Capstone II

Animal Science and Behavior Core

ANIM 505 Animal Behavior and Modification

ANIM 605 Advanced Animal Training

ANIM 630 Emotional Support and Service Animals: Rules and Regulations

*Complete one of the following required tracks:*

Canine and Feline Health and Care Track

ANIM 510 Canine and Feline Nutrition

ANIM 610 Animal Shelter Best Practices and Management

Equine Health and Care Track

ANIM 520 Equine Nutrition

ANIM 620 Best Management Practices for Ranches and Stables

## Master of Professional Science: Environmental Geographic Information Science (GIS)

Environmental scientists can analyze and interpret environmental data while Geographic Information Systems (GIS) scientists can manage and manipulate data. Unity College's Master of Professional Science in Environmental GIScience program will prepare students to meld the two by integrating spatial technologies and



environmental information. Students will collaborate with their peers, and current or potential employers to learn concepts and skills necessary to complete their work and research in the program. Hands-on experience through online projects and research will engage students in course activities and allow for increased comprehension of the science, concepts, and skills they need to become leaders in their chosen environmental fields. This multidisciplinary education program will also encourage students to report upon their research through scientific communication to both scientists and the general public upon graduation.

Graduates in the Master of Professional Science: Environmental GIScience program will:

1. Identify and gather many different types of environmental data produced by government agencies, industry, academia, and popular media.
2. Quality check, analyze, and process spatial data related to real-world environmental issues.
3. Critically analyze course project and capstone research results.
4. Use environmental GIS data and information produced by government agencies, industry, academia, and popular media effectively and with discernment.
5. Identify potential funding sources for research projects and prepare competitive responses to RFPs.
6. Identify and discuss the ethical dimensions and policy issues related to environmental research.

Degree requirements:

30 credits earned

21 credits earned at Unity College

3.00 minimum cumulative graduate level grade point average

#### Professional Skills Core

PROF 505 Strategic Management of Innovation

PROF 510 Communication for Environmental Professionals

PROF 515 Ethical Practice and Policy

PROF 590 Capstone I

PROF 690 Capstone II

#### Environmental GIScience Core

GISC 505 GIS and Remote Sensing for Environmental Solutions

GISC 510 Advanced GIS and Remote Sensing for Ecological Applications

GISC 515 Environmental Research Methods

GISC 520 Creating Maps and Graphics of Ecosystem Change

GISC 605 Modeling Our Changing World

## Master of Professional Science: Environmental Marketing and Behavioral Economics

Using tools from the field of psychology, behavioral economics study what drives human decision-making and leverage these insights to shape their choices as consumers. Professionals trained in behavioral economics are sought after to design and carry out market analyses, interpret results, and make recommendations based on data. Graduates of the Environmental Marketing and Behavioral Economics program will be prepared to fill marketing positions within companies/corporations that seek to create pro-environmental brands and/or to use knowledge of consumer behavior to promote sustainable products and services. Graduates will also be trained to use the ESG (environmental, social, governance) framework to develop and implement sustainable practices within businesses and NGOs.

Graduates of the Master of Professional Science with a focus in Environmental Marketing and Behavioral Economics will:

1. Draw on theories in the social sciences to explain how cognitive, emotional, cultural, and social factors impact human decision-making.
2. Use various tools and approaches to measure the environmental impact of products and services.
3. Collect, analyze, and use consumer behavior data to inform decisions that support sustainable products and services.
4. Create branding and marketing communications plans that promote the consumption of sustainable products and services.
5. Create and leverage an ESG strategy for an organization.

Degree requirements:

30 credits earned

21 credits earned at Unity College

3.00 minimum cumulative graduate level grade point average

### Professional Skills Core

PROF 505 Strategic Management of Innovation

PROF 510 Communication for Environmental Professionals

PROF 515 Ethical Practice and Policy

PROF 590 Capstone I

PROF 690 Capstone II

Environmental Marketing and Behavioral Economics Core

MKTG 505 Market Research

MKTG 605 Purpose-Driven Marketing and Brand Management

PSYC 505 Behavioral Economics: Understanding What Shapes Decision-Making

SBUS 515 Ecological Economics

SUST 525 Making the Invisible Visible: The ESG Proposition

## Master of Professional Science: Environmental Studies and Sustainability

Sustainability science is a problem-based, solution-oriented framework for creating a resilient civilization. The framework combines technical sustainability with skills based in the social sciences and humanities to create effective change agents who can work within the context of political, economic, and cultural concerns. Mitigation and adaptation to climate change is emphasized along with biodiversity conservation, resource conservation, and mitigation of pollution. Students within this track should expect to explore, debate, and research possible solutions to climate change from a variety of viewpoints.

Graduates of the Master of Professional Science, with a focus in Environmental Studies and Sustainability will:

1. Identify and describe root causes of unsustainability and their impact on current environmental or sustainability challenges.
2. Evaluate sustainability problems and potential solutions from diverse perspectives.
3. Integrate concepts and approaches from social sciences and natural sciences to address environmental problems.
4. Design and conduct a project addressing a sustainability issue using transdisciplinary approaches that engage diverse stakeholders.

Degree requirements:

30 credits earned

21 credits earned at Unity College

3.00 minimum cumulative graduate level grade point average

Professional Skills Core

PROF 505 Strategic Management of Innovation

PROF 510 Communication for Environmental Professionals

PROF 515 Ethical Practice and Policy

PROF 590 Capstone I

PROF 690 Capstone II

Climate Change Sustainability Core

SBUS 515 Ecological Economics  
SUST 505 Thinking in Systems  
SUST 510 Climate Dynamics  
SUST 515 Leading Sustainable Change  
SUST 520 Community Planning for Resiliency

## Master of Professional Science: Marine Science

The MPS in Marine Science program provides students with a deep understanding of marine science, ecology, and the types of impacts oceans, and associated ecosystems, are experiencing. Stresses on marine ecosystems have created massive losses in marine biodiversity. By pairing leadership skills with scientific innovation, graduates of the program will have the ability to understand, implement, and improve best practices by reviewing primary literature, analyzing scientific data and applying conservation strategies. Employment opportunities span the breadth of academic research, natural resource management, conservation, and education.

Graduates of the Master of Professional Science with a focus in Marine Science will be able to:

1. Explain the underlying ecological principles and functioning of marine ecosystems.
2. Evaluate and propose solutions to environmental problems facing marine organisms and their habitats.
3. Analyze the approaches and potential outcomes of sustainable marine resource management strategies.
4. Manage scientific data and apply common statistical procedures used in marine science data analysis.
5. Interpret and critically evaluate studies from the scientific literature, and other sources, and clearly communicate findings to others.

Degree requirements:

30 credits earned

21 credits earned at Unity College

3.00 minimum cumulative graduate-level grade point average

Professional Skills Core

PROF 505 Strategic Management of Innovation  
PROF 510 Communication for Environmental Professionals  
PROF 515 Ethical Practice and Policy  
PROF 590 Capstone I  
PROF 690 Capstone II

Marine Science Core

MARI 505 Dynamics of Marine Ecosystems

MARI 605 Sustainable Management of Marine Resources

MATH 620 Statistics and Data Management for Science Professionals

*Complete one of the following required tracks:*

Conservation of Marine Mammals Track

MARI 520 Identification and Life History of Marine Mammals

MARI 620 Marine Mammal Rescue and Rehabilitation

Conservation of Marine Predators Track

MARI 510 Conservation of Marine Predators

MARI 610 Impacts of Predators on Marine Ecosystems

Coral Reef Biodiversity and Conservation Track

MARI 515 Coral Ecology and Conservation

MARI 615 Coral Reef Restoration and Aquaculture

## Master of Professional Science: Wildlife Conservation and Management

This degree program uses a transdisciplinary process for understanding and managing the natural world. Important factors impacting natural communities include climate change and habitat disruption. Understanding the management of the changing environment will be crucial to adaptation and creating sustainable management practices over the coming century. The central distinguishing feature of this degree is its focus on understanding the environment in the context of sustainability science. Students will be expected to be highly inquisitive about the ramifications, motivations and cost of global responses to environmental issues while exploring their own individual ideas.

Graduates of the Master of Professional Science, with a focus in Wildlife Conservation and Management will:

1. Describe and explain central ideas and foundational assumptions of managing wildlife.
2. Identify and explain fundamental factors and/or processes [including climate change] that impact wildlife and their communities.
3. Use systems thinking and transdisciplinary strategies to describe and explain wildlife management challenges and approaches.
4. Design and carry out a project that uses a transdisciplinary approach to address a wildlife management or conservation challenge.

Degree requirements:

30 credits earned

21 credits earned at Unity College

3.00 minimum cumulative graduate level grade point average

Professional Skills Core

PROF 505 Strategic Management of Innovation

PROF 510 Communication for Environmental Professionals

PROF 515 Ethical Practice and Policy

PROF 590 Capstone I

PROF 690 Capstone II

*Complete one of the following required tracks:*

Conservation and Management Program Core Track

SNRM 505 Human Dimensions of Wildlife Management

SNRM 507 Wildlife Ecology and Management

SNRM 509 Wildlife Identification

SNRM 515 Conservation Ecology

SUST 510 Climate Dynamics

Professional Wildlife Biologist Program Core Track

MATH 520 Quantitative Reasoning and Scientific Thought

SNRM 505 Human Dimensions of Wildlife Management

SNRM 510 Landscape Ecology

SNRM 515 Conservation Ecology

SUST 510 Climate Dynamics

## Capstone Experience

The Unity College Graduate Programs require a capstone experience. The capstone experience is a key component of professional master's degree programs and is centered around a capstone project that demonstrates the student's ability to apply skills learned during their master's program through the production of useful workforce-related product for an external partner or the student's current employer. These programs are non-thesis degrees and the capstone projects are not traditional academic theses. Capstone projects should be able to be completed within the timeframe of the capstone course(s), approximately 16 weeks depending on the student's degree completion schedule. The instructor(s) of the capstone courses work with the student as they develop their project proposal and produce the deliverable product for the external partner or employer. A final project report based on this deliverable is presented during the capstone course and contributes to the grade of that course. Capstone projects do not have faculty advisors or graduate committees apart from the capstone course instructor(s). Students will work with external partners

or employers as part of their capstone projects.

The capstone experience varies somewhat among programs. The following describes the project for each program.

Master of Professional Science: Environmental Geographic Information Science, Environmental Studies and Sustainability, and Wildlife Conservation and Management programs

In these programs, capstone projects are developed and completed during two courses. The projects are expected to demonstrate transdisciplinary thinking while developing products that address real-world problems for the external partner or employer. During the first course, the student will work with the instructor to develop a proposal for their project as an outcome for this course. During the second course, the student will compile and analyze information, complete the deliverable product, and prepare and present a report on their project as a course outcome.

## SECTION 7: COURSE DESCRIPTIONS

### Baccalaureate Course Descriptions

#### ADVENTURE ECOTOURISM COURSES

##### TOUR 201 Recreation, Sport, and Ecological Tourism

Ecological tourism is a growing arm of the tourism industry intended to incorporate natural areas using low-impact and sustainable approaches to build tourism opportunities and drive economic growth. This course introduces students to the fundamentals of tourism and differentiates between recreation, sport and ecological tourism businesses and assesses the economic, social, and environmental costs and benefits associated with adventure-based ecological tourism businesses.

Credits: 3

Prerequisites: None

##### TOUR 203 Minimal Impact Tourism for a Sustainable World

In a world where we have access to some of the most remote places on earth, how do we explore these sensitive ecosystems with as little impact as possible on the landscape and the native people in order to maintain the integrity of the system for others to enjoy in the future? In this course students will draw on historical and current practices in ecological tourism to understand the best practices, sustainable solutions and ethical decision-making principles to develop a business plan for a sustainable ecotourism business.

Credits: 3

Prerequisites: None

##### TOUR 301 Ecotourism Risk Management and Legal Liability

An integral component to running any business is to have a thorough understanding of risk management and legal liability. In this course students will gain an understanding of the legal liabilities associated with running an ecological tourism business and apply ethical decision making into business planning and practice. Students will develop strategies to mitigate circumstances that may pose risk to the public and/or environment and write a risk management plan for a proposed ecological tourism business.

Credits: 3

Prerequisites: None

#### ANIMAL HEALTH AND BEHAVIOR COURSES

##### ANIM 103 Animal Training and Care

This course is an introduction to the requirements for training and caring for animals in



captive and wild settings. Issues covered include habitat maintenance, sanitation, and best care practices. Students will additionally be introduced to and explore the various practices and techniques associated with animal training, with a particular emphasis placed on the skills necessary to train domestic and wild animals for husbandry, handling, and healthcare needs. Best practices related to detailed observation, notation, and data collection will be underscored as students explore the basic principles of animal training and care.

Credits: 3

Prerequisites: None

### ANIM 205 Animal Nutrition

This course is focused on the basic concepts of and science behind animal nutrition, including digestion, absorption, dietary requirements, consumption needs from their environment, and formation of regular feedings. This course will introduce the student to the science of animal nutrition. Discussions will be focused on the role nutrition plays in the development of animal disease. A comparative approach will yield insight into the varying nutritional spectrums across animal groups commonly handled by wildlife and veterinary professionals.

Credits: 3

Prerequisites: None

### ANIM 301 Animal Husbandry and Genetics

This course provides an in-depth look at the design, implementation, and optimization of breeding animals, with a particular focus on conservation of genetic diversity. Students will explore the principles of genetic and breeding productivity, inheritance patterns and genetic drift, as well as the basics of quantitative and molecular genetics. Methods covered will help students learn how to create, maintain, and improve the genetics of populations in a variety of controlled environments.

Credits: 3

Prerequisites: Completion of at least 60 baccalaureate credits

### ANIM 302 Animal Comparative Anatomy

This course involves detailed study of the different structural systems found in the global array spectrum of animals, including the underlying evolutionary relationships among the groups. Anatomical structures ranging from the cellular to tissue, organ, and organismal levels will be covered. Functional interpretations of anatomy are stressed, as well as their broader connection to the physiology and health of animals.

Credits: 3

Prerequisites: Completion of at least 60 baccalaureate credits

### ANIM 303 Animal Science Medical Terminology

Throughout this course, students will become acquainted with multiple veterinary medical concepts, medical terms and scientific principles. Using an approach based on word derivation and combination, students will learn the names and etymology of various animal ailments and diseases, tests used in the analyses of diseases, as well as

the treatments and therapeutic techniques used in alleviation and cure of animal health issues. This course will provide students interested in the veterinary medical fields a ground-up and comprehensive understanding of the complex language of veterinary terminology to be productive in a variety of current or future work environments and help understand more advanced veterinary fields.

Credits: 3

Prerequisites: None

### ANIM 304 Animal Comparative Physiology

The course is a systematic study of the function of internal animal systems, from the cellular to the organ-system level. Particular emphasis will be placed on processes supporting organismal homeostasis, with examples from animals commonly found in wild and captive veterinary care. Throughout the term, you will investigate how environmental differences dictate the physiological strategies and responses of animals, including consequences to their health and well-being. Additional work will be focused on processes to collect physiological data, including analysis and interpretation for use in care of their health.

Credits: 3

Prerequisites: ANIM 302

### ANIM 305 Animal Health and Disease

Maintenance of health is critical for the care of animals. In this course, students will learn about the most prevalent health issues and how to prevent them. Concepts covered will include disease transmission vectors and pathways, zoonotic diseases, and preventative measures. Particular emphasis will be placed on both the diagnostic processes used to assess animal health, as well as the role animal diseases play in the health of ecological populations, communities, and ecosystems.

Credits: 3

Prerequisites: ANIM 205

### ANIM 306 Understanding the Role of Emotional Support and Service Animals

This course will explore the differences between companion, emotional support and service animals. Students will review legislation and organizations that guide the use of animals in public spaces. Additional topics will include key principles of human-animal interactions, potential human health benefits, and current controversies regarding the use of animals for support and service roles. Students will evaluate the best practices of training and caring for emotional support and service animals in a way that maximizes both human and animal safety and wellbeing.

3 Credits.

Prerequisites: ANIM 103

### ANIM 307 Designing Captive Animal Environments

This course will engage students in the principles of designing, displaying, and

enriching the environments of captive animals. Topics covered will include creating basic and complex habits in a wide variety of settings, from zoos and aquariums to wildlife preserves, as well as forming environments which promote the enrichment, engagement, and promotion of health outcomes which reflect the animals' natural behaviors while in captivity. Particular emphasis will be placed on promoting animal welfare and creating productive environments for animal husbandry and veterinary care.

Credits: 3

Prerequisites: ANIM 103

### ANIM 310 Sustainable Livestock Health, Nutrition, and Care

This course will focus on sustainable practices that lead to proper health, nutrition, and care of livestock animals. Topics include the science behind livestock nutrition and best husbandry practices for monitoring, handling, and training of livestock species. Students will learn how to measure and document livestock behavior and how to use behavior as an indicator of proper health and welfare.

Credits: 3

Prerequisites: ANIM 205

### ANIM 315 Equine Health, Nutrition, and Care

This course will lead you through an understanding of equine nutritional needs and the essential elements of maintaining a healthy horse. Students will learn the basics of nutrition, including feeds and feeding, diet, and its relationship to health and performance, plus key environmental factors in horse health. *Please note that you do not need access to a horse, or own your own horse to participate and be successful in this course.*

Credits: 3

Prerequisite: ANIM 205

### ANIM 401 Animal Care Technical Skills

In this course, students learn and apply various clinical and laboratory techniques used in the animal care and veterinary medical fields. Emphasis is placed on acquiring new skills and putting the skills to practice to improve abilities. Skills will be focused on those used in both clinic (e.g., drawing blood samples) and lab (e.g., molecular techniques, software applications for analysis) settings, and include reference to those used in wildlife and game preserves (e.g. chemical immobilization).

Credits: 3

Prerequisites: ANIM 103, ANIM 305

## ANIM 410 Sustainable Livestock Management

In this course, students will learn how to integrate principles of sustainability into livestock management practices. Students will identify strengths and weaknesses of traditional methods of farm animal management and compare those with sustainable methods and regenerative practices. Students will examine links between livestock management and consumer supply chains while considering best practices that prioritize environmental sustainability, animal welfare, and economic success. Students will seek ways to integrate these in real world applications by designing their own life cycle assessment.

Credits: 3

## ANIM 415 Horse Facility Management

In this course, students will study important aspects of running an equine establishment, including barn hygiene, air quality, safety audits, and fencing and pasture maintenance and improvement. Students will learn the importance of properly managing the natural environment and built facilities to optimize the health of horses, including concepts related to natural ecosystems, ecosystem services, and beneficial management practices. The relationship between the health and well-being of the environment and the health and well-being of the horse will be explored.

Credits: 3

## ARTS COURSES

### ARTS 101 Composing the Landscape: Introduction to Landscape Photography

This course is an exploration of landscape photography. Students will examine its history, study its masters and work on developing their own visions. Over the span of the semester, students will gain an understanding of the medium while trying their own eye at creative expression. The first 2 weeks will re-fresh students on the basic camera functions and making good exposures as well as a "get to know you" assignment. The bulk of the semester will be spent learning the variations of landscape photography by both studying significant photographers and their work as well as exploring the variations with their own cameras, culminating in a portfolio project.

Credits: 3

Prerequisites: None

### ARTS 105 Environmental Storytelling for Social Change

Humans make sense of the world, and choose how to act within it, through the medium of storytelling. American pragmatist and philosopher Kenneth Burke argues that stories shape our thoughts and reality. More specifically, for this class, they are our most ancient and advanced tools for changing minds. Thus social change cannot happen without storytelling. In this class, students will learn how to construct the stories

that drive and guide environmental intervention. Students will also learn practical strategies for engaging in the struggle over narrative, and how to deal with the increasing agency of individuals to decide which stories are worth listening to. Great stories demand an audience; great stories about our world, and its problems, demand action. Storytelling organizes and mobilizes people, spurs donations, and shapes public opinion. Nonprofits, foundations, and socially responsible businesses are looking for people who know how to leverage effective stories to drive action and energize supporters. This class will teach students how to tell those kinds of stories about environmental issues, and become changemakers in their profession.

Credits: 3

Prerequisites: None

## BIOLOGY COURSES

### BIOL 103 Biology: Foundations of Life

Introduction to fundamental biological principles emphasizing common attributes of all living organisms. Unifying concepts include chemical structure of living matter, structure and function of the eukaryotic cell, including characteristics of plant and animal cells, respiration, photosynthetic pathways, genetics, and microevolution.

Credits: 3

Prerequisites: None

### BIOL 104 Biology: Foundations of Life Laboratory

This course includes the laboratory experiences focused on basic biology to accompany BIOL 103.

Credits: 1

Prerequisites: None

### BIOL 105 Biological Diversity, Ecology, and Evolution

An introduction to biological diversity, macroevolution, population genetics, and organismal structure and function. Students will examine such topics as: Origin of life, mechanisms of evolution, diversity, animal and plant morphology, reproduction, behavior, population biology and ecology.

Credits: 3

Prerequisites: None

### BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

This course includes the laboratory experiences focused on biological diversity, ecology, and evolution to accompany BIOL 105.

Credits: 1

Prerequisites: None

### BIOL 201 Organisms that Sustain the Earth: Understanding Plants

Plants, as the most prominent primary producers in terrestrial systems due to photosynthesis, are the base source of energy in the most ecosystems. This course will introduce students to the factors that influence the growth, distribution and abundance

of plants, the influence of plants on energy and nutrient flow, and key features of plant biology. Students will experience the diversity of plants and how major taxa differ in form and function. Case studies will illustrate the role of plants in ecosystem function, human culture, and animal ecology.

Credits: 3

Prerequisites: None

### BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

In this course students will explore key concepts of ecology. The course emphasizes concepts applicable to understanding and mitigating impacts of climate change, human activities, and invasive species on ecological systems, as well as other concepts underlying conservation ecology and management of wildlife species. Through course activities focused around practical application of concepts, students will gain a basic understanding of evolution, autecology, population ecology, community ecology, and ecosystem ecology.

Credits: 3

Prerequisites: BIOL 105 and MATH 201

### BIOL 301 Animal Behavior: The Evolution, Ecology, and Social Behavior of Animals

In this course, students will explore principles of animal behavior. They will discuss how evolution, environment, and life experience interact to influence the behavior of animals. Students will be introduced to the history of animal behavior as a scientific discipline, learn how to define behavior, and apply behavioral principles to measure and analyze behavior. The course will also cover topics related to social behavior including group living and animal communication as well as reproduction, mating, and parental care. Finally, students will explore other important survival behaviors such as predator avoidance, foraging, and predation. Skills learned in this class can be applied in both captive and wildlife animal fields to increase the wellbeing of a wide variety of animal species.

Credits: 3

Prerequisites: BIOL 103 or BIOL 105

### BIOL 305 Conservation Biology

There's a popular axiom in science that "all biology is now conservation biology." This statement is telling in two ways: First, in the modern era it is hard to find a biological system that is untouched by humankind. Second, perhaps more than any other discipline conservation biology is highly integrative, bringing together such disparate fields as ecology, evolutionary biology, public policy, and sociology. In this course, we will lay the foundation for any field within the natural sciences or environmental studies. Specific topics that we will cover include the status of biodiversity, the threats facing biodiversity, the importance of ecosystem services, conservation policy, design and management of protected areas, and habitat restoration.

Credits: 3

Prerequisites: BIOL 103 or BIOL 105

### BIOL 310 Microbiology

This course focuses on the diversity of microorganisms found throughout the earth, with a particular focus on their taxonomy, ecology, and evolutionary relationships. Not only the source for many of the serious animal diseases, microorganisms serve many ecological roles in nature. Fundamental topics exploring these roles and the impact of microorganisms on animal health and welfare will be nutrient cycling, genetic diversity, food production, and biotechnological applications. Students will additionally be exposed to the variety of processes and techniques related to assessing microbial communities and their diversity.

Credits: 3

Prerequisites: BIOL 103 and CHEM 101

### BIOL 315 Cell Biology

This course is an in-depth exploration into the biology of cells of higher organisms. As the fundamental unit of life, cells play an integral role into the functioning of tissues, organs, and ultimately organisms. The topics in this course will be underpinned by an understanding of cellular structure and functioning, with particular emphasis placed on membrane and organelle formation, growth and transformation, transport and communication, and ultimately reproduction, with a brief exploration into the dysfunction and treatment of cellular abnormalities and cancers. Students in this course will additionally become familiar with the methods used for the observation and assessment of cells in laboratories.

Credits: 3

Prerequisites: BIOL 103 and CHEM 101

### BIOL 320 Plant Genetics

This course reviews the genetic enhancement of crop value to humans through development and applications of Mendelian, quantitative, and molecular genetics. Students will examine crop genetic improvement methods by discussing the history and current practice of plant breeding, tools available to breeders, choices and modifications of those tools to meet specific objectives, and challenges plant breeders face in developing varieties for the future. Emphasis on pollination syndromes, plant breeding, and the role of genetic modification of plants.

Credits: 3

Prerequisites: BIOL 103

### BIOL 325 Plant Pathology

The course introduces the basic concepts of plant disease biology and control, covering disorders caused by fungi, viruses, bacteria, nematodes, as well as the role of environmental factors (including temperature, moisture, and light) in contributing to the development of diseases. Case studies will be incorporated to ensure students will be able to find, interpret, and use scientific literature on plant diseases and discuss a range of control strategies suitable for both traditional and organic growers.

Credits: 3

Prerequisites: BIOL 201

### BIOL 330 Integrated Pest Management

This course will provide a practical investigation of insect structure and function, ecology, behavior, and life history, as well as an in-depth study of strategies of integrated pest management (IPM). Students will explore current topics such as vectors of plant and animal diseases, and the challenges to pollinator populations. Students will learn key practices in IPM, including identification, threshold establishment, monitoring, and sampling methods. They will evaluate the efficacy and risks associated with various pest control strategies separately and as part of an IPM plan.

Credits: 3

Prerequisites: None

### BIOL 335 Ecology of Fire-Dependent Ecosystems

The evolution of terrestrial plants introduced the oxygen and vegetation necessary for fire into the Earth system 500 million years ago, and all levels of life, from organisms to ecosystems, have been responding ever since. This course begins by detailing the components of fire as an ecological disturbance regime, scaling up from the chemistry and physics of combustion, to fire behavior at landscape scales, and feedbacks between climate, vegetation, and fire. Both physical impacts to soil as well as the breadth of adaptive traits in plants and animals are reviewed, and essential perspectives on population biology and community ecology taken through the lens of pyrodiversity – the role of heterogenous fire in creating and conserving Earth's biodiversity.

Credits: 3

Prerequisites: BIOL 203

### BIOL 340 Forest Ecology

Forest ecology is the scientific study of forest ecosystems through the interactions with biotic and abiotic factors that affect the structure, composition, function, and dynamics of the systems. Topics covered in this course include tree population and forest community dynamics, ecosystems processes, historical ecology, disturbance ecology, and ecosystem services. Students will apply these concepts to current environmental problems such as biodiversity loss, anthropogenic disturbance, and global environmental change

Credits: 3

Prerequisites: BIOL 201

### BIOL 345 Rangeland Ecosystems

This course will examine major ecological principles that influence the functions of many components of rangeland ecosystems with an emphasis on grasslands. Topics such as biogeochemical processes, ecological succession, the role of disturbances, plant/animal diversity, soil-plant interactions, carbon storage, sustainability, nonnative species encroachment, and other ecosystem services will be explored. Understanding how natural processes transform among natural communities that can also be manipulated through anthropogenic activities will be highlighted. This course will give students the knowledge to distinguish how management of these ecosystems can change plant communities over time.



Credits: 3

Prerequisites: BIOL 203

## CHEMISTRY COURSES

### CHEM 101 Chemistry I

This course covers the fundamentals of chemistry, with an emphasis on modern and applied chemistry of atomic and molecular matter. Specific emphasis will be on atomic theory, bonding, nomenclature, stoichiometry, molecular structure and reactivity, orbitals and electron configurations, the periodic table, intermolecular forces, aqueous solutions, and basic chemical reactions.

Credits: 3

Prerequisites: None

### CHEM 102 Chemistry I Laboratory

This course includes the laboratory experiences focused on basic inorganic chemistry to accompany CHEM 101

Credits: 1

Prerequisites: CHEM 101 (or concurrent enrollment)

### CHEM 103 Chemistry II

This course is an introduction to chemical balance, equilibrium, and change. Topics covered include general equilibrium, acid-base chemistry, colligative properties, chemical kinetics, and thermodynamics, including entropy and enthalpy. Additional work will focus on gasses, gas properties, and electrochemistry, and build from topics covered in CHEM 101.

Credits: 3

Prerequisites: CHEM 101

### CHEM 104 Chemistry II Laboratory

This course includes the laboratory experiences focused on chemistry to accompany CHEM 103.

Credits: 1

Prerequisites: CHEM 103 (or concurrent enrollment)

### CHEM 201 Organic Chemistry 1

This course focuses on the chemistry of organic molecules. Starting with an overview of the diversity of carbon compounds, topics include organic molecular reactions, shapes and structures of molecules, and the spectroscopic identification of organic molecules. Additional work will examine the processes involved in synthesizing molecules, techniques used in determining molecular structure, and the application of organic chemistry to environmental issues.

Credits: 3

Prerequisites: CHEM 101 and CHEM 103

### CHEM 202 Organic Chemistry 1 Laboratory

Throughout this course, students will become acquainted with multiple veterinary medical concepts, medical terms and scientific principles. Using an approach based on word derivation and combination, students will learn the names and etymology of various animal ailments and diseases, tests used in the analyses of diseases, as well as the treatments and therapeutic techniques used in alleviation and cure of animal health issues. This course will provide students interested in the veterinary medical fields a ground-up and comprehensive understanding of the complex language of veterinary terminology to be productive in a variety of current or future work environments and help understand more advanced veterinary fields.

Credits: 1

Prerequisites: CHEM 104 and CHEM 201 (CHEM 201 can be taken concurrently)

## CHEM 203 Organic Chemistry 2

This course is a continuation of the concepts covered in CHEM 201, with a particular emphasis on reaction chemistry and the mechanisms of reactions. Specific topics will include use of NMR spectroscopy, mass spectrometry, electronic structure, and bonding in carbonyl compounds. Additional work will be focused on determining the patterns of reactivity in conjugated and aromatic molecules, carbonyl compounds, and biologically important molecules such as carbohydrates and amino acids.

Credits: 3

Prerequisites: CHEM 201

## CHEM 204 Organic Chemistry 2 Laboratory

This course includes the laboratory experience focused on organic chemistry to accompany CHEM 203.

Credits: 1

Prerequisites: CHEM 202 and CHEM 203 (CHEM 203 can be taken concurrently)

## CHEM 205 Applications of Chemistry for Horticulture

This course examines the use of pesticides, herbicides and fertilizers in horticulture. Students will learn about the modes of action, toxicity, environmental impact, and human health risks of various pesticides and herbicides. Similarly, students will learn about fertilizer types and the conditions under which they are typically used. In addition, the course will cover how fertilizers, herbicides, and pesticides can be applied to minimize risk of human exposure and environmental impact, including the proper use and calibration of equipment. The economic value of chemical pest and weed control and growth promotion will be discussed.

Credits: 3

Prerequisites: CHEM 103

## CHEM 301 Biochemistry

This course is an exploration into the link between biology and chemistry and provides an in-depth analysis of the structure and function of biomolecules, including their metabolism and regulation. Topics in areas such as bioenergetics and enzymology will provide the basis to understand major challenges to facing biological systems and

organisms, including their pathologies, nutrition, and toxicology. Additional work will focus on using an understanding of biological molecules and their associated processes to analyze an environmental issue facing organisms.

Credits: 3

Prerequisites: BIOL 103 and CHEM 103

### CHEM 302 Biochemistry Laboratory

This course includes the laboratory experience focused on biomolecular functioning, metabolism, and regulation meant to accompany CHEM 301.

Credits: 1

Prerequisites: CHEM 301 or concurrent enrollment

## COMMUNICATION COURSES

### COMM 100 Communication Skills for Online Learners

Learning is an active process that involves intentionally connecting new ideas and experiences to existing knowledge. In an online setting, learners are most successful when they employ specific strategies to engage with the learning materials, their peers, and their instructor. This course will provide learners with opportunities to develop and practice intentional learning strategies and communication skills in an online context.

Credits: 2

Prerequisites: None

### COMM 101 Writing for Environmental Professionals

Environmental professionals understand that the ability to communicate effectively in many genres leads to professional success. In this writing course, students will refine and reflect on their writing process, practice writing in multiple genres, and learn about rhetoric. Through eight modules, online discussion, and a series of writing assignments, this course examines the most important aspects of any piece of professional writing: organization, use of evidence, clarity and cohesion, and incorporating feedback during the revision process. Upon completion, students will develop strategies to improve their writing so that they become more persuasive and impactful environmental professionals.

Credits: 3

Prerequisites: None

### COMM 201 Multimedia Communication for Environmental Professionals

In COMM 201 Multimedia Communication for Environmental Professionals, students produce collaborative and individual projects that develop critical reading, writing, thinking, and research skills. By applying a rhetorical framework to pressing environmental issues, students will develop effective, ethical communication in print and digital texts. Projects include oral, written, and visual presentations.

Credits: 3

Prerequisites: None

## COMM 203 Environmental Communication

From Ecological Activists to Ecomodernists—how humans think, talk about, and represent nature has had an impact on policymaking, natural resource management, and the place that nature has in our day-to-day lives. This course explores how people communicate about the environment and how such rhetoric is used by advertisers, policy-makers, and opinion leaders. We will also cover how citizens can join (or resist) the effort to manage public opinion about the environment. Topics include environmental rhetoric, media and journalism, public participation in environmental decision making, social marketing and advocacy, and nature in popular culture and green marketing.

Credits: 3

Prerequisites: None

## COMM 303 Communicating to Stakeholders

This course teaches students how to communicate real-world issues and problems for a just end. Students will learn how different modes of communication such as storytelling can be used as an effective way to communicate an organization's mission and builds empathy for its cause. Students will learn how to craft values-based communications to persuade stakeholders to support social justice issues such as sustainability, environmental law, and wildlife conservation. Students will learn concepts and skills to build public support for their organization's mission, strategic initiatives, and fund-raising activities. This course will develop skills in written, visual, and oral communication.

Credits: 3

Prerequisites: COMM 101 or COMM 201

## COMM 401 Using Social Media in a Global World

Not only do marketers use social media to communicate with their customers but also as a way to better understand their customers. This course teaches students how to use social media as a global branding and marketing tool, exposes learners to the analytic methods that can be used to convert social media data to marketing insights, and shows learners how social media data can be used to provide insights into market structure and consumers' perceptions of the brand.

Credits: 3

Prerequisites: None

## COMM 403 Environmental Crisis Communication

This course introduces students to the key elements of crisis communication, including creating a plan before, during, and after a crisis. Since an organization's reputation is one of its most valuable assets, effective crisis management helps preserve and defend the company's reputation and maintain the organization's operations. This course explores aspects of crisis communications including typology of crises; history of crisis communications; theoretical basis for effective crisis response and communications; and crisis communications planning methodologies and strategies.

Credits: 3

Prerequisites: None

## COMPUTER SCIENCE COURSES

### CIST 101 Introduction to Coding for Environmental Applications

This course introduces students to fundamental computer science concepts and Python. Students will learn the core skills of Python programming and design and problem-solving approaches using programming. Students will discuss environmental applications of programming and design and write Python programs for environmental applications.

*Course meets language requirement unless otherwise noted.*

Credits: 3

Prerequisites: None

### CIST 103 Introduction to R

In this course students learn the basics of programming in R, a powerful and commonly used object-oriented programming language for modeling, statistical analysis, and graphic presentation in the ecological sciences. The course covers the basics of using R for data input and import, data subsetting and transformation, data analysis using common statistical approaches, and data visualization. In addition, students will learn to access and use R packages and write their own R functions. Students will learn these aspects of R coding by working through ecological case studies both in practice problems to develop a basic understanding, and then through developing their own code by working through a similar example.

Credits: 2

Prerequisites: None

## ECONOMICS COURSES

### ECON 301 Microeconomics for Ecological Sustainability

This course applies the principles of microeconomics to ecological and environmental sustainability issues. Students will consider the operation of a market economy and how best to allocate resources, will read case studies that explore how individuals and firms make decisions about production and consumption, and will explore how these decisions impact sustainability. Students will study the laws of supply and demand, explore the various causes of market failure, and examine how economic policies could be designed to correct market failure to maximize ecological sustainability.

Credits: 3

Prerequisites: 100-level MATH course or higher

### ECON 303 Macroeconomics for a Sustainable Planet

In this course, students will explore the fundamentals of economics on a national and global scale. Specifically, students will learn how production, distribution and

consumption of goods and services, the exchange process, the role of government, the national income and its distribution, GDP, inflation, trade, and unemployment can be used to design a more sustainable planet.

Credits: 3

Prerequisites: None

## ENVIRONMENTAL EMERGENCY MANAGEMENT AND LAW ENFORCEMENT COURSES

### EMGT 203 Social Justice Issues in Emergency Management

The primary goal of social justice in emergency management is to ensure all groups have the opportunity to receive resources equitably. This course explores how issues like terrorism become racialized and explores an overview of inequity in how agencies and people respond to natural disasters.

Credits: 3

Prerequisites: None

### EMGT 301 Public Policy and Planning for Emergency Management and Law Enforcement

This course focuses on the role of local, state, and federal government in a time of disaster. Students will study key legislation related to disasters, disaster management, law enforcement, and how that legislation has impacted the profession.

Credits: 3

Prerequisites: None

### EMGT 305 Planning and Responding to Natural Disasters

In this course, students will review and critique disaster plans and learn components of effective disaster management across jurisdictions.

Credits: 3

Prerequisites: None

### EMGT 307 Planning and Responding to Cyberthreats and Terrorism

Students learn the history, methods, and philosophy of terrorism, with an emphasis placed on how governments and law enforcement agencies plan and respond to terrorism and cyberthreats. Students study case studies that explore terrorist activities and the implications for emergency response.

Credits: 3

Prerequisites: None

### EMGT 403 Implementation of Emergency Management: Simulation and Exercises

The goal of this course is to prepare students to create and implement their own emergency management simulation. By the end of the course, students will be able

to describe the benefits of exercise management; define the parameters and process of the simulation; describe the different phases of exercise management such as planning, conduct, post-review; and explain how to select the appropriate exercise.

Credits: 3

Prerequisite: None

## ENVIRONMENTAL CRIMINAL JUSTICE COURSES

### ENCJ 201 Law Enforcement and Emergency Management in the Age of Globalization

This course introduces students to the United States criminal justice system in the age of globalization. Students will develop a general understanding of the criminal justice system's response to crime and how the processes of globalization are changing it. It is an introductory overview of local, state, and federal law enforcement, judicial and corrections agencies, and the criminal justice system processes. Special attention will be paid to the role criminal justice agents play in environmental issues and problems. The course prepares students to take more advanced courses that address the specific components of environmental criminal justice.

Credits: 3

Prerequisites: None

### ENCJ 205 Drug Recognition Training

This course will study current drug trends in society exposing students to both use and abuse. We will identify drugs and the observable effects on the human body when abused. The students will become familiar with the signs and symptoms of abuse and be able to differentiate drug impairment with common medical conditions. We will explore the hazards of drug abuse in the working environments that the students are pursuing and identify potential skills to deal with those individuals.

Credits: 3

Prerequisites: None

### ENCJ 301 Crime Scene and Forensic Techniques

In this course, students will learn the techniques used in the criminal investigations, introducing students to theories and fundamental knowledge of the investigative process, including special and basic forensic techniques. The course will include some of the following topics: crime scene and incident processing, information gathering techniques, the collection and preservation of evidence, how to write appropriate reports, and other related techniques and topics. Students will then apply what they learn to case studies that involve environmental laws and policies.

Credits: 3

Prerequisites: None

### ENCJ 303 Homeland Security and Emergency Management

In this course, students will learn critical concepts to emergency and disaster

management, risk prevention and management, counterterrorism, and consequence management and mitigation. This class will also explore the history and evolution of the Department of Homeland Security. Topics will include crisis action planning, including the impact of global warming; relationships among local, state, and federal agencies during management operations; concepts of emergency management, including mitigation, hazard analysis, and terrorism; and homeland security functions, methodologies, and techniques.

Credits: 3

Prerequisites: None

### ENCJ 305 Natural Resource Law and Policy

This survey course addresses not only the creation and management of our natural and wildlife resources on federal and tribal public lands, with a focus on the National Parks, National Forests, and the National Resource Lands (Bureau of Land Management (BLM) regulated lands), as well as the National Wildlife Refuge System and the National Wilderness Preservation System. Students will learn how Native American tribes, interest groups, citizens, and the courts influence the management of natural resources on these lands. After taking the class, students should be familiar with the major public land legislation such as the National Forest and National Park "Organic Acts" and the Wilderness Act; as well as laws that affect our public lands, but apply more broadly, including the Endangered Species Act and the National Environmental Policy Act. Through class work and their papers, students will also be familiar with different perspectives on some of the most important current issues facing our public lands.

Credits: 3

Prerequisites: None

### ENCJ 401 Environmental Compliance, Regulation, and Mitigation

Organizations that produce, import, process, handle, or release chemical substances are required by Federal law to comply with many regulatory programs that are implemented by the EPA. This course introduces students to the Federal laws and regulations that apply to environmental compliance and regulation. Upon completion of this course, students develop an understanding of the regulatory process, how specific materials and activities are regulated, and develop skills necessary for applying EPA's standards to operations.

Credits: 3

Prerequisites: None

### ENCJ 405 Environmental Criminology

This course explores environmental criminology and law by examining the strengths and weaknesses of federal and state laws that apply to water, air, land, and biodiversity. Specifically, the course explores specific issues that pertain to the nature and responses to environmental law, including crimes against nature, transgressions against humans, environments, and nonhuman animals. Students will also learn broad conceptual knowledge about law enforcement and regulation relevant for a



criminological approach to environmental issues.

Credits: 3

Prerequisites: None

## ENVIRONMENTAL HEALTH AND SAFETY COURSES

### EVHS 205 Occupational Safety and Health

In this course, students examine occupational safety and health practices needed to address occupational safety and health issues in the workplace. Students will employ regulatory standards as a guide to apply policies, procedures, standards and occupational safety and health principles. Topics will include industry recognized best practices, origin of the standards, the process and rules of inspections, citations and penalties, and policies.

Credits: 3

Prerequisite: BIOL 103, BIOL 104, CHEM 101, CHEM 102

### EVHS 210 Fire Protection and Safety

This course introduces students to the fundamentals and theories of how fires start, spread, and are controlled. Students will learn about basic fire chemistry principles such as properties of solids, liquids, and gases, and fire combustion and behavior. Students will learn about the laws applied to fire prevention, including federal fire safety requirements for industry and commerce, solving technical problems encountered, recognition of hazards, prevention of fires and inspection techniques. Additionally, students will receive guidance on several fire inspection trainings. These include FEMA: An Introduction to Hazardous Materials and Fire Extinguisher Training.

Credits: 3

Prerequisite: CHEM 101, CHEM 102

### EVHS 305 Construction Safety

Construction workers are some of the most at risk workers in any industry. That is why it is important to understand the foundations of accident prevention in the building and construction industry. This class introduces students to practical applications of safety analysis and management. Students will learn about past incidents through case studies and explore topics such as reporting unwanted occurrences, incident databases, safety performance indicators, and accident investigation. Students then will learn about how to prevent accidents for future conditions, learning risk analysis, preliminary hazard analysis, and job safety analysis. This course will emphasize using data and data analysis to make decisions.

Credits: 3

Prerequisites: EVHS 205, MATH 201

### EVHS 405 Corporate, Non-profit, and Government EHS Management

In this course, students will profile Environmental Health and Safety (EHS) management at an organization. Students will explore the EHS management's history, motivations, and strategies. The course will introduce students to developing systems of managing an organization's Environmental Health and Safety. Students will also investigate the implications of developing an EHS strategic plan and policies and learn how to communicate that plan and policies to a variety of stakeholders.

Credits: 3

### EVHS 410 Sustainable Product Stewardship

In this course, students will learn about sustainable product development and product stewardship. This course will explore key concepts through experiential online activities which will assist learners with integrating sustainability, life cycle thinking (cradle to grave), and sustainable product development and design tools into new product development processes.

Credits: 3

## ENVIRONMENTAL HEALTH AND WELLNESS COURSES

### EVHW 105 Introduction to Human Health

This class is designed to give students interested in health careers basic knowledge related to health professions. Students will learn foundational concepts in anatomy and physiology, medical terminology, medical ethics, and medical communications.

Credits: 3

Prerequisite: BIOL 103 and BIOL 104

### EVHW 205 Health Literacy and Promotion for Leaders

In this course, students will learn about social and demographic factors that contribute to health disparities, both directly and by acting as barriers to health literacy. They will examine health literacy frameworks and adult learning theories to identify best practices for educating and supporting behavior change in adults and apply these tools to create a workplace wellness plan to address a specific healthcare disparity.

Credits: 3

Prerequisite: BIOL 103 and BIOL 104

### EVHW 305 Employee Benefits for Wellness

This course focuses on policy and politics about America's healthcare's system, closely examining access, cost and quality. Students will learn about the roles of patients,

physicians, hospitals, insurers, and pharmaceutical companies. The interaction between the government and these different groups will also be covered. The course will cover national health care policy initiatives. The course will develop students' critical and analytical skills about the U.S. healthcare system and the people affected by it.

Credits: 3

### EVHW 310 Mind, Body, Soul, Planet: Understanding the Mind-Body Connection for Long-Term Health

This course will help students understand what contributes to emotional, physical and spiritual well-being through awareness of the mind-body connection. Students will study the mind-body connection, the stress response, brain training techniques, plus the important roles of nature and positive psychology to understand whole-body health. Students will explore different techniques that support whole body health such as yoga, reiki, and meditation, along with understanding the role of diet, nature, exercise, relationships, and stress play.

Credits: 3

### EVHW 405 Health Coaching: How to Live a Balanced Life

This course provides an overview of the field of health coaching and is designed to develop a skill set for health coaching including: creating relationships, envisioning change, motivational interviewing, planning and goal setting, providing feedback, progression and engagement strategies.

Credits: 3

Prerequisite: PSYC 101

### EVHW 410 Worksite Health Environment and Management

In this course, students analyze the principles of developing a successful worksite wellness program. This course introduces key concepts, strategies, resources, and tools. Students will learn about worksite wellness, collaborating with management and other stakeholders, creating wellness teams, collecting data, developing a strategic plan, creating incentives, creating budgets, understanding legal issues, and creating supportive environments.

Credits: 3

Prerequisite: PSYC 101

## ENVIRONMENTAL JUSTICE AND SOCIAL CHANGE COURSES

### ENVJ 201 Understanding Diversity and the Environment

In this course, students develop a critical vocabulary around issues of diversity, sustainability, and the environment. Students learn about the ways people from different backgrounds, whether racial, age, gender, socioeconomic, are treated and affected differently by environmental problems. Finally, students develop ideas about how to make real-world environmental changes that include every stakeholder's voice, especially voices from communities that have otherwise been subordinated, silenced, and marginalized.

Credits: 3

Prerequisites: None

### ENVJ 203 History of Creating Environmental Social Change

Although environmental issues are often presented ahistorically, every issue is historically rooted to economic, political, social, and cultural reasons. This course explores the role that historically-rooted lines of power such as race, gender, and class produce patterns of local and global environmental resource use and abuse. Students learn these histories by studying key environmental figures who have fought for environmental justice and social change. Finally, students recognize that history provides a meaningful and important framework for understanding the present and can be used to provide solutions to some of the most pressing environmental justice issues.

Credits: 3

Prerequisites: None

### ENVJ 301 Energy Justice: Local to Global Perspectives

As global patterns of energy use often remain hidden or go undiscussed, it is important to investigate the social and environmental justice implications. In this class, students examine case studies to explore real-world controversies over energy extraction and use. Some questions this course considers are who benefits most from current energy systems? Who pays for it? How does climate change policies affect global energy patterns and use? How do political and economic power drive the conversation and energy policies around the world? In addition to exploring the existing problems, students will consider possibilities for creating more just and sustainable energy systems.

Credits: 3

Prerequisites: None

### ENVJ 303 American Government: Foundations in Environmental Law

Passing legislation and enforcing the law are some of the most powerful tools to enact environmental justice and social change. This class provides an overview of the law and legal system, with an emphasis on environmental cases. After covering the basics of American government and the legal system, students focus their learning on the design, implementation, and enforcement of major environmental statutes.

Credits: 3

Prerequisites: None

## ENVJ 305 Sustainable Design and Justice

The planning of resilient, sustainable, and socially just urban spaces has become extremely important as more and more of the world population urbanizes. This course teaches students how to use design thinking to work with different stakeholders such as architects, designers, city planners, government, and the local community to ensure that urban planning projects consider and implement social and environmental justice initiatives.

Credits: 3

Prerequisites: None

## ENVJ 307 Food Systems and Social Justice

This course explores the social and environmental dimensions of food systems from a global perspective. Through an exploration of the relationships between the natural and built environment, students explore the environmental impacts of food production, food processing, food distribution, and food disposal. Lastly, students learn how power and justice are distributed among the farmers, big agro-business, food industry workers, business owners, policymakers, communities, and consumers.

Credits: 3

Prerequisites: None

## ENVJ 310 Fire and Culture

The historian Stephen J. Pyne describes Earth as a uniquely fire planet, and humans as a uniquely fire species. Using anthropological, ecological, and sociological perspectives, this course explores the human-fire relationship in wildlands and fire-prone ecosystems. Case studies will be used to address Indigenous and Western perspectives related to fire in the United States and countries around the world. Students will be introduced to the diverse ways humans use fire to manipulate and engage with the landscape, and the influence of culture, ethnicity, and policy on human perception and use of fire across different time periods.

Credits: 3

Prerequisites: None

## ENVJ 401 Seminar in Environmental Justice: Balancing Equity, Environment, and Enterprise

This course advances students' environmental justice professional skills so that they can find real-world solutions to make sure that the people are treated fairly and have meaningful involvement in the development, implementation, and enforcement of environmental laws, regulations, and policy. Students start to develop their final capstone project that provides a solution to a real-world environmental justice problem and that addresses a key tenant of Environmental Justice: the recognition that environmental goods (such as clean air and water) and environmental harms (such as toxic waste) are not always distributed equitably among populations. Since environmental harms fall more heavily on low-income communities, communities of color, immigrant communities, indigenous peoples, and other population demographics, students examine the various reasons for these disparate impacts and

will start to offer possible solutions grounded in law, policy, and practice.

Credits: 3

Prerequisites: ENVJ 201 and ENVJ 303

## ENVIRONMENTAL PROFESSIONAL CORE COURSES

### EVPC 100 Ecoliteracy

We are living in an era characterized by unprecedented environmental challenges, including water scarcity, climate change, and loss of biodiversity. At Unity College, we are committed to helping our students build the scientific, social, and emotional knowledge and skills needed to address these complex challenges in their professional, personal, and civic lives. This course is the first step in that journey. Here, learners will develop an understanding of the cycles that sustain life on Earth and cultivate key ecoliteracy practices, including empathy (intellectual and affective) and systems thinking. Learners will build on these foundational skills in subsequent courses within the Environmental Professional Core.

Credits: 1

Prerequisites: None

### EVPC 101 Professional Skills

In this course, students will develop professional and academic skills that are applicable in a variety of environmental fields. Through activities focused on reflection, self-assessment, and application, students will acquire techniques and strategies to be a successful learner and a professional. Course activities also include developing research skills, professional communication, critical writing, positive psychology, and media creation. This course serves as the gateway to the other environmental professions core courses.

Credits: 3

Prerequisites: None

### EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation

This course is part of a two-course sequence that provides students with an understanding of the interconnectedness of the looming environmental issues that the world faces. This class will provide students with a basic scientific understanding of deforestation, biodiversity, and overpopulation and address what societies can do that they aren't currently doing. Upon completion, students will be able to critically assess these issues and provide models for making more sustainable choices.

Credits: 3

Prerequisites: None

### EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

This course is part of a two-course sequence that provides students with an understanding of the interconnectedness of looming environmental issues that the

world faces. This class will provide students with a basic scientific understanding of energy, water scarcity, and waste, and address what societies can do that they aren't currently doing. Upon completion, students will be able to critically assess these issues and provide models for making more sustainable choices.

Credits: 3

Prerequisites: None

### EVPC 301 Environmental Justice

This course examines issues of environmental quality and social justice. The course begins by examining the philosophical foundations and history of the environmental justice movement and foundational concepts such as justice, race, gender, and class. Students will explore these concepts through a series of case studies of urban and rural environmental (in)justice in the United States and move on to environmental justice's role in globalization.

Credits: 3

Prerequisites: None

### EVPC 305 Building a Better World: Ethical Decision-Making

Ethical decision making is essential for leadership, and since most decisions leaders make have an ethical dimension, the ability to discern the ethical implications requires a set of skills that are informed by ethical philosophy. This course provides students with strategies, tools, and techniques to make ethical decisions by considering the ethical issue and the people involved, develop a strategy, and implement ethical action possible. Through the use of case studies, students will develop their ethical awareness, learn to distinguish difficult decisions from real ethical dilemmas, and practice deliberating effectively about a variety of ethical issues drawn from social and professional contexts.

Credits: 3

Prerequisites: None

### EVPC 401 Transformational Leadership

In this course, students explore strategies needed to become effective instruments of change. Students will examine themselves as leaders, learn how to create meaningful relationships as a leader, and understand the role of leadership within complex systems. By using case studies from a variety of organizational contexts such as business, government, non-profit, community, and education, students explore concepts of organizational behavior and culture, consensus building, and project management to lead effective change towards environmental sustainability. This course is designed to empower and prepare students to become leaders in any profession.

Credits: 3

Prerequisites: None

### EVPC 490 Transdisciplinary Capstone

The Capstone course is the culminating course for students in Unity College bachelor's degrees. In this course, students will develop a project that deals with a real issue and

produce a final artifact reporting the project's findings. During this process, students will demonstrate and apply learning from their degree program and their ability to communicate to a broad audience. The course will also cover other important topics that support a student's career development and goals. All projects will be workforce-related products that students can use for their current or pitch to a future employer.

Credits: 3

Prerequisites: Minimum of 90 credits completed

## ENVIRONMENTAL SCIENCE COURSES

### ESCI 101 Geology and Our Environment

Desertification, acid rain, atmospheric carbon dioxide levels, radon poisoning – what do these have to do with geology? In this course students will explore how the geology of our environment influences ecological processes and environmental issues. Students focus on the influence of geological processes, exploring both the large-scale events of natural disaster such as earthquakes, volcanoes, floods, and landslides, and less obvious influences of geology on pollution, soil loss, groundwater availability, distribution and effect of mining and petroleum exploration, and other environmental issues. Issues will be explored through case studies with an emphasis on recognizing the role of geological process in solving or creating environmental issues.

Credits: 3

Prerequisites: None

### ESCI 201 Meteorology

This course will focus on the fundamentals of atmospheric circulation, and the physical and chemical attributes of the atmosphere. Understanding the physiochemical nature of the atmosphere, climate, and weather will provide the basis for building knowledge of energy balances, atmospheric circulation, weather predictability and climate change. The student of weather systems, air pollution and climate, using the scientific method and tools such as Doppler radar and satellites, will be implemented to separate scientific knowledge from anecdote or opinion.

Credits: 3

Prerequisites: None

### ESCI 301 Soil Analysis

This course involves detailed study of the biological, chemical, and geological components of soil, soil types, and soil health. Topics covered include principles and processes in soil chemistry, soil taxonomy, soil geography, and erosion. Additionally, students will explore the role of organic materials in soil health and type, general roles of soil properties on vegetative nutrient uptake, and the role of soil on nutrient and chemical cycles. Throughout the course of the term, students will pursue a project related to soil's influence on environmental health and sustainability.

Credits: 3

Prerequisites: None



### ESCI 303 Hydrology, Wetlands, and Water Policy

This course is a systematic study of the function of wetlands, including the underlying hydrology and policies controlling their use. Specific topics include water pathway models, reservoirs, groundwater storage and utilization, general wetland ecology, and wetland policy and regulation. Students will additionally explore human impacts on hydrology and wetlands, and work in groups to prepare a wetland restoration plan.

Credits: 3

Prerequisites: None

### ESCI 305 Environmental Remediation and Toxicology

This course is focused on the basic concepts of and science behind environmental toxicology, including processes related to remediation and contaminant mediation. Topics include the underlying biological processes such as bacterial metabolism, enzymatic activity, anaerobic and aerobic biodegradation, and an overview of remediation of inorganic contaminants. Students will additionally explore the fate and effects of chemicals in organisms in the environment, including air, water, and ground pollutants.

Credits: 3

Prerequisites: None

### ESCI 401 Environmental Science Field Techniques Laboratory

In this course, students learn and apply various field and laboratory techniques used in environmental science. Emphasis is placed on acquiring new skills and putting the skills to practice to improve abilities. Skills will be focused on those used in both field (e.g., wetland delineation, aquatic macroinvertebrate sampling) and lab (e.g., sediment analysis, water chemistry techniques, software applications for analysis) settings, and include reference to those used in various professional scenarios.

Credits: 1

Prerequisites or Corequisites: ESCI 305

### ESCI 405 Wildland Fire Operations & Planning

Whether fighting a wildfire or conducting a prescribed burn, managing personnel and equipment safely and effectively are key priorities for wildland fire professionals. This course reviews the strategies and tactics commonly employed in wildland fire operations conducted across a variety of ecosystems by state and federal agencies, nonprofit land management organizations, and private landowners. Students are introduced to the Incident Command System, risk assessment and mitigation, and principles and best practices for communication and coordination.

Credits: 3

Prerequisites: None

## ENVIRONMENTAL STUDIES COURSES

## ENVS 101 Sustainable Solutions to Globalization

This course is designed to enhance literacy skills needed to understand major environmental issues facing the world in the 21st century. This and other core courses at Unity are designed to address prominent issues during your education at Unity Online. These are issues that will affect your chosen career, your future lifestyle, and the lives of your family and future generations. What are the most pressing environmental issues of our time? What do we need to know to address them? The course tackles these questions from variety of disciplines to provide the bigger picture and put our environmental challenges in a global context.

Credits: 3

Prerequisites: None

## ENVS 201 The Warming Planet: Understanding Climate Change

Climate change is one of the most urgent and complicated issues we face today. This course explores the science of climate change by teaching students how the climate system works; what factors cause climate to change; how climate has changed in the past; how scientists use models, observation, technology, and theory to make predictions about future climate; and the possible consequences of climate change for our planet. Finally, students will explore the connection between human activity and the current warming trend and consider some of the potential social, economic, political, and environmental consequences of climate change.

Credits: 3

Prerequisites: None

## ENVS 205 Drone Technology and the Environment

Unmanned Aerial Systems (UAS), most commonly referred to as drones, have become an increasingly valuable tool for the Environmental Science field.

- How can the use of drones advance the ability to make informed decisions about our environment?
- What does it take to fly a drone safely and legally?
- What are the requirements to become a remote pilot?
- How will this exponentially growing industry fare in the future?

This course will investigate these questions and more. It will provide an opportunity to understand drone use in multiple Environmental Science disciplines and will position students well for studying for the FAA Remote Pilot Certification test should they be interested in taking it. Drone Technology and the Environment will also provide hands-on training in planning drone missions, developing policies and procedures, and flying recreational drones- with an emphasis on drone safety. This is a valuable skill set in a field that is growing exponentially both here in the United States and around the globe. This is an introductory drone course. No prerequisites or prior flight experience is needed. It is my intention to facilitate an inclusive, participatory learning community where each of us is a resource to the other. There will be a variety of activities and assessments to accommodate different learning styles, including reading and written assignments, quizzes, discussions and even a group project.

Credits: 3

Prerequisites: None

### ENVS 303 Social Science for Environmental Professionals

Every environmental professional needs to understand how to interpret and use research data because they use data to procure stakeholder buy-in and inform the public about important environmental issues. In this course, students will learn an overview of social science research methodology and how to apply those concepts and tools to current environmental issues. Upon completion, students will gain skills in research, data analysis, data implementation, and communication.

Credits: 3

Prerequisites: MATH 201

### ENVS 305 Advanced Drone Skills

Jumpstart your drone career with advanced marketable skills in an industry that is growing exponentially. Students will learn to use drones for monitoring, modeling, and mapping remotely sensed data, plus the requirements to fly drones in the National Airspace. After completion, students will be prepared to take the Remote Pilot exam.

Credits: 3

Prerequisites: ENVS 205 or completion of the free FAA Safety Course: Part 107 small Unmanned Aircraft Systems

## FINANCE COURSES

### FINC 301 Environmental Accounting

Environmental accounting is increasingly being used in business and government to support the development of sustainable global solutions and government policy. This course will cover what environmental accounting is and how it can help in decision-making. Through an understanding of this field, students will learn how different sectors of the economy affect the environment and how environmental policy affects the economy. Key policy questions related to accounting, and practical considerations needed to make environmental account an enduring reality for business and governments around the world will be addressed.

Credits: 3

Prerequisites: 100-level MATH course or higher

### FINC 401 Financing a Sustainable World

Since business plays an important role in developing environmental financial solutions for future generations, this course considers how the tools of finance can address environmental challenges and how market processes can be used to ensure long-term sustainability. Students will learn an overview of business financial management, with an emphasis on financial statement analysis, management of cash flow, risk and return, and sources of finance. Upon completion, students will be able to interpret and apply principles of financial management to develop sustainable business solutions.

Credits: 3

Prerequisites: 100-level MATH course or higher

## GEOSPATIAL TECHNOLOGY COURSES

### GISC 101 Introduction to Geographic Information Systems (GIS)

In this course, students will explore key concepts used in Geospatial Technologies. Topics include the use of scale, coordinate systems, geodesy, direction, projections, traditional land surveying techniques, and global positioning systems (GPS). Students explore the fundamental knowledge and techniques used in geospatial technology careers. This course also introduces students to remote sensing, geographic information systems (GIS), and cartography to start identifying and quantifying environmental patterns. Students will critically evaluate information and use quantitative reasoning skills such as patterns with urban heating in relationship to heat stress on a population. Students who finish this course are prepared to continue in GISC 201 Geographical Information Systems for a Changing World.

Credits: 3

Prerequisites: None

### GISC 201 Geographic Information Systems for a Changing World

This course covers the theory and practice of geographic information systems (GIS) through applications of environmental science and ecology. Students use a variety of global environmental spatial data types for spatial analysis and data visualization to quantify environmental changes using quantitative datasets. Students learn essential GIS procedures for data viewing, acquisition, manipulation, geographic referencing, and map creation coupled with real-world datasets and meaningful results.

Manipulation of common data types such as raster and vector datasets, database operations and applications are covered. Basic methods of GIS analysis are also included in the form of topological relations, buffer, query and map algebra analysis. The end product is the creation of data layouts, feature layers and dynamic and/or static maps allowing students to visualize spatial patterns of global changes.

Credits: 3

Prerequisites: GISC 101

Modality: Online or Hybrid

### GISC 301 Integrated Spatial Analysis and GIS Application

This course covers GIS for investigating geographic patterns, relationships and connections. Spatial analysis methods are used for both raster and vector data. This course emphasizes problem-solving and decision-making using GIS. Students will explore the use of advanced ArcGIS Extensions through environmental spatial analysis and modeling of complex terrains, hydrological watersheds, detecting patterns and gaining statistical insights on environmental issues. This course teaches students how to use models and scripts for automating GIS processes also introduced and applied to process large environmental datasets to unlock spatial patterns.

Credits: 3

Prerequisites: CIST 101, GISC 101, GISC 201

## GISC 303 Conservation Cartography and Visualization

This course covers fundamental concepts of cartography and visualization using geographic information systems (GIS) and illustration programs (Adobe Illustrator) as it is applied for conservation organizations and projects. Students employ design principles to create effective maps, incorporating data from a variety of formats used to communicate complicated environmental issues to a diverse map user audience. Hardcopy and web maps are produced to communicate conservation patterns and outcomes targeted for a diverse map audience. Infographic, animations, 3D maps, and other visualization techniques are explored to convey the importance of environmental conservation through the science and art of cartography

Credits: 3

Prerequisites: GISC 101, GISC 201

## GISC 305 Environmental Impact Using Remote Sensing

This course covers remote sensing fundamentals as they apply to mapping of Earth's surface and understanding how the earth works. These approaches include Earth observation in varying forms such as from sensors on satellites, aircraft, drones and ships. Understanding the electromagnetic spectrum of radiant energy and the radiation emitted from Earth's surface provide a foundation for understanding of the types of imagery available and their characteristics. Image enhancement, classification and quantitative techniques are explored with attention to integration with GIS datasets. Application of remote sensing for land cover change, vegetation classification, and environmental quality are explored. Students will observe environmental changes over spatial and temporal periods through the qualitative and quantitative processing of remote sensing at a local, regional, and global scale.

Credits: 3

Prerequisites: GISC 101, GISC 201

## GISC 307 Field Data Collection for GIS

In this course students learn best practices to design, configure and deploy ArcGIS software for field-productivity apps to meet their environmental data collection needs. Put your environmental data collection needs to the test and create a dynamic solution based on your non-profits, governmental agency or conservation data needs. This course covers the design and implementation of geographic databases for GIS data capture and management. Included are essential concepts and practices of relational database management systems, with specific application to GIS. Volunteered geographic information scenarios will be addressed and applied to final project.

Credits: 3

Prerequisites: GISC 101, GISC 201

## GISC 401 Advanced GIS Analysis for Environmental Solutions

This course covers data accuracy and quality, and standard and advanced geospatial data models such as changes in glaciers, bird migration, urban heat islands and disappearing coastlines. Students will be exposed to the workflow of

processing remote sensing image analysis using R. Students will also learn data integration and analysis, constraint analysis, location-allocation analysis, and metadata standards and documentation. Geospatial ethics and environmental industry applications of geospatial analysis will also be covered.

Credits: 3

Prerequisites: GISC 101, GISC 201, GISC 301

### GISC 405 GIS Applications in Fire Ecology & Management

This is an advanced-level course to cover the utilization of geographic information systems (GIS) for mapping and analyzing wildland fire and resultant ecological processes. The course offers a summary of the fundamentals of wildland fire science and fire management problems, with focus on the relationships of fire to climate variation, land use, and ecosystem processes. The course addresses in more depth the science and techniques used to map fire scars, fuel conditions, and post-fire ecosystem recovery through the use of remote sensing and image processing. Additionally, this course addresses how fire data can be used in a GIS in order to support adaptive land management and critical decision making in the context of wildland fire.

Credits: 3

Prerequisites: GISC 101, GISC 201

## HEMP INDUSTRY AND SCIENCE COURSES

### HEMP 201 Law, Society, and the Cannabis, Hemp, and CBD Industry

The 2014 and 2018 U.S. Farm Bills have progressively legalized hemp (*Cannabis sativa*) cultivation, generating tremendous interest in food, oil, and fiber products. In this course, students will gain a broad-based understanding of the industry from seed to sales and explore the legal and regulatory environment and challenges facing the cannabis, hemp, and cannabidiol (CBD) industry today and in the future. Discussions will focus on history, regional regulations, cultural implications, and research into the uses, products, and growth of the cannabis, hemp and CBD industry in the U.S. and abroad.

Credits: 3

Prerequisites: None

### HEMP 203 The Science of Hemp and CBD Processing

Do you know the difference between CBD oil and hemp seed oil? The difference between cannabis and hemp? How to extract CBD oil and store it? In this class, students will learn the scientific and technical requirements to develop hemp products, including plant growth requirements, oil extraction, and textiles. Topics include hemp seed germination, differences in genetic strains, oil types and different extraction processes, and technical requirements for processing and creating products, including space, cost, and storage requirements.

Credits: 3

Prerequisites: None

### HEMP 301 Hemp Products, Production Systems, and Distribution

Having been cultivated for over 10,000 years, cannabis is one of the oldest agricultural crops in history. These tall, hardy plants were grown by early humans for rope, seed, oil, and fabric. These plants were selectively bred for industrial purposes and have evolved into the type of cannabis we now know as hemp. Students will study the different products created from hemp, the technical requirements for oil extraction and processing, and distribution challenges and potential. Emphasis will be placed on understanding the costs, challenges, and benefits of each product and market niche, along with the development of socially sustainable hemp businesses. Students will create business plans that demonstrate an understanding of the science and technical needs for a variety of hemp-based products.

Credits: 3

Prerequisites: None

## HORTICULTURE COURSES

### HORT 301 Growing Hydroponic and Aquaponic Crops

Students will gain experience in the skills needed to successfully grow crops hydroponically. The course focuses on nutrient formulation, fertigation management, plant health monitoring, design, operation, and cultivation of crops in various types of hydroponic systems and environments. This includes aeroponics, aquaponics, mushroom farming, and vertical growing. Students will read and analyze different scenarios involving hydroponic systems and develop the ability to troubleshoot and solve grower problems.

Credits: 3

Prerequisites: BIOL 201

### HORT 401 Climate-Smart Agriculture

In this course, students will explore the impacts of global climate change on food systems. Providing an overview of current and future anthropogenic climate change impacts on food production, the course focuses on holistic perspectives of future climate scenarios and their impact on agriculture systems. Using case studies from around the world, students will discuss ways to mitigate and reduce negative impacts caused by climate change.

Credits: 3

Prerequisites: None

## HUMANITIES COURSES

### HUMN 101 Pop Culture and the Environment

What is the role of popular culture in society? Does it have the capacity to provoke social change? These are some of the questions students will consider in this class. Students will examine several pop culture artifacts from a global context to discuss how the works use a variety of strategies for understanding, making visible, and at times influencing environmental social change. Finally, students will consider how these artifacts relate to nation, history, gender, class, and sexuality. Through discussions and multimedia activities, students will grapple with interesting and challenging questions and debates around the role popular art plays in influencing the public's opinion(s) about climate change and other sustainability issues.

Credits: 2

Prerequisites: None

### HUMN 103 Environmental Documentary Films

Documentary films are a powerful way to inform the public about environmental issues. Because they represent real people, documentaries are a powerful rhetorical tool directors and producers use to provoke a deeper, empathic response. Although documentary films with themes of environmental activism date back to the silent film era, the 21<sup>st</sup> century has seen a spike in the number of quality films that engage the public in environmental issues. In this class, students will study the documentary film genre, analyze films, discuss the ethics of producing documentary films, and produce their own short documentary project.

Credits: 3

Prerequisites: None

## LANGUAGE COURSES

### SPAN 101 Introduction to Spanish

Introduction to Spanish will help the student acquire the fundamentals of pronunciation and grammar, practical vocabulary, useful phrases, and the ability to understand, read, write, and speak simple Spanish. Basic relevant information covered includes geographical and historical background of the language. The class will prepare the student for further language study. The student will learn Spanish in the same manner they learned their first language: 1. Listening to the language; 2. Reading the new language; 3. Writing; 4. Reading; 5. Interactive participation.

Credits: 3

Prerequisites: None

### SPAN 102 Introduction to Spanish II

Intermediate Spanish is a continuation of Introduction to Spanish by developing their proficiency in speaking, reading, writing, and listening. In Intermediate Spanish, all coursework will be taught entirely in Spanish because learning a language is more than vocabulary and grammar. Students will expand their ability to communicate in written and oral work, and expand their understanding of the rich, diverse Spanish-speaking cultures.



Credits: 3

Prerequisites: None

## MANAGEMENT COURSES

### MGMT 201 Understanding the Sustainable Business Landscape

This course introduces students to business with a focus on an organization's environmental and social impact. Students will learn about the basics in corporate social responsibility, supply-chain management, finance, and non-financial reporting and accounting. Students will obtain knowledge about how small businesses and corporations integrate corporate social responsibility models in order to identify new markets and opportunities, communicate with their stakeholders, compete in a global marketplace, and address social and environmental sustainability expectations and requirements.

Credits: 3

Prerequisites: None

### MGMT 301 Starting Your Small Non-Profit

The course covers the processes of starting a small business from ideation to implementation, with an emphasis on designing a sustainable business model, writing a business plan, learning forms of ownership, and exploring funding opportunities. Students learn how to meet high standards for social and environmental impacts for small businesses. Upon completion, students will be able to bring all the tools and lessons discussed to launch their own business.

Credits: 3

Prerequisites: None

### MGMT 303 Strategic Management for Social Change

This course introduces students to strategic management through case analyses and provides students with the tools to consider the basic direction and goals of an organization, the environment (social, political, technological, economic, and global factors), industry and market structure, and organizational strengths and weaknesses. The course emphasizes the development and successful implementation of strategy in different types of organizations across industries. With a focus on non-profit, students will put themselves in the shoes of top management and make important, "Big Picture," decisions. Students will learn skills to analyze complex business situations and present findings both orally and in writing. Finally, students will learn how to develop strategies to promote social change and the sustainability movement.

Credits: 3

Prerequisites: None

### MGMT 403 Global Supply Chain Operations: Greening Your Business

In this course, students will learn how to integrate global logistic, purchasing, operations and market channel strategies. The course covers the fundamentals and

logistics of network management, consisting of network suppliers, manufacturers, warehouses, distribution centers, wholesalers, and retailers. This course develops the student's understanding of the design, control, and operation of supply chains through the lens of sustainability management.

Credits: 3

Prerequisites: None

### MGMT 405 Using Data for Sustainable Business Decisions

This course introduces students of sustainability management to the data analysis techniques and statistical methods that are indispensable to sustainable business management. Students learn how to use statistical information in the context of evaluating environmental issues. Possible topics will include environmental monitoring, impact assessment, environmental valuation techniques and analyses of sustainable development.

Credits: 3

Prerequisites: MATH 201 Statistics for Environmental Professionals

## MARINE BIOLOGY AND SUSTAINABLE AQUACULTURE COURSES

### MBAQ 105 Introduction to Oceanography

This course provides an overview of oceanography – the chemical, biological, geological, and physical characteristics and patterns of oceans throughout the globe. Topics covered will include the physical characteristics and patterns of oceans throughout the globe. Topics covered will include the physical and chemical properties of seawater, evolution of ocean basins, ocean-atmosphere interactions and cycles, multi-dimensional ocean circulation, and large-scale fluctuations such as tides and waves. Additional work will include an investigation into patterns of sedimentation, plankton and primary productivity, and biogeochemical cycles. Specific emphasis will be placed on how ocean behavior and patterns is impacted by and impacts human development and coastal communities around the world.

Credits: 3

Prerequisites: None

### MBAQ 201 Form and Function of Unique Marine Ecosystems

This course is an examination into the structure and dynamics of various saltwater ecosystems and builds from basic ecological principles sustaining marine life. Issues covered include an exploration of habitats ranging from estuaries to the rocky intertidal zone and coral reefs to the open ocean. Major ecological communities will be studied, with a particular focus on those supported by kelp and plankton and include an exploration into unique marine environments such as the deep sea. Additional topics include trophic interactions, energy flow, and community and population organization in select marine habitats. Students will explore the ecological

processes controlling the distribution and abundance of marine organisms and community structure and examine the impact of humans on the marine environment.

Credits: 3

Prerequisites: BIOL 203

### MBAQ 202 Sea Turtle Rehabilitation

This course will introduce students to sea turtle biology, health and rehabilitation, with a special focus on the sea turtle's role in a 'One Ocean' model. The history of sea turtle rehabilitation, current and future directions will be discussed. Rehabilitative husbandry will be covered, including water quality and chemistry, and nutritional needs. Basic anatomy and physiology will be presented in an organ system format, with an introduction to veterinary techniques in these species as well as common pathologies and current treatments. Finally, specific topics will be covered, to include viruses, parasites, algae blooms, environmental contaminants, field techniques, oil spills, health assessments and fishery interactions, and the role of the rehabilitation in these environments.

Credits: 2

Prerequisites: BIOL 103 or BIOL 105

### MBAQ 203 Global Diversity of Freshwater and Marine Resources Used in Sustainable Harvest

This course will provide an overview of the sustainably harvestable resources found in both aquatic and marine ecosystems. With an underpinning on the contemporary approaches toward habitat and population management, students will learn about capture and growth fisheries and aquaculture, emphasizing the contribution of these to the global food supply. Topics covered will include production methods, environmental and ecological impacts, best practice in growth, capture, and processing, and an overview of marketing of fisheries resources. Additional work will explore the impact of human populations on resource availability and health, as well as the major issues connecting resource extraction and acquisition to environmental degradation. All work will build from basic ecological concepts covered in other coursework and be placed in the context of effective long-term management practices.

Credits: 3

Prerequisites: BIOL 203

### MBAQ 301 Sustainable Aquaculture Techniques 1: Growing Shellfish and Finfish

This course covers the theory and practice of aquaculture techniques used in growing shellfish and finfish in both freshwater and marine habitats. Topics covered will include species identification, habitat creation, reproduction, hatchery and nursery operation, and growth promotion. Additionally, students will learn how to manage the health of aquaculture organisms, harvesting principles and techniques, processing procedures, and identifying appropriate markets for sale. Discussions will be based on the biological, chemical, and economic aspects of aquaculture with a strong emphasis

on sustainability, underscoring techniques which minimize environmental impact while maximizing human and animal welfare. Students will assess best-practices in the industry which meet sustainability goals.

Credits: 3

Prerequisites: MBAQ 203

### MBAQ 303 Sustainable Aquaculture Techniques 2: Crustaceans and Pathobiology

This course covers the theory and practice of aquaculture techniques used in growing crustaceans and algae in both freshwater and marine habitats, as well as the mechanisms and causes of disease in aquaculture organisms. Topics covered will include species identification, habitat creation, reproduction, hatchery and nursery operation, and growth promotion in shrimp, prawns, crayfish, crabs, lobsters, brine shrimp, kelp, and other assorted seaweeds. Additionally, students will learn how to manage the health of these organisms, harvesting principles and techniques, processing procedures, and identifying appropriate markets for sale. Discussions will be focused on the pathobiology of organisms, with topics including cell death, inflammation, infection, metabolic disorders, and neoplasia across all species targeted in the aquaculture industry, as well as practices and techniques to control disease while maintaining a focus on global sustainability.

Credits: 3

Prerequisites: MBAQ 203

### MBAQ 307 Ichthyology and Fish Health

This course is an overview of freshwater and marine fishes, their diversity, behavior, and health. Students will learn about the evolution, morphology, physiology, and life history of the global diversity of fishes, with an emphasis on integrating knowledge of fish anatomy and physiology in relation to their survival and wellbeing. Major diseases of captive-raised and farmed fish, including pathogenic control measures will be presented.

Credits: 3

Prerequisites: BIOL 105

### MBAQ 310 Marine Mammal and Seabird Biology

This course will provide students with an in-depth exploration into the identification, evolution, anatomy & physiology, population biology, behavior, and ecology of marine mammals and seabirds. We will explore the breadth and evolutionary history of all marine mammals and seabirds, with a particular emphasis on what makes each family and species unique. Students will become acquainted with the primary literature in this field and refine critical thinking and public speaking through in-depth projects. Multiple research projects will be pursued throughout the course across a wide range of topics related to the biology and ecology of these species, with a particular focus on conservation and ecology. In the pursuit of these projects, students will learn of the many sampling techniques used from land and sea platforms and discuss how their data impacts the health and survival of these important organisms.

Credits: 3

Prerequisites: BIOL 105

### MBAQ 315 Diversity of Marine and Aquatic Vegetation

This course will provide students with an in-depth exploration into the marine and aquatic photosynthetic organisms, including their identification, classification, and phylogenetic relationships. Topics will explore the ecology, diversity, and biography of algae and plants found in a variety of habitats throughout the globe. Specific work will focus on the propagation, reproduction, and survival of micro- and macroscopic plants, as well as the interaction between humans and vegetative communities. Students will become familiar with the basic sampling techniques used to sample aquatic and marine vegetation. Research projects will be pursued throughout the course across a wide range of topics related to the biology and ecology of these species with a particular focus on their conservation and ecology.

Credits: 3

Prerequisites: BIOL 103 and BIOL 105

### MBAQ 401 Field Research in Marine Biology and Aquaculture

This course is focused on providing a broad spectrum of field-based research skills across marine biology and aquaculture. The theme, topic, and suite of skills will vary depending on when it is offered but will rotate when offered across biogeographic areas such as tropical, temperate, and cold-water areas, as well as across differing salinity habitats ranging from marine to freshwater, as well as brackish water and saltmarsh habitats, lakes, rivers, bays, and oceans. Students will conduct original research projects examining how organisms interact with their environment, with a particular focus on gaining proficiency in multiple research and assessment methods of aquatic and marine organisms. Students will use the skills developed in this course to plan and design their capstone research projects.

Credits: 3

Prerequisites: At least two 300-level MBAQ courses

## MARKETING COURSES

### MKTG 301 Environmental Marketing and Branding

As businesses become more aware of the need to be sustainable, being green will be the future, and professionals need to help companies with marketing sustainable business practices. This course covers an overview of concepts and techniques related to marketing opportunities, strategies, communication, and effective marketing campaigns within the context of sustainability. Through case studies, students will analyze marketing strategies, plans, and decisions. Students will also explore why environmental marketing is a key aspect in business today.

Credits: 3

Prerequisites: None

## MATH COURSES

### MATH 101 College Algebra for Environmental Professionals

This class answers the age-old question, “will I ever use Algebra at my job?” Practical applications are emphasized throughout the course integrating it with other disciplines in environmental studies. Building on students’ knowledge of algebra concepts and the skills to solve more complex mathematical operations and problem solving, students will learn to apply this knowledge to real-world problems. Students will acquire a range of basic math skills and understand how to apply them in their careers.

Credits: 3

Prerequisites: None

### MATH 105 Precalculus

This course introduces the foundations of analysis designed to precede calculus with emphasis on functions and graphs. Topics include properties of absolute value, polynomial, rational, exponential, logarithmic and trigonometric functions, techniques for solving equations and inequalities, and an introduction to the concept of limits and the difference quotient.

Credits: 3

Prerequisites: MATH 101

### MATH 201 Statistics for Environmental Professionals

How do we come to know something about our world? Environmental science uses statistics as a tool to aid in this quest. Statistics covers how we collect data, how we characterize it, how we make inferences about the world using it, and what assumptions we make in the process. In this course students will gain an understanding of the basic principles of sampling design, probability and statistical distributions, data characterization, and common approaches to statistical modeling with an emphasis on regression and correlation and ways to evaluate differences among populations we have sampled. Students will explore literature to understand how these techniques are currently used in environmentally-based professions.

Credits: 3

Prerequisites: None

### MATH 215 Calculus

This course is focused on functions and calculus computations. Students will use limits, derivatives, and integrals to analyze and describe the behavior of functions. Students will use these tools to solve application problems in a variety of settings, including the biological and social sciences. Topics include areas such as approximations, the fundamental theorem of calculus, extremum problems, curve-sketching, and the utility of derivatives in mathematical problems.

Credits: 3

Prerequisites: MATH 105

## MATH 401 Statistics for Wildlife Professionals

Data collected by wildlife biologists often requires forms of analysis not covered in entry-level statistics courses. This advanced statistics course introduces students to techniques currently used by ecologists and covers the components of experimental design that create effective research and monitoring programs. Students will learn the underlying components important for the design and implementation of statistical models used in their research. Examples will emphasize regression-based approaches to data analysis and explore the impacts of assessment and monitoring on data to inform experimental design. Students will learn to conduct and interpret results from regression analysis, as well as use information-theoretic approaches for model selection.

Credits: 3

Prerequisites: MATH 201

## PHYSICS COURSES

### PHYS 201 Physics 1

This course is designed to enhance your understanding of fundamental physical principles and phenomena through the study of mechanical motion and thermodynamics. Topics in this course include the three laws of thermodynamics, work and energy, heat transfer, kinematics, Newton's three laws of motion, momentum, and periodic and circular motion. Students will explore these topics and solve a wide array of physical problems using a background in basic algebra.

Credits: 3

Prerequisites: None

### PHYS 202 Physics 1 Laboratory

This course includes the laboratory experience focused on mechanics and thermal physics meant to accompany PHYS 201.

Credits: 1

Prerequisites: PHYS 201 or concurrent enrollment

### PHYS 203 Physics 2

This course is designed to enhance your understanding of fundamental physical principles and phenomena through a study of topics from fluid dynamics, electromagnetism, and nuclear physics. Concepts in this course include density, pressure, electricity, and magnetic fields. Additional investigations in light, optics, and radiation will also be included. You will explore these topics and solve a wide array of physical problems using a background in basic algebra.

Credits: 3

Prerequisites: None

### PHYS 204 Physics 2 Laboratory

This course includes the laboratory experiences focused on fluid dynamics, electricity, magnetism, light, and radiation meant to accompany PHYS 203.

Credits: 1

Prerequisites: PHYS 203 or concurrent enrollment

## PSYCHOLOGY COURSES

### PSYC 101 Introduction to Psychology

The purpose of this course is to provide a broad overview of the history of the field of psychology as well as its current focal points. Research methods and scientific reasoning underlie the exploration and critical evaluation of the five main subfields of modern psychology: biological, developmental, cognitive, social, and mental health. The course will enable learners to evaluate the methods, practices, and findings of psychological studies, thus becoming critical consumers of this body of knowledge. By integrating information derived from work across the subfields of psychology in the course project, learners will build a more complete understanding of a specific issue related to human behavior.

Credits: 3

Prerequisites: None

### PSYC 301 Environmental Psychology

This course explores critical issues in environmental psychology. Starting with foundational theories on place attachment and place identity, students will learn about the interrelationships between ourselves and the environment. Students will develop the ability to analyze environment-and-behavior issues, think more critically about the world around you, and understand the ways that we wield influence on the environment. Some topics the course will address include the history of environmental psychology, theories of environment and human behavior, environmental stress, natural environments, built environments, and changes in behavior as a result of global environmental shifts and sustainability.

Credits: 3

Prerequisites: None

## RENEWABLE ENERGY COURSES

### RNRG 101 Introduction to Green Energy: Politics and Implementation

This course explores the fundamentals of renewable energy resources including wind, solar, hydroelectric, geothermal, ocean dynamics, hydrogen fuel cell and biofuels. Students will compare and contrast these energy resources. Emphasis will be placed on evaluating the political, social and economic consequences of implementing green



technologies in an industry currently based primarily on non-renewable energy resources.

Credits: 3

Prerequisites: None

### RNRG 201 Renewable Energy: Science, Technology and Management

This course examines the science, technology and management of renewable energy resources. By assessing the growth potential of renewable energy markets and understanding the challenges of transitioning to green technologies, students will learn and apply the best practices of managing and leading change in the green energy market.

Credits: 3

Prerequisites: None

### RNRG 301 Successful Management of Wind and Solar Renewable Energy Projects

This course provides an in-depth look into the technological, political, and permitting challenges associated with bringing solar and wind electricity generation online. Students will model successful business practices at the project level as they plan consider how to manage policy considerations and the political controversies that must be overcome to integrate solar and wind technologies into local energy markets.

Credits: 3

## SOCIOLOGY COURSES

### SOCI 101 Introduction to Environmental Sociology

In this course, students will learn about basic concepts in sociology and apply them to the study of the relationship between human societies and the larger, natural environment. This course introduces students to the discipline of sociology by providing perspectives on complex social processes that impact our natural environment. Through reviewing and discussing issues such as culture, economics, racial and gender relations, urbanization, and social movements, this course will provide students with a broader understanding of nature and environmental sustainability.

Some questions this course will consider are the following: Why have some societies treated the environment differently than others? Is the reason economic? Is it scientific of technological? Is it religious? How does the distribution of power affect the reasons? This class will cover a wide range of topics in order to give students an opportunity to reflect on how sociology contributes to important debates taking place about society and the environment.

Credits: 3

Prerequisites: None

## SUSTAINABILITY COURSES

### SUST 301 Sustainable Horticulture Practices in Indigenous Communities

Many of the core practices of contemporary regenerative agriculture originated within indigenous communities that grew and gathered plants for sustenance. In this course, students will investigate the relationship between indigenous cultures, Native plants, and sustainable agriculture practices such as intercropping and polycultures. They will also explore how shifting political and economic landscapes have impacted agricultural practices, food culture and security, and health of Native peoples.

Credits: 3

Prerequisites: None

## SUSTAINABLE FOOD AND FARMING COURSES

### SUFA 200 Farm to Table: Exploring Food Production Systems

This course will explore organic food production systems using the three pillars of sustainability—economic, environmental, and social justice. Topics will focus on USDA Organic market garden production but will compare and contrast it to other production systems. Discussions will cover the scientific and cultural underpinnings of sustainable and organic food production to develop the critical thinking and observation skills necessary to grow food using ecologically informed methods. Students will explore the farm and business management skills necessary to operate a small-scale vegetable farm. We will delve into farm management practices that build healthy soil through cover cropping, crop rotations, crop / livestock integration, and no-till practices. Additionally, we will examine the hand-tools necessary to establish and manage a market garden operation. Farm business skills will focus on designing and creating a farm management plan as well as the record keeping systems necessary to track a crop from seed to plate.

Credits: 3

Prerequisites: None

### SUFA 201 Sustainable Farm Management

Students in this course will study environmentally and socially sustainable enterprises to learn about management strategies for running a farming or food-based operation. Discussion will include farm management strategies, such as lean management strategies for farm operations and food establishments. We will also discuss business opportunities within all aspects of the greater food system. How does organic certification, Food Safety Modernization Act (FSMA) and other government regulatory requirements affect a business model? What infrastructure is needed? What is the role of County Extension, conservation districts, and USDA Natural Resources Conservation Services (NRCS)? Students will study the parts of a business plan, competitive business

model, and a solid strategic plan. They will consider marketing, accounting, human resources, and strategic planning. Students will learn how to estimate taxes, do break-even analysis, calculate payroll costs and prepare pro forma financial statements.

Credits: 3

Prerequisites: None

### SUFA 301 SUSTAINABLE AGRICULTURE FOR SMALL FARMS

This course will address the practical skills and planning necessary for small-scale sustainable farm production. Viewing the farm as an ecosystem, learners will explore the relationships between soil and plant health. They will evaluate strategies for monitoring and maintaining soil health, capturing and using water efficiently, managing pests, and using season extension structures. Learners will practice measuring and observing conditions, recognizing patterns, and employing responsive interventions. The course culminates in the development of a farm management plan that incorporates sustainable practices to deliver the best outcomes.

Credits: 3

Prerequisites: None

## VIRTUAL REALITY COURSES

### EXRL 101 Introduction to Virtual Reality

This course will explore how Virtual Reality, Augmented Reality and Mixed Reality, collectively called Extended Reality, bring new perspectives to a broad range of fields including environmental science, sustainability, healthcare, design, engineering, architecture, tourism, law enforcement, marketing, and education. Students will engage with a variety of XR modalities, from mobile apps and computer-based simulations to fully immersive virtual reality experiences. Each student will be equipped with a VR head mounted display to discover firsthand the potential impact of this technology. Students will design an original concept for an XR application. The culmination of this course will be an XR product brief that students can use as a basis for future development, and as a strong portfolio piece for potential employers.

Credits: 2

Prerequisites: None

## WILDLIFE CONSERVATION COURSES

### WCON 201 Plant and Wildlife Interactions

This course centers around the important role plant communities play in providing resources and habitat for wildlife species. Students will learn about important species interactions within major ecoregions and biomes such as forest, rangeland, grassland, agricultural, and desert environments. Students will also learn how species relationships and biodiversity influence ecosystem health and function. Students will explore species

of management concern and learn how ecological interactions are an important facet of species conservation.

Credits: 3

Prerequisites: Any biology course

### WCON 301 Human Dimensions of Wildlife Conservation

Wildlife managers influence wildlife species using three 'levers': habitat, populations, or humans. This course addresses the human dimension of wildlife management. During the course students explore social, political, and economic concepts that are involved in effective wildlife management. Students will learn common forms of wildlife governance, the role of stakeholders, concepts from sociology, ethics, economics, management and decision-making as they relate to wildlife management.

Credits: 3

Prerequisites: Any biology course

### WCON 303 Life History and Identification of Birds & Mammals

During this course, students will learn to identify avian and mammalian species with a focus on species at which management is often directed. These species include game bird and mammals, common agricultural or urban 'pest' species, and threatened or endangered species. Students will also learn basic life history of these species with a focus on characteristics useful for management. Students will be expected to conduct field activities directed at learning the species prominent in their region.

Credits: 3

Prerequisites: Any biology course

### WCON 305 Wildlife Conservation Genetics

Genetics form a key component of modern wildlife management, providing tools aiding our understanding of taxonomy, conservation of small populations, and hybridization, as well as enabling non-invasive population monitoring and enhancing wildlife forensics. During this course, students will encounter the basic concepts of genetics, with an emphasis on population genetics and genetic techniques useful in wildlife management. Prominent topics covered include genetic variation, the role of gene flow and genetic drift on population viability, and key genetic markers used by wildlife biologists. Students will explore case studies illustrating the applicability of concepts in genetics to wildlife management.

Credits: 3

Prerequisites: Any biology course

### WCON 307 Humans, Parasites, and Wildlife: Understanding the Impact of Insects on Wildlife

Insects, as the largest class of animals, have an extraordinarily large influence on ecosystem function. For humans they as vectors for important zoonotic diseases and pollinators of key food crops. For wildlife species they pollinate and feed on key plant species, vector prominent diseases, create large scale habitat change through plant disease outbreaks, and provide the primary source of animal matter for predators. During this class students will learn basic taxonomy and life history of insects,

as well as explore case studies involving the role of insects in plant and animal disease, pollination, biological control, and other influences on ecosystem functioning.

Credits: 3

Prerequisites: Any biology course

### WCON 403 Habitat Management for Wildlife

Wildlife managers influence wildlife species using three 'levers': habitat, populations, or humans. This course addresses the habitat dimension of wildlife management. Students will engage in discussions and activities to create understanding of the basic concept of habitat and its components, how various species identify, select, and interact with their habitat, and how this process influences how managers manipulate the environment to influence wildlife populations. Students will also gain familiarity with common habitat management tools and funding programs.

Credits: 3

Prerequisites: BIOL 203 or BIOL 305

### WCON 405 Wildlife Population Management

Wildlife managers influence wildlife species using three 'levers': habitat, populations, or humans. This course addresses the population dimension of wildlife management. Students will explore how wildlife biologists measure and monitor demographic parameters of populations, including field techniques and analysis methods, with a focus on understanding strengths, weaknesses, and appropriate use of each technique. Students will consider ecological concepts and management techniques used to manipulate wildlife populations including sustainable harvest, management of threatened and endangered species, and control of overabundant species.

Credits: 3

Prerequisites: BIOL 203 or BIOL 305

## Graduate Course Descriptions

### ANIMAL SCIENCE AND BEHAVIOR COURSES

#### ANIM 505 Animal Behavior and Modification

This course will focus on the science of animal behavior and learning. Students will learn how to define behavior through use of a behavioral ethogram and how to measure behavior through analysis of animal behavior videos. This course will also cover the three levels of environmental selection that impact behavior with a focus on how individual behavior can be shaped by interactions with the environment. Students will explore basic principles of animal learning including associative and non-associative learning and classical, operant conditioning, habituation, dishabituation, and sensitization. Finally students will learn about the three-term contingency and how to modify behavior through use of environmental contingencies.

Credits: 3

#### ANIM 510 Canine and Feline Nutrition

This course is focused on the concepts of and science behind animal health specific to canine and feline nutrition, including digestion, absorption, dietary requirements, and consumption needs. Discussions will focus on the effects of nutrition on the health and wellness of canines and felines. Emphasis will be placed in the dietary management of various disorders and diseases in these animal groups. Students will also explore how proper nutrition and feeding schedules can be implemented to promote companion animal welfare.

Credits: 3

#### ANIM 520 Equine Nutrition

This course will explore equine nutritional needs and the essential elements of maintaining a healthy horse. With an emphasis on feeds, diet, and its relationship to health and performance, students will learn how proper nutrition and feeding schedules can be implemented to promote proper equine welfare. This course will also investigate environmental factors that influence horse health and connect the dietary management of various disorders and diseases to equine health and performance.

Credits: 3

#### ANIM 605 Advanced Animal Training

This course will explore the science and theory of animal learning and how to apply learning principles to train animals. Students will review various practices and techniques that form the art of animal training. Students will learn about the principles of reinforcement and punishment, schedules of reinforcement, and how to utilize positive reinforcement to build stronger communication between the trainer and the animal. Students will also learn fear free training techniques, how to pick a reward, and training tools such as shaping, capturing, and luring to encourage animals to exhibit a desired behavior. The knowledge and skills learned in this course may be utilized to assist with medical evaluations, treatments, or procedures, and to help

meet a variety of management and animal welfare goals.

Credits: 3

### ANIM 610 Animal Shelter Best Practices and Management

Animal shelters strive to balance animal welfare science with practical and realistic expectations that can be achieved to provide a high standard of care for their animals and meet the needs of the public. This course provides recommendations on best practices for animal health and care at animal shelters with an emphasis on facility design, record keeping, population management, sanitation, monitoring health and behavior, handling, euthanasia, spaying and neutering, animal transport, and care procedures that maximize animal welfare. This course is intended to provide students with an understanding of the role of a manager in an animal shelter and practice the interpersonal and management skills required to fill the role of an Animal Shelter Manager.

Credits: 3

### ANIM 620 Best Management Practices for Ranches and Stables

This course will review the best management practices and safety procedures recommended for ranch and stable managers. The emphasis of this course will include barn hygiene, air quality, safety audits, implementing practices to reduce grazing pressure and pasture quality, manage nutrient gains on pastures, manage water flow, and deliberate fencing to reduce impact on nearby streams and waterways. Students will learn the importance of properly managing the natural environment to optimize the health and welfare of horses, including concepts related to natural ecosystems, ecosystem services, and beneficial management practices.

Credits: 3

### ANIM 630 Emotional Support and Service Animals: Rules and Regulations

This course will focus on rules, regulations, laws and training encompassed and/or required by service, emotional support and therapy animals. Students will explore principles of human-animal interactions and potential human health benefits of animals in society. This course will provide students with the ability to provide guidance to public and private stakeholders that seek support in understanding and enforcing the rules and regulations for these animal groups to minimize risk or harm to animals and/or humans. In doing so, students will explore current controversies and analyze current case studies regarding the use of animals in service, emotional support and therapy animal roles.

Credits: 3

## CONSERVATION LAW ENFORCEMENT COURSES

### CONL 505 Conservation Law Enforcement Management

This course examines the structure of a conservation enforcement agency to achieve maximum effectiveness toward the mission of an organization. Beginning with a

statutory foundation at the federal or state level, this course will look at a variety of factors such as size of workforce, budget, contracts, work rules; and public policy, to shape a cost-efficient organization. This course will also look at structure of supervision, span of control, career advancement, use of special teams and support operations. Students will examine operational policies and procedures and learn the value of providing consistent direction to throughout the chain of command.

Credits: 3

### CONL 510 Operational Human Resources Management

Civil service laws and rules control the work practices of public service enforcement agencies. This course will take a hands-on look at how such laws and rules direct the day to day operations of a conservation enforcement agency. Topics such as job specifications, position reclassification, performance management, personnel investigations; grievances, and arbitration will be examined. Students will review labor contracts and understand the principles of collective bargaining for conservation enforcement agencies.

Credits: 3

### CONL 515 Advanced Wildlife Enforcement

Enforcers of wildlife laws around the globe face a multitude of challenges. Technology has created an interface of humans and wildlife that has changed the face of conservation enforcement. From a local to global perspective this course analyzes how technology and other enforcement practices can be used to combat the illegal taking of wildlife. Topics such as human dimensions, overt vs. covert operations, surveillance practices will be examined.

Credits: 3

### CONL 520 Judicial Procedure and Evidence Management

This course will examine the judicial system focusing on the appellate court process at the state and federal level. Students will analyze court decisions and how they control enforcement practices within their jurisdiction. The course will examine evidence management issues including but not limited to electronic evidence, requirements for expert witnesses, and the use of DNA evidence.

Credits: 3

### CONL 525 Conservation Law Enforcement and Public Policy

This course examines natural resource policy globally, and at the federal and state level demonstrating regional and societal differences. Enforcement administrators learn to understand the impacts of natural resource-based policy and how it directs the focus of agency. From a global perspective various treaties and conventions will be discussed. At the state and federal level topics such as the Endangered Species Act, Lacey Act will be reviewed.

Credits: 3

### CONL 610 Diversity in Conservation Law Enforcement

This course will explore the demographics of the United States and look at diversity from a broad perspective, including but not limited to ethnicity, gender, and



economics. Students will understand how diversity affects agency enforcement policies and procedures. The course will also identify management level considerations for creating a diverse natural resource enforcement agency, considering federal and state laws, and policies.

Credits: 3

## ENVIRONMENTAL SCIENCE COURSES

### ESCI 605 Water and Soil Resource Management

This course will cover a range of topics relating to soil and water management, such as basic soil and water interactions, salinity and sodicity issues, soil erosion, chemical transport, and water use efficiency. Processes that degrade soil and water resources (e.g. erosion, salinity, alkalinity and sodicity, as well as acidification, water repellence, and degradation of soil structure) are examined, and their measurement, avoidance, and management discussed. Broader issues in soil and water conservation are also covered.

Credits: 3

### ESCI 610 Environmental Analysis: Atmosphere, Soil, and Water

This environmental science course covers a broad range of analytical techniques related to soil, air, and water systems. Sample preparation procedures and sampling methods are covered, as are key soil chemical processes, air quality sampling, water sampling, and how they are quantified. The application of techniques is discussed using case studies and environmental problem-solving. The influence of air, water, and soil pollution on environments locally and globally will also be discussed.

Credits: 3

## GEOGRAPHIC INFORMATION SCIENCE COURSES

### GISC 505 GIS and Remote Sensing for Environmental Solutions

This course is intended to introduce students to GIS and remote sensing software and tools used to solve real-world environmental problems. Students will learn concepts and data sources and formats used in environmental research they may encounter in careers in environmental science. This course introduces the fundamentals of cartography, photogrammetry, geographic information science, and remote sensing through maps and spatial analysis used to answer various environmental and ecological issues. This course will also introduce students to use map and data outputs in the decision-making process that can impact environmental assessments and determinations.

Credits: 3

### GISC 510 Advanced GIS and Remote Sensing for Ecological Applications

This course is intended to build upon introductory course knowledge. This course will

teach students to understand and apply more advanced methodologies using GIS and remote sensing technologies. They will apply knowledge gained in this course to environmental concepts they may be exposed to in their careers. Types of data used will include vector and raster spatial data, imagery, maps, and topographic data to examine environmental problems. Data assessed will include spatial information regarding human and natural hazards and disasters, land use and land cover, surface temperature, climate change, wetland delineation, wildlife corridor mapping, coastal erosion, human impacts on the environment, and more. Students can use this data to gain insights and make problem solving decisions regarding real-world environmental issues they may encounter during their careers.

Credits: 3

Prerequisites: GISC 505 GIS and Remote Sensing for Environmental Solutions

### GISC 515 Environmental Research Methods

This course will expand upon GIS and remote sensing concepts, techniques, and tools used in environmental research. Students will gather, process, and analyze data from a variety of sources. Data sources will include GIS and remotely sensed data from online repositories like USGS Earth Explorer, Google Earth, state GIS repositories, the National Atlas Viewer, the NPS IRMA Data Portal, the NRCS Soil Data Viewer, and the USDA Geospatial Data Gateway. Types of data examined will include vector and raster spatial data, imagery, maps, and topographic data. Students will also learn to gather, process, and analyze basic geographic data using tools they have access to including GPS devices including watches, smartphones, cameras, and trackers.

Credits: 3

Prerequisites: GISC 505 GIS and Remote Sensing for Environmental Solutions

### GISC 520 Creating Maps and Graphics of Ecosystem Change

This course is intended to introduce students to theory and practice of cartography and visualization. This course will teach students to learn, to think, and to communicate visually using a variety of environmental GIS data. Activities and a final project will teach students to visually display and examine environmental problems. Students will learn symbology, coordinate systems, map projections, topographic representations, interpolation, classification schemes, and more to effectively visually communicate real-world environmental problems and solutions to scientific and general public audiences.

Credits: 3

Prerequisites: GISC 505 GIS and Remote Sensing for Environmental Solutions

### GISC 525 Project Development for Environmental Problem Solving

This course will apply all the knowledge and skills students have learned in the Professional Skills and Environmental GIScience core courses. Students will work with faculty or a government or private institution to solve a real-world environmental problem. Faculty will work with each student to identify an area of interest or need and begin to put together a portfolio of professional work for student's intended or current careers. Note: Must be scheduled by an advisor in accordance with academic plan.

Credits: 3

Prerequisites: GISC 505

### GISC 605 Modeling Our Changing World

This course is intended to continue to build on the concepts and techniques learned in previous GIS and remote sensing courses. Students will learn to model and analyze real-world environmental science problems (e.g. past and future impacts of climate change on the Earth). A model is a simulation of the real-world. Students will model raster and vector data using algorithms and basic programming language. Students will use various proprietary and/or open source software to model and analyze environmental data including ArcGIS, and standalone Free and Open Source Software (FOSS) tools.

Credits: 3

Prerequisites: GISC 505

### GISC 690 Environmental GIScience Capstone

The Capstone course project will be the culmination of the knowledge and skills learned throughout the Environmental GIScience program. Students will complete processing, analysis, and interpretation GIS and remotely sensed data to solve the real-world environmental problem of interest identified in the Project Development course. Students will present their final projects in oral, visual, or written form to a public audience. This can include conferences, industry professionals, community town hall meetings, and more. Examples of final projects formats can include factsheets, peer-reviewed articles, project reports, interactive graphics or animations, poster presentations, YouTube videos, PowerPoint presentations, websites, and more. Note: Must be scheduled by an advisor in accordance with academic plan.

Credits: 3

Prerequisites: GISC 505

## MARINE SCIENCE COURSES

### MARI 505 Dynamics of Marine Ecosystems

This course will provide students with an understanding of fundamental biological, chemical, geological, and physical interactions in marine ecosystems. Students will learn the importance of considering temporal and spatial scale when studying oceanic processes and habitats. Topics include vertical structure of coastal and pelagic environments, ocean circulation, global oscillation patterns, distribution and dispersal of phyto- and zooplankton, and the global climate system and climate change. Students will review scientific literature and apply principles of marine ecosystem dynamics to design a research project to examine the connections between ecosystem dynamics and marine conservation.

Credits: 3

## MARI 510 Conservation of Marine Predators

This course provides students with a deep understanding of ecology, diversity, natural history and behavior of marine predators, and the implications of the global decline of these species. Students will review the historical and contemporary threats to these species and explore sustainable solutions for the conservation of these important marine species. With an emphasis on synthesizing scientific literature, data analysis and interpretation, students will develop a conservation strategy to ensure the future sustainability of marine predators.

Credits: 3

## MARI 515 Coral Ecology and Conservation

This course will explore the biology of corals including the parameters necessary for healthy growth, reproduction and reef formation. Students will learn to distinguish between different types of corals based on physical characteristics and distribution. Current threats to corals and reef health such as coral bleaching, black band disease and ocean acidification will be examined along with management and restoration strategies.

Credits: 3

## MARI 520 Identification and Life History of Marine Mammals

This course will provide students with an in-depth exploration into the identification, evolution, anatomy & physiology, population biology, behavior, and ecology of marine mammals. We will explore the breadth and evolutionary history of all marine mammals, with a particular emphasis on what makes each family and species unique. Students will examine the sampling techniques employed to survey these organisms and discuss how this data impacts the health and survival of these important organisms. Lastly this course will identify local, national and global threats facing marine mammals and describe multiple solutions to counteract and address these threats.

Credits: 3

## MARI 605 Sustainable Management of Marine Resources

This course will provide an overview to the structure and functioning of marine ecosystems, and acquaint students with the basic biology and field techniques required to successfully and sustainably manage marine populations. This course will expose students to a number of challenges facing marine ecosystems, and will provide an opportunity to discuss activities, approaches and strategies that can be used to solve these challenges. While many examples and scenarios discussed will be based on regional issues, the course will emphasize a global perspective to marine conservation issues and how regional differences in problems and solutions exist. Emphasis will be

placed on the importance of using sound science to generate successful management strategies.

Credits: 3

### MARI 610 Impacts of Predators on Marine Ecosystems

Current global declines in marine predators could have the unintended consequence of degrading marine habitats. Marine habitats including kelp beds, seagrass, mangroves, salt marshes and coral reefs will be examined to document the widespread effects of changing predator populations. Students will discuss the impact of fewer predators on coastal stability, resilience and diversity of plant communities and coral reefs. Students will synthesize scientific literature to explore the direction of trophic cascades in kelp forests, seagrasses, salt marshes, mangroves, and coral reefs in relation to declines in predators and review the changes to the ecosystem services provided by marine habitats.

Credits: 3

### MARI 615 Coral Reef Restoration and Aquaculture

Coral reefs are one of the most diverse ecosystems on earth and act as carbon sinks allowing the reduction of the concentration of atmospheric carbon dioxide, thus playing an important role in climate dynamics. Today many coral reef systems are in a state of decline and therefore protecting and repopulating damaged reefs is an important component of coral reef conservation. From a local to global perspective students in this course will review the major threats to coral reef ecosystems and seek solutions to these threats by exploring the role of artificial reefs, marine protected areas and aquaculture in the restoration of coral reefs.

Credits: 3

### MARI 620 Marine Mammal Rescue and Rehabilitation

The primary goal of marine mammal rescue and rehabilitation is to release healthy animals back into the wild. In this class students will learn about the methods used to rescue and rehabilitate marine mammals, including cetaceans, manatees, walrus, seals, and sea lions. Students will follow the steps of rescue from notification through assessment, examination and standard rehabilitation practices, and transportation methods and release protocols. Government programs that guide the protocols of marine mammal rescue, public relations, and funding needed to support rescue operations will also be reviewed. Students will draft their own animal rescue plan from initial encounter to release or permanent housing.

Credits: 3

## MARKETING COURSES

### MKTG 505 Market Research

This course will provide an overview of the market research process, from formulating a question to making a data-informed decision. Students will learn to employ appropriate sampling techniques and statistical methods to gather and analyze data using common methods of market research, including surveys, interviews, focus groups, and customer observation. They will draw on market research to support decision-making.

Credits: 3

### MKTG 605 Purpose-Driven Marketing and Brand Management

In this course, students will develop and use strategies for building brands or brand initiatives grounded in core values related to sustainability. They will select appropriate strategies and design communication tool to connect with target consumers, partners, or other audiences to promote behaviors that contribute to the greater good.

Credits: 3

## MATHEMATICS COURSES

### MATH 520 Quantitative Reasoning and Scientific Thought

This course provides managers with a basic quantitative literacy to enhance their ability to evaluate and interpret current ecological literature, and to implement management procedures that help advance understanding of the systems they manage. Topics include ecological study design, use of models in ecology, and advanced statistical approaches such as information-theoretic and Bayesian methods.

Credits: 3

### MATH 540 Quantitative Methods for Sustainable Solutions

This course provides students with basic quantitative literacy such as data analysis and statistical computing to enhance their ability to evaluate and interpret data. Students will learn to use that data to implement procedures that help advance the public's understanding of sustainability and environmental issues. Emphasis will be on visualization and quantitative reasoning. Assignments are grounded in real-world problems and data from the social sciences.

Credits: 3

### MATH 620 Statistics and Data Management for Science Professionals

This course implements common statistical procedures used to analyze ecological data. Students will learn how to merge, synthesize, edit and summarize large data sets. Emphasis is placed on application of and inferential methods for evaluating linear models using numerous probability distributions. Extensions of these models for

estimating population and community parameters such as occupancy, abundance, and survival are also covered.

Credits: 3

## PROFESSIONAL SCIENCE COURSES

### PROF 505 Strategic Management of Innovation

The course is designed to help students understand the strategic, organizational and human issues that can either help or hinder you (and the organizations, both private and public, you work for) in efforts to develop and implement science-based solutions to environmental and natural resource challenges. It combines the study of those principles needed to manage scientific innovation with an emphasis on how environmental innovation fits within an organization's strategy and business model, and why they matter, and how one creates an innovative learning organization, drives change within an organization, and drives the adoption of the innovations the organization creates.

Credits: 3

### PROF 510 Communication for Environmental Professionals

This course will provide students the opportunity to develop vital professional skills in oral and written communication while preparing them to communicate clearly about science, policy, and technology issues with demographically diverse and geographically dispersed audiences. Content will address mass media and public understanding of science; organizational communication issues such as structure and communication networks; rhetoric, advocacy, and strategic message development; the role of public opinion and public policy; innovation and decision making; crisis communication and conflict management; emerging communication technologies; and inter-organizational and cross-disciplinary communication.

Credits: 3

### PROF 515 Ethical Practice and Policy

This course will investigate some of the ethical dimensions of a life in professional science, examining dimensions of environmental and natural resource science and policy in the context of globalization, global change, and climate change. The course builds on the communications skill set of the science communication course by including a module on the role of science in society. Students critically evaluate the ethical dimensions of common scientific practice and policy issues related to sustainability and natural resources.

Credits: 3

### PROF 590 Capstone I

This course guides students through the creation of a capstone project. Students from all degree tracks solve real-world problems through application of the variety of skills and knowledge acquired during their master's experience. Students work to develop projects that demonstrate transdisciplinary thinking, analyze complex systems, and

develop and communicate solutions to posed problems. Note: Must be scheduled by an advisor in accordance with academic plan.

Credits: 3

### PROF 690 Capstone II

This course is the culminating experience of obtaining the Master of Professional Science degree at Unity College. Students will work to solve real-world problems through application of the variety of skills and knowledge acquired during their master's experience. Collaborators work to demonstrate transdisciplinary thinking, analyze complex systems, and develop and communicate solutions to posed problems. Students will complete their capstone projects in their fields of interest.

Note: Must be scheduled by an advisor in accordance with academic plan.

Credits: 3

Prerequisites: PROF 590 Capstone I

## PSYCHOLOGY COURSES

### PSYC 505 Behavioral Economics: Understanding What Shapes Decision-Making

Behavioral economics, a fairly new subfield of economics, uses concepts and tools from psychology and economics to understand human decision-making. In this course, students will learn how cognitive, emotional, social, and cultural factors can impact decision-making and explain why decisions are often not rational, consistent, or, as predicted by traditional economic models, self-serving. Students will study how insights from behavioral economics have been used to promote pro-environmental and/or sustainable behavior.

Credits: 3

## SUSTAINABLE BUSINESS COURSES

### SBUS 505 Accounting and Finance for Sustainable Business

This course examines the principles of financial and managerial accounting for strategic decision-making and assessment of the financial strength of sustainably-minded organizations. Discussions will include the essentials of cost accounting, minimizing the costs and risks posed by operations and environmental liabilities, developing effective operational planning and capital budgeting processes, and effectively managing a firm's investments.

Credits: 3

### SBUS 515 Ecological Economics

Economic systems influence how society understands its relationship to the environment. From the neo-classical synthesis to socialism, none of our contemporary economic systems seems to provide the social and environmental resilience that



sustainability theory demands. The interdisciplinary field of ecological economics attempts to overcome the deficiencies in traditional economic theory, first by recognizing the physical limits in which any economic system operates and then by including normative values into a holistic economic system. Students will learn the basic principles of ecological economics, evaluate the framework, and learn to apply its principles to sustainability work.

Credits: 3

### SBUS 520 Global Impact of Capital Markets

This course explores the foundations of financial markets, how they operation, and how to assess performance. Students explore market behavior from a global perspective and how financial institutions operate. Key concepts include economic instability, government intervention, and how to value sustainability.

Credits: 3

### SBUS 525 Designing Successful Teams & Organizations

This course covers some of the skills that help organizations to thrive in a multicultural business environment, such as effective teamwork, the ability to set and reaching goals, and effective human resource strategies. Students will learn about leadership and communications skills for business leaders, group collaboration, and engaging employees and stakeholders to reach their full potential.

Credits: 3

### SBUS 530 Business Ethics for 21st Century Leaders

Recent events have demonstrated that ethical failures by business leaders can have major consequences across the globe. It is important for businesses to identify when ethical issues emerge and how to address them. Organizations can create a strategic advantage by taking a triple bottom line approach to business by considering social, environmental and economic factors.

Credits: 3

### SBUS 535 Marketing & Communicating Corporate Social Responsibility

This course enables students to apply business data to solve organizational issues. Organizing and interpreting relevant information allows organizations to make informed business decisions and make sound forecasts.

Credits: 3

### SBUS 540 Quantitative Methods for Sustainable Solutions

Effective marketing is essential for overall business success. This course explores marketing in a sustainable organization and creating beneficial relationships with stakeholders. Students learn how to brand an organization, determine consumer demand, identify target markets, create brand positioning, and develop pricing strategies.

Credits: 3

## SUSTAINABLE NATURAL RESOURCE MANAGEMENT COURSES

### SNRM 505 Human Dimensions of Wildlife Management

This course considers the human dimensions aspects of wildlife management. Topics include approaches to stakeholder involvement in management, conflict resolution, and decision-making approaches through case studies and human-dimensions research. Students learn principles that are needed to find science-based and socially acceptable solutions to wildlife management problems.

Credits: 3

### SNRM 507 Wildlife Ecology and Management

This course emphasizes the key ecological concepts and management principles involved in the management of free-ranging animal populations. This course provides an overview of community and population ecology, habitat and population management, and role of human dimensions in successful wildlife management. Topics include aspects of game and non-game management including harvest management, species recovery and nuisance wildlife. Students will learn and discuss these principles and concepts as they relate to current issues encountered by wildlife managers.

Credits: 3

### SNRM 509 Wildlife Identification

This course covers the principles of identifying wildlife species, including mammals, birds, reptiles, and amphibians. This survey course will focus on understanding the features of these groups and life history characteristics that inform management of these species. Identification will focus on key species of management importance in each of these groups, and students will be expected to conduct field activities directed at learning the species prominent in their region.

Credits: 3

### SNRM 510 Landscape Ecology

Landscape ecology focuses on the relationships between scale, spatial pattern, and ecological processes. Emphasis will be placed on landscape perspectives and practices as they relate to the management and conservation of populations and communities. This course will explore the importance of scale in assessing pattern and process and how landscape structure is characterized. We will examine the abiotic and biotic drivers of landscape patterns including land- use legacies and disturbance regimes. Other topics to be addressed include how populations and communities are structured across the landscape and respond to landscape change.

Credits: 3

### SNRM 515 Conservation Ecology

This course presents concepts from multiple biological disciplines, including population ecology, evolutionary biology, genetics, behavioral ecology, sociology, as well as sociology and policy. Discussion illustrates the value of transdisciplinary thinking in solving conservation challenges. Students practice management and conservation problem solving by integration and application of course concepts to

real-world case studies with an ecological focus.

Credits: 3

## SUSTAINABILITY COURSES

### SUST 505 Thinking in Systems

Ecological, economic, and social systems have complex interactions which can make management inherently difficult. Students will examine examples of these systems from both a top-down and bottom-up perspective. From a top-down perspective, students will use statistical tools to mine information about systems, as understanding system patterns and measures can help managers anticipate how systems will change under natural or artificially applied modifications. In some cases, modifying these interactions (due to variation in environment or natural or applied pressures) can produce unexpected results. Therefore, students will also examine systems from a bottom-up perspective, using quantitative tools to model systems and examine their responses under changing conditions.

Credits: 3

### SUST 510 Climate Dynamics

Climate change is the defining environmental issue of the 21st century. Sustainability scientists and natural resource managers should be able to follow the emerging science and communicate it to a wide variety of audiences. This course 1) examines the science of climate and climate change, and 2) considers the environmental and socio-economic challenges associated with climate change and 3) explores strategies to increase the resilience of natural and human communities to these challenges. Throughout the course we will examine the role energy production has on the climate system and evaluate different methods for energy production in light of climate change.

Credits: 3

### SUST 515 Leading Sustainable Change

The community dimension of sustainability science sets it apart from historical scientific problem solving. Truly sustainable solutions need to meet economic and cultural acceptability to be implemented politically, and the process of seeking solutions can change community perceptions. Through techniques for understanding the nature of stakeholders and the use of social marketing, sustainability professionals can strongly influence perceptions and behavior. In this course, students will practice research-based stakeholder analysis and social marketing.

Credits: 3

### SUST 520 Community Planning for Resiliency

It is increasingly essential that we couple our greenhouse gas reduction actions with preparations for climate extremes and other changes, both expected and unexpected. As the footprint of human society continues to grow, managing the built environment for resilience becomes one of the primary leverage points for mitigation of sustainability problems, and an important focus of adaptation. From buildings to

transportation networks to the relationship between urban communities and their rural resource bases, a strategically developed built environment dramatically reduces the carbon footprint, protects open space, and fosters social cohesion. We will enlist successful frameworks used in community design and green building as we explore ways in which communities can anticipate and adapt to the consequences of climate change while contributing to global mitigation efforts.

Credits: 3

### SUST 525 Making the Invisible Visible: The ESG Proposition

The environment, social, and governance (ESG) framework is a powerful tool for shaping sustainable business practices and investment decisions. ESG reporting has become a mechanism for supporting sustainable investment and catalyzing the adoption of sustainable business practices. This course will introduce learners to the three dimensions of the ESG framework and strategies for gathering and reporting data about each. Learners will analyze sample ESG propositions and develop a proposition for a specific business or organization.

Credits: 3

## URBAN ECOLOGY AND SUSTAINABLE PLANNING COURSES

### UESP 505 Sustainable Design: Green Spaces and Urban Nature

This course introduces students to principles of sustainable design with an emphasis on green spaces in urban environments. It will provide students with a framework to move beyond superficial greening efforts to create plans that highlight people, planet, profit, and purpose. Upon completion, students will have a critical vocabulary about the complexity, cost, and scale of the challenges in designing green spaces in urban environments.

Credits: 3

### UESP 605 Sustainable Design: Creating Sustainable Buildings

This course will focus on design thinking and design principles with an emphasis on the built environment in urban settings. Students will learn ways to re-envision the built environment as "living" and as an active community member that contributes to the urban ecological landscape. Students will learn about building infrastructure to help design buildings that contribute to its urban ecosystem(s). This course will emphasize design thinking, teach students strategies for managing the complexities when designing new buildings or redesigning existing ones, and explore the role of economics and human beings in this process.

Credits: 3

### UESP 615 Planning for Human-Wildlife Interactions in Urban Environments

This course is an introduction to both the issues surrounding human-wildlife interactions in urban environments and an exploration into meaningful plans to support productive ecological coexistence. After providing a historical context and background on

current conservation efforts, students will learn innovative strategies to support areas which are valuable to both humans and wildlife. Topics covered will include multi-level policy development, ecological economies of wildlife in urban spaces, zoonotic disease transmission and prevention, global encroachment trends, hunting in relation to wildlife abundance, and even tourism practices in urban environments. Students will additionally be exposed to the principles of wildlife forensics and learn how to design and implement culturally appropriate and community-led solutions to human-wildlife challenges.

Credits: 3

## SECTION 8: COLLEGE POLICIES

## Code of Conduct and Honor Code

Distance Education students are expected to abide by the Code of Conduct and Honor Code as set forth in the Distance Education [Student Handbook](#).

## The Family Educational Rights and Privacy Act of 1974

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their educational records. These rights include:

### Inspection of Records

A student has the right to inspect and review their education records within 45 days of the day the College receives a request for access. If a student wishes to inspect their education records, they should contact the Registrar to make arrangements.

### Amendment of Records

A student has the right to request the amendment of their education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA. A student who wishes to ask the College to amend a record should write to the [Registrar](#), clearly identify the part of the record the student wants changed, and specify why it is inaccurate or misleading.

If the College decides not to amend the record as requested, the College will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

### Disclosure of Records

Unity College must obtain a student's written consent prior to disclosure of personally identifiable information contained in educational records except in circumstances permitted by law or regulations, some of which are summarized below.

### Directory Information

Unity College designates the following student information as directory information that may be made public at its discretion: name, address, telephone listing, email address, photograph, date and place of birth, major field of study, grade level, enrollment status, most recent educational agency or institution attended, and student ID number or other identifier other than a Social Security number (but only if the identifiers cannot be used to gain access directly to education records without one or more other factors such as a password), participation and level of students in officially recognized activities, dates of attendance in the College, degrees, honors and awards received, and photographs and videos relating to student participation in campus activities open to the public.

Students who do not want the College to disclose directory information must notify the Registrar's Office in writing. This opt-out request will remain in effect unless and until it is rescinded by the student in writing.

### School Officials with Legitimate Educational Interests

Education records may be disclosed to school officials with a legitimate educational interest. A school official has a legitimate educational interest if they need to review an education record in order to fulfill his/her professional responsibility. School officials include persons employed by the College as an administrator, supervisor, academic or research faculty or staff, or support staff member (including health or medical staff and law enforcement unit personnel); persons or companies with whom the College has contracted to provide specific services (such as attorneys, auditors, medical consultants, field placement supervisors and other related personnel, collection agencies, evaluators or therapists); Board of Trustee members; students serving on official committees or assisting other school officials in performing their tasks; and volunteers who are under the direct control of the College with regard to education records.

## Student Identity Verification Policy

In compliance with the provisions of the United States Federal Higher Education Opportunity Act (HEOA) of 2008, Public Law 110-315, concerning the verification of student identity in distance learning, Unity College has established and will periodically evaluate its process to confirm that person who is enrolling in the College is the person who is completing the enrollment form, that a student taking an examination is the student who registered to take the examination, and that the student who is registered for an online course is the same student who participates in, completes, and receives credit for the course.

To authenticate identities, Unity College will use one or more of the following methods for verification:

- A secure login with username and password
- Proctored examinations
- New or emerging technologies and practices that are effective in verifying student identification

All methods of verifying student identity must protect the privacy of student information in accordance with the Family Educational Rights and Privacy Act (FERPA), any other applicable laws or regulations regarding the confidentiality of personally identifiable information, and the College's Privacy Policy.

Personally identifiable information collected by the College may be used as the basis for identity verification. This information may include a combination of the following:

- Student ID number
- Last four digits of the student's Social Security Number
- At least two other pieces of information such as the student's email address on file, date of birth, address, or username, etc.

## Active Duty and Veteran Students

Unity College welcomes applications from veterans, active military members, and their dependents. Any student wishing to use educational benefits from the Veterans Administration must submit a copy of a Certificate of Eligibility or Tuition Assistance voucher to their assigned Concierge. Veterans using Vocational Rehabilitation and Employment benefits must inform their VA counselor of their intention to attend Unity College.

Veterans, active military members, and their dependents are also eligible for a 10% discount on tuition, regardless if they are using VA educational benefits. Such students may disclose their status on their admissions application or notify their DE Concierge to receive the discount.

### VA Benefits

The degree programs of Unity College are approved by the Maine State Approving Agency for Veterans Education Programs for persons eligible for educational benefits (GI Bill®) from the U.S. Department of Veteran Affairs. Students who have questions about their eligibility should visit the Veterans Administration web site at [Veteran Administration](#) or call (888) 442-4551.

Veteran students are expected to complete all registered courses each term. Any change in academic workload must be reported to the College. Failure to do so may result in incurring debt.

Under S2248 PL 115-407 Section 103, Unity College will not impose a late fee, denial of access to facilities, or other penalty against a veteran or eligible dependent due to a late payment of tuition and/or fees from the VA up to the certified benefits amount. Any portion of the student bill not covered by VA benefits is still expected to be settled by the due date.

### Ethical Recruitment of Service Members Policy

This policy places restrictions on recruitment practices and payment of incentivized compensation in the recruitment of service members. Unity College recruitment practices refrain from high-pressure recruitment tactics such as making multiple unsolicited contacts [three or more] for the purpose of securing service member enrollments.

Unity College does not offer its employees commission, bonus or other incentive payment based directly or indirectly on securing Service member enrollments or any student enrollments. This applies only to incentive compensation and does not apply



to base salary or wages.

The College will not provide any inducements to any individual or entity to secure the enrollment of military service members or obtain military provided tuition assistance. Inducements include any gratuity, favor, discount, entertainment, hospitality, loan, transportation, lodging, meals, or other item having a monetary value of more than a minimal amount.

### Military Tuition Assistance

Military tuition assistance [TA] is awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of TA funds originally awarded. To comply with the Department of Defense [DoD] policy, Unity College will return to the DoD any unearned TA funds on a prorated basis through at least the 60% portion of the period for which the funds were provided. TA funds are earned proportionally during an enrollment period, with unearned funds returned when a student stops attending. In instances when a Service member stops attending due to a military service obligation, Unity College will work with the affected service member to identify solutions that will not result in a student debt for the returned portion in compliance with the DoD policy.

### Schedule for returning unearned TA

#### 5-Week Courses [35 days in term]

- Drop course before third day of term: 100% returned
- Withdrawal from course, days 4-11: 80% returned
- Withdrawal from course, days 12-17: 60% returned
- Withdrawal from course, days 18-21: 45% returned
- Withdrawal from course, days 22-35: 0% returned

#### 8-Week Courses [56 days in term]

- Drop course before third day of term: 100% returned
- Withdrawal from course, days 4-17: 75% returned
- Withdrawal from course, days 18-25: 50% returned
- Withdrawal from course, days 26-33: 40% returned
- Withdrawal from course, days 34-56: 0% returned

For those courses that have durations differing from those listed above: unearned TA funds will be returned on a prorated basis, depending on the length of the course. To determine the amount of TA that needs to be returned, the institution will determine the date the withdrawal was submitted, then divide that by the number of days in the term to determine the percentage of TA that was earned by the student.

*GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at [GI Bill](#).*

## Student Health Insurance Policy

Students are not required to have health insurance and are not eligible to join the Unity College [UC] sponsored student health insurance plan.

## SECTION 9: RESOURCES

### Academic Calendar

Please see the webpage for the current academic calendar:

<https://online.unity.edu/academic-calendar/>

### Distance Education Student Handbook

<https://unity.edu/unity-college-handbooks/>

### College Resources

#### Financial Aid Consumer Information

Please see the webpage for [institutional information for consumers](#).

#### College Resources

The mailing address for all Unity College correspondence is:

Unity College Distance Education  
70 Farm View Drive, Suite 200  
New Gloucester, ME 04260

College Switchboard: [207] 509-7100  
Distance Education: [207] 509-7155  
College Website: [www.unity.edu](http://www.unity.edu)

Distance Education Leadership	
President / CEO <a href="mailto:president@unity.edu">president@unity.edu</a>	Dr. Melik Khoury
Dean of Graduate Studies <a href="mailto:kboyerontl@unity.edu">kboyerontl@unity.edu</a>	Dr. Kelly Boyer Ontl (207) 509-7256
Dean of Sustainability Studies <a href="mailto:jcartier@unity.edu">jcartier@unity.edu</a>	Dr. Jennifer Cartier (207) 509-7159
Associate Vice President of Distance Education <a href="mailto:dyoung@unity.edu">dyoung@unity.edu</a>	Denise Young (207) 509-7342
Assistant Dean of Graduate Enrollment <a href="mailto:pinkpen@unity.edu">pinkpen@unity.edu</a>	Perceval Inkpen (207) 509-7301
Student Financial Services <a href="mailto:sfs@unity.edu">sfs@unity.edu</a>	(207) 509-7235

UNITY COLLEGE DISTANCE EDUCATION CATALOG

Associate Dean of Advising <a href="mailto:debbrecht@unity.edu">debbrecht@unity.edu</a>	Danielle Ebbrecht (207) 509-7320
Operations Manager <a href="mailto:mross@unity.edu">mross@unity.edu</a>	Michelle Ross (207) 509-7252
ADA Accessibility Office <a href="mailto:AccessibilityDE@unity.edu">AccessibilityDE@unity.edu</a>	(207)509-7320
Title IX Coordinator <a href="mailto:dyoung@unity.edu">dyoung@unity.edu</a>	Denise Young (207) 509-7342

Enterprise Employees Dedicated to Distance Education	
Assistant Registrar <a href="mailto:registrarsoffice@unity.edu">registrarsoffice@unity.edu</a>	(207) 509-7257
Assistant Bursar <a href="mailto:nclark@unity.edu">nclark@unity.edu</a>	Nichole Clark (207) 509-7251
Distance Education Career Specialist <a href="mailto:career-services@unity.edu">career-services@unity.edu</a>	Candice Parsley (207) 509-7129

Enterprise Resources	
President of the UC Enterprise / Chief Academic Officer <a href="mailto:elatty@unity.edu">elatty@unity.edu</a>	Dr. Erika Latty (207) 509-7297
Registrar <a href="mailto:registrarsoffice@unity.edu">registrarsoffice@unity.edu</a>	Kerry Hafford (207) 509-7257
Librarian: Reference and Collection Development <a href="mailto:ssout@unity.edu">sstout@unity.edu</a>	Sandra Abbott-Stout (207) 509-7234

*Date Modified: March 9, 2023*  
*Adoption Chain: DE Leadership, President*

## **DE Catalog Addendum for April 2023**

Update to Graduate Priority Admissions policy. *Approved 2/2/2023; page 9.*

Update to courses that meet General Education areas of Humanities and Social Sciences. *Approved 1/24/2023; page 34.*

Update of Environmental Professional Core and required electives in all baccalaureate programs. *Approved 1/24/2023; pages 35-52.*

Update of General Education Core and Program Core in Sustainable Business Management program. *Approved 1/24/2023; page 45.*

Update of General Education Core and Program Core in Sustainable Horticulture program. *Approved 1/24/2023; pages 47-48.*

Update of General Education Core and Program Core in Wildland Fire Science and Management program. *Approved 1/24/2023; pages 49-50.*

Clarification of Sustainable Food and Farming concentration availability. *Page 56.*

Update of description and learning outcomes for the Animal Science and Behavior program. *Approved 12/20/2022; pages 58-59.*

Update of description and learning outcomes for the Marine Science program. *Approved 12/20/2022; page 63.*

Update of learning outcomes for the Wildlife Conservation and Management program. *Approved 12/20/2022; page 64.*

Addition of COMM 100 Communication Skills for Online Learners. *Approved 1/24/2023; page 78.*

Update to ENCJ 305 Natural Resource Law and Policy course description. *Approved 1/27/2023; page 83.*

Update to EVHS 210 Fire Protection and Safety course description. *Approved 1/27/2023; page 84.*

Addition of EVPC 100 Ecoliteracy course description. *Approved 1/24/2023; page 89.*

Update to PHYS 203 and PHYS 204 course descriptions. *Approved 2/25/2023; pages 106-107.*

Update to SRNM 505 title and course description. *Page 125; approved 1/13/2023.*