NEW PROGRAM PROPOSAL FORM

Name of Institution: Coastal Carolina University

Name of Program (include degree designation and all concentrations, options, or tracks):
Bachelor of Arts in Sustainability and Coastal Resilience, Policy and Culture Concentration
Bachelor of Arts in Sustainability and Coastal Resilience, Business and Economics Concentration
Bachelor of Science in Sustainability and Coastal Resilience, Science and Ecosystems Concentration

Program Designation:

☐ Associate's Degree ☐ Master's Degree

☒ Bachelor's Degree: 4 Year ☐ Specialist

☐ Bachelor's Degree: 5 Year ☐ Doctoral Degree: Research/Scholarship (e.g., Ph.D. and DMA)

☐ Doctoral Degree: Professional Practice (e.g., Ed.D., D.N.P., J.D., Pharm.D., and M.D.)

Consider the program for supplemental Palmetto Fellows and LIFE Scholarship awards?

☐ Yes

☒ No

Proposed Date of Implementation: Spring 2021

CIP Code: 30.3301

Delivery Site(s): Coastal Carolina University (main campus), Conway, SC

Delivery Mode:

☒ Traditional/face-to-face ☐ Distance Education
*select if less than 25% online ☐ 100% online

☐ Blended/hybrid (50% or more online)

☐ Blended/hybrid (25-49% online)

☐ Other distance education (explain if selected)

Program Contact Information (name, title, telephone number, and email address):

Dr. Megan McIlreavy
Associate Dean/Chair of Interdisciplinary Studies
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Institutional Approvals and Dates of Approval:

Internal Institutional Approval	Date
Board of Trustees	October 11, 2019
Department of Interdisciplinary Studies	November 26, 2019
Curriculum Committee, HTC Honors College	November 26, 2019
Dean, HTC Honors College	November 26, 2019
Academic Affairs Committee	February 11, 2020
Faculty Senate	March 4, 2020
Provost	

Background Information

Coastal Carolina University (CCU) proposes to establish a Bachelor of Science degree and a Bachelor of Arts degree in Sustainability and Coastal Resilience. A sustainable approach recognizes the urgent challenges the planet and local communities face and yet acknowledges the need to continue to provide social and economic development for all. Sustainable development requires systemic and integrated thinking in multidisciplinary settings at multiple levels from the local to the global. It requires competencies in systems thinking, strategic analysis, collaborative leadership and problem solving, critical thinking, effective public communication, and reflective self-awareness across a range of employment pathways. An interdisciplinary undergraduate degree program in Sustainability and Coastal Resilience delivers a curriculum specifically designed to help students develop and master these competencies, in addition to delivering the content knowledge necessary to succeed as a professional in the field of sustainability. Students may pursue a wide variety of jobs and interests in the area of sustainability, therefore offering both a B.S. degree (for students inclined toward the natural sciences or engineering and technology) and B.A. degree (for students inclined toward the social sciences, economics, humanities, and related fields) will allow students to tailor their degree program to their specific career goals. This degree program will employ a transformative learning approach that empowers learners to question and change the way they see and think about the world through knowledge acquisition, practical experience in the field, reflection and observation, and the co-generation of new ideas and solutions for 21st Century challenges and opportunities.

According to the Bureau of Labor Statistics, sustainability professionals "help organizations achieve their goals by ensuring that their business practices are economically, socially, and environmentally sustainable" (https://www.bls.gov/green/sustainability/sustainability.htm; accessed 9/23/19). Further, recent surveys have shown that companies are more likely to develop and implement sustainability as an integral part of their business plan. In a 2014 report, McKinsey and Company finds that 43% of corporate executives say that "their companies seek to align sustainability with their overall business goals, mission, or values—up from 30 percent who said so in 2012" (https://www.mckinsey.com/business-functions/sustainability/our-insights/sustainabilitys-strategic-worth-mckinsey-global-survey-results; accessed 9/23/19). Companies are seeking employees who can:

- Apply systems thinking;
- Implement and manage sustainable business practices;
- Help balance budgets to meet the triple bottom line of people, profit, planet;
- Understand energy production, consumption, and environmental impact;
- Apply technology and information systems that support sustainable development in an organization;
- Promote sustainable strategies inside the organization and beyond; (https://sustain.wisconsin.edu/sustainability/careers/; accessed 9/23/19).

Unique to this program, students will apply knowledge and skills to the issues specifically facing coastal communities through coursework that focuses on coastal resiliency, a growing subfield in the sustainability profession as a result of recent extreme weather events resulting in increased flooding and coastal erosion. Harvard Business Review predicts that extreme weather events will "demand resilient, flexible organizations," with "dedicated resources to manage the operational and regulatory terrain" (https://hbr.org/2015/06/leading-in-a-world-of-resource-constraints-and-extreme-weather; accessed 9/23/19). Because the program's graduates will work directly with the very real issues that arise as a result of these kind of weather events, they will be uniquely prepared to meet the needs of companies and organizations whose day-to-day business will directly benefit from the implementation of practices that increase coastal resiliency. Students will also have the opportunity to gain real-world experience in policy development and education outreach through their engagement with the United Nations Regional Centre of Expertise on Education for Sustainable Development housed at Coastal Carolina University in partnership with the National Estuarine Research Reserve. Using the Sustainable Development Goals (UN SDGs) as a framework, students will work with faculty and staff to make CCU's campus, region, communities, and the world a better place through partnerships with public and private institutions. The UN SDGs outline a leadership role for all stakeholders from local governments, industry/business, and educational institutions to national and international stakeholders. This degree aims to create a continuing base of leaders who instill these goals in their organizations/communities and produce measurable

results as a product of their training and networking within the program. More information about the UN SDGs can be found at: https://www.iau-hesd.net/sites/default/files/documents/247444e.pdf.

Student demand for this degree can be found by considering CCU's Interdisciplinary Studies (IDS) degree, where students are actively building their own degrees centered around sustainability and environmental studies. Within the past four years, 26 students have tailored their IDS degrees in these specific areas and an additional 19 students have built degrees that are in related areas within this proposal major. Further demand can be found within the Sustainability certificate and minor programs: 18 students have added the sustainability certificate as a supplement to their primary major and 8 have enrolled in the environmental studies minor.

This major directly speaks to the University's mission statement "to develop students who are both knowledgeable in their chosen field and prepare to be productive, responsible, and healthy citizens with a global perspective." CCU's mission statement also speaks to fairness, honest treatment and sustainable stewardship of resources. **"**As Coastal Carolina executes this mission, it recognizes its responsibility to be a role model to the community and to the professions by assuring fair and honest treatment of people with whom it interacts and sustainable stewardship of resources entrusted to it, adopting the highest standards of integrity and accountability, and in committing itself to excellence through continuous assessment and improvement." This major is a clear enactment of this process, as it focuses on understanding and enacting sustainability through its many dimensions, and engages application-based learning experiences to engage students in weighing the competing demands in any community to explore a sustainable future.

Goal 1.3 of the 2016-2021 Strategic Plan, entitled "High Impact Engagement," supports the balance of teacher-scholar model that engages community engagement activities as a part of the balanced teacher-scholar at Coastal Carolina University. **Goal 2.1** supports a high-quality learning environment that produces knowledgeable and skilled graduates prepared for career success. Through this program, students will be prepared to make choices that contribute to environmental and social sustainability, as well as develop a greater awareness of resilience issues specifically affecting coastal communities. The inclusion of **Goal 2.2** suggests a clear focus on health and safety, but this goal also speaks to understanding and making choices that have long-term sustainable outcomes. **Goal 2.4** focuses on citizenship informed decisions, including "Advance curricular and co-curricular learning opportunities that raise student and campus awareness of global citizenship and empower action in the broader community."

Assessment of Need

In South Carolina, there are no other public institutions offering a degree in sustainability. Furman University offers a degree in Sustainability Science and Winthrop University offers a BA and BS in Environmental Studies and a minor in Sustainability. Thus, Coastal Carolina University will be the first public institution in South Carolina to offer an undergraduate degree with a focus on sustainability. Furthermore, CCU will be the only institution in the nation to offer a degree in Sustainability and Coastal Resilience.

The Department of Interdisciplinary Studies housed in the HTC Honors College and Center for Interdisciplinary Studies currently offers a certificate in Sustainability as well as a minor in Environmental Studies. By creating this degree program in Sustainability and Coastal Resilience, enrollment is expected to increase in both lower- and upper-level courses that have traditionally served these offerings, as well as providing core skills, cognates, and electives to other majors.

Already within Interdisciplinary Studies (IDS), students are actively building their own degrees centered around sustainability and environmental studies. Within the past four years, 26 students have tailored their IDS degrees in these specific areas and an additional 19 other students have built degrees that are related to areas of emphasized within this proposal major. In addition to students who have majored within these areas, an additional 21 students have added the sustainability certificate as a supplement to their primary major and 19 have enrolled in the environmental studies minor.

The College and Department are in the process of gathering letters of support from local/regional employers. Specifically, from one of our most recent alumni (Stache Hess,'19), there is a testimonial available online at https://www.youtube.com/watch?v=ww6Rnw7N77s&feature=youtu.be

Transfer and Articulation

Students who complete an Associate of Science degree at a community or technical college will be tracked to complete the Sustainability and Coastal Resilience program in four years.

The College and Department are in the process of developing these memoranda. On March 9th, the Dean of the HTC Honors College and Center for Interdisciplinary Studies (Dr. Sara Hottinger) and our Provost (Dr. Dan Ennis) will be meeting with several community/technical colleges to specifically discuss this degree.

Employment Opportunities

Occupation	State		National		Data Type and Source
	Expected Number of Jobs	Employment Projection	Expected Number of Jobs	Employment Projection	
Environmental Scientists and Specialists	47	13%	85,000	8%	US Bureau of Labor Statistics
Environmental Science and Protection Technicians	29	10%	34,800	9%	US Bureau of Labor Statistics
Environmental Engineering Technicians	1	0%	17,900	9%	US Bureau of Labor Statistics
Agricultural Technicians	17	0%	29,200	6%	US Bureau of Labor Statistics
Compliance Managers	333	10%	N/A	N/A	US Bureau of Labor Statistics
Construction and Building Inspectors	122	1%	117,300	7%	US Bureau of Labor Statistics
Construction Managers	439	14%	471,800	10%	US Bureau of Labor Statistics
Farmers, Ranchers and Other Agricultural Managers	1,282	0%	975,400	-1%	US Bureau of Labor Statistics
Fish and Game Wardens	N/A	N/A	39,400	-2%	US Bureau of Labor Statistics
Forest and Conservation Workers	70	0%	13,400	-3%	US Bureau of Labor Statistics
Green Marketers	33	1%	N/A	N/A	US Bureau of Labor Statistics
Hydrologists	13	1%	6,700	7%	US Bureau of Labor Statistics

Occupation	State		National		Data Type and Source
	Expected Number of Jobs	Employment Projection	Expected Number of Jobs	Employment Projection	
Recycling Coordinators	450	18%	N/A	N/A	US Bureau of Labor Statistics
Conservation Scientist	25	1%	32,900	3%	US Bureau of Labor Statistics
Urban and Regional Planners	38	13%	39,100	11%	US Bureau of Labor Statistics
Natural Sciences Manager	50	16%	63,500	6%	US Bureau of Labor Statistics

Supporting Evidence of Anticipated Employment Opportunities

According to the Bureau of Labor Statistics, as of August 2011, 74.5% of companies in the United States reported at least one green technology or practice in place. It is anticipated that both the percentage of US companies and the number of sustainable technologies and practices within any given company will continue to grow. A recent forecast has predicted that meeting the United Nations Sustainable Development Goals will "open up market opportunities worth up to $12 trillion a year in less than 15 years." (https://hbr.org/2017/05/saving-the-planet-from-ecological-disaster-is-a-12-trillion-opportunity, accessed 11/25/19). A recent search of companies who have announced sustainability initiatives and achievements demonstrated a widespread recognition of this growing area of opportunity:

- PepsiCo just issued around $1 billion worth of green bonds to investors, claiming that it will use the proceeds of the bond sale to fund sustainability initiatives in areas such as packaging and transport. PepsiCo's goal is to advance its sustainability agenda, specifically looking at the development of more sustainable packaging materials and ways in which to make its supply chain more sustainable. They just appointed a Chief Sustainability Officer to oversee these efforts. (https://www.environmentalleader.com/2019/10/pepsi-issues-1-billion-in-green-bonds-to-fund-its-sustainability-initiatives/, accessed 11/25/19).
- Goldman-Sachs just formed a Sustainable Finance Group, the goal of which is to drive finance toward investment opportunities that further sustainable growth. They see themselves as responsible for partnering with businesses to drive innovation and capture emerging opportunities as sustainable growth becomes the priority of more investors, institutions and companies around the world. (https://www.goldmansachs.com/media-relations/press-releases/current/announcement-24-JUL-2019.html, accessed 11/25/19).
- Williams-Sonoma Inc. has met several company-wide milestones and is on track to other goals towards responsible sourcing, sustainable design, landfill diversion, energy and carbon intensity, supply chain development, corporate giving and volunteering, according to its newly released Corporate Responsibility Scorecard. (https://www.hfndigital.com/sustainability/williams-sonoma-achieves-sustainability-milestones/, accessed 11/25/19).

This growth in the area of sustainable business practices requires trained sustainability professionals, familiar with sustainable systems thinking, as well as the ability to speak to the integrated nature of environmental, economic, and community impacts.

A Sustainability and Coastal Resilience major will provide skills for careers of the 21st Century. Those careers include employment in Offices of Resilience and Sustainability around the region, for example in Charleston, Greenville, and Columbia. Additionally, Emergency Operations employees would benefit from such a major. All counties and some cities across the US, but particularly in the Southeast due to hurricanes and natural disasters, have employment in these offices. Additionally, Zoning and Planning Offices across our region employ Sustainability and Resilience experts for the complex decision-making tools of GIS, regulations, flooding and sea level rise data as it pertains to new development along our

coast and throughout our region. Public Works office employ sustainability and resilience experts to help develop and maintain our infrastructure and services. Many cities, towns, and counties, as well as states, have a Climate Action Plan and hire Climate Action Officers to measure goals and targets of these plans. At the public institutional level, employment needs in these areas include the skills garnered in this major such as data analysis, emissions analysis, water quality testing, communications, GIS mapping, policy analysis and development, and economic development analysis, among others.

In the private sector, an increased number of businesses have adopted Corporate Sustainability Plans with Sustainability Officers in many of them. Many corporations have adopted global standards for sustainability to include over 9,000 companies that have signed onto the Global Compact for Sustainable Development Goals. Renewable energy is a growing area of employment and SC has recently passed the Energy Freedom Act, opening jobs in solar energy throughout the state. There are about 108 solar energy companies in SC with 3,000 jobs in this field in our state. One hundred percent of the students in the Solar Ambassador program at CCU that apply for solar jobs are hired. Additionally, 60% of students who intern in Sustainable Development Youth Corps internships are hired in Georgetown County, SC alone. Nationwide, jobs in renewable energy outnumber those in other energy areas by five times, including over 335,000 jobs in the solar energy industry nationwide this year. The multidisciplinary approach to this major provides skills in the B.S. selection to include business management in sustainability and resilience, economic analysis, and scientific analysis. The B.A. selection of the major will enable jobs in the private sector in marketing and communications, policy development, corporate government relations and the nonprofit sector (a sector that is increasingly responding to natural disasters, particularly in the Southeast).

Finally, in a job search online over 60 jobs in Sustainability in the private sector in SC were located. Over 100 jobs in the solar industry are available throughout our state. These jobs pay starting salaries at entry levels from $15-$20 per hour and leadership roles can garner salaries of over $100,000. This undergraduate major seeks to provide complex analysis skills with rigorous scientific skills and knowledge to foster integrated solutions for the public and private sector in the 21st Century for our state.

Description of the Program

The undergraduate certificate program in Sustainability as well as the Environmental Studies minor has been housed in the HTC Honors College and Center for Interdisciplinary Studies. This curriculum has been intentionally designed to bring together courses that are already offered in various departments across the university. Given current interest in self-designed Interdisciplinary Studies degrees with a focus on Sustainability and interest in the Sustainability Certificate, enrollment of at least 10 students per academic year in the new major is anticipated.

Projected Program Enrollment

Projected Enrollment			
Year	Fall Headcount	Spring Headcount	Summer Headcount
2021-2022	10	13	0
2022-2023	21	22	0
2023-2024	28	29	0
2024-2025	34	34	0
2025-2026	34	33	0

Note 1: Based on enrollment of 10 new students each fall and 4 new students each spring.
Note 2: Years one through four total headcounts based on 90% returning fall to spring and 85% returning spring to fall.

Besides the general institutional admission requirements, are there any separate or additional admission requirements for the proposed program? If yes, explain.

☐Yes

☒No

Curriculum

New Courses

SUST 301 – Environmental and Coastal Resilience (3 credits)
This course engages students by endowing them with a sense of place at CCU, in Conway, on the Grand Strand, on the SC coastal plain, and on planet earth. Employing local ecosystems as part of teaching an ecological worldview requires students to recognize that we live on a finite planet with limited resources and interdependent social, economic and environmental systems. Through a combination of classroom and field trips, this course introduces students to the ecology and biodiversity of our home and asks them to evaluate the resilience of these systems.

SUST 302 - Sustainability and Community Resilience (3 credits)
This course is an applied seminar on sustainability, justice, and communities. Topics include political ecology of health, housing and homelessness, migration, climate change, and community health and wellbeing. The course draws on multiple disciplines, including public health, environmental studies, geography, political science, sociology, and anthropology. The class will be discussion-based and project-based, and include experiential field experiences. Students will be designing and completing a class research project on a local community social-environmental issue, and will gain an introduction to ethnographic and qualitative social science research methods.

SUST 310 – Methods in Sustainability (3 credits)
This course covers methods by which sustainability is measured, assessed, and communicated. It will provide both classroom and practical experience, including sustainability assessments of the campus. Students will interpret and write sustainability reports and other data related to sustainability. The course introduces students to a variety of sustainability accreditations and certifications and assists them in preparing for personal accreditation in one of the numerous sustainability accreditations currently available.

SUST 325 – Service in Sustainability (3 credits)
Students participate in public service with local agencies in order to understand the relationship between civic responsibility, sustainability, and higher education. In the classroom, students reflect upon the function and necessity of their service as well as its limitations in responding to specific community needs and general social problems.

SUST 350 – Sustainable Systems in Historical Perspective (3 credits)
This class is an introduction to the history of North American sustainable systems and thinking, exploring how humans have interacted with, imagined, transformed, and otherwise altered the natural world. Students will focus on traditional topics of significance: land use, capital accumulation, industrialization, national parks, conservation and environmental movements, food systems, and the role of wilderness. By the end of the semester we will be able to view sustainability as a relationship between people and nature but also from a number of other perspectives – including those of poorer people, indigenous people, and others who may imagine "environment" differently.

SUST 380 – Emergency Preparedness and Disaster Resilience (3 credits)
This course provides students instruction and practical strategies to develop the core competencies of basic emergency preparedness. Natural hazards, technological hazards, and manmade threats will be examined through the lens of everyday emergencies and disasters. Emphasis will be placed on personal preparedness by addressing hazard and threat awareness, prevention, response, recovery and mitigation. Students will learn critical skills to manage emergency situations through experiential learning activities such as CPR/AED and First Aid training, and fire extinguisher operations training.

SUST 495 – Sustainability Internship (3 credits)
The purpose of this sustainability internship is designed to provide students the opportunity to gain valuable work experience that complements their major in Sustainability and Coastal Resilience. This

course offers individuals educational experiences that bridge coursework in the major and the work place. The guided internship requires 120 hours of on-site work over the course of the term.

SUST 499 – Sustainability Capstone (3 credits)
This course is a capstone experience for sustainability majors and serves to integrate the knowledge and skills that students have developed over a college career. To accomplish this, each student will complete and report on an independent research project, service project, or off-campus internship in the field of sustainability. Students will participate in readings, discussion, and a final paper that allows in-depth analysis of their selected project area.

There are no pre- or co-requisites for any of the proposed new course with one exception. SUST 499 (Sustainability Capstone) requires the pre-requisite of SUST 310 (Methods and Tools in Sustainability). Research methods will be essential for students to complete their capstone project.

Sustainability and Coastal Resilience, B.A.
       Business and Economics Concentration

Mission Statement

The Sustainability and Coastal Resilience program supports student development of strong competencies in Sustainability, with special focus areas in Sustainable Ecosystems, Economics, and Policy and Culture. Students in the program examine the environmental, economic, ethical, political, and social dimensions of sustainability for a holistic perspective on major global challenges as well those specifically related to coastal communities. With sustainability as a future global goal in mind, students develop strong critical reasoning and systems thinking skills for personal and professional development.

Student Learning Outcomes

When students complete the program in sustainability, they will be able to:
1. State and explain the principles, concepts, and processes of sustainability.
2. Analyze the concepts and methods of environmental science, economics, politics and geography relevant to the sustainability of environmental resources and social institutions.
3. Apply these concepts and methods to developing sustainable strategies and institutions for water, land, air, and urban management at the local to global level.
4. Communicate and synthesize knowledge of sustainability through interactions with the academic, governmental, and local communities.
5. Use systems thinking to analyze the interconnectedness of the multiple aspects of sustainability.

Degree Requirements (120 Credits)

Students must earn a grade of 'C' or better in each course used to satisfy foundation and major requirements.

Core Curriculum Requirements

Core Curriculum (38-40 Total Credit Hours)

Graduation Requirements

Graduation Requirements (3-7+ Credits) *

Foundation Requirements (26 - 29 Credits) *

Complete the following courses (20-21 credits):
- SUST 122 - Introduction to Sustainability (3 credits)
- BIOL 121 - Biological Science I (3 credits) AND
- BIOL 121L - Biological Science I Laboratory (1 credit)
  OR
- MSCI 111 - Introduction to Marine Science (3 credits) AND
- MSCI 111L - The Present-Day Marine Environment Laboratory (1 credit)
- CBAD 302 - Business Sustainability (3 credits)
- GEOG 120/ANTH 120 - Cultures and Environments (3 credits)
- GEOG 201 - Introduction to Physical Geography (3 credits) AND
- GEOG 201L - Introduction to Physical Geography Laboratory (1 credits)
- STAT 201 - Elementary Statistics (3 credits) AND

- STAT 201L - Elementary Statistics Computer Laboratory (1 credit)
  OR
- CBAD 291 - Business Statistics (3 credits)

Choose two from the following (6-8 credits):
- BIOL 122 - Biological Science II (3 credits) AND
- BIOL 122L - Biological Science II Laboratory (1 credit)
- BIOL 370 - Principles of Ecology (3 credits)
- CBAD 120Q – Introduction to the Global Culture of Business (3 credits)
- ECON 101 - Survey of Economics (3 credits)
- GEOG 200 - Digital Earth (3 credits)
- POLI 101 - Introduction to World Politics (3 credits)
- MSCI 112 - The Origin and Evolution of the Marine Environment (3 credits) AND
- MSCI 112L - Marine Environment Laboratory (1 credit
- MSCI 302 - Marine Biology (3 credits) AND
- MSCI 302L - Marine Biology Laboratory (1 credit)
- PUBH 121 - Personal and Community Health (3 credits)
- Or other courses as designated by the department

* Course credit hours only count once toward the total university graduation credit hour requirements.

Major Requirements (30-31 credits)

Required Courses (12 credits)
Complete the following courses:
- SUST 301 – Environmental and Coastal Resilience (3 credits)
- SUST 302 – Sustainability and Community Resilience (3 credits)
- SUST 310 – Methods in Sustainability (3 credits)
- SUST 499 – Sustainability Capstone (3 credits)

Experiential Learning Requirement (3 credits)

Choose one of the following options:
- SUST 325Q - Service in Sustainability (3 credits)
- SUST 380 – Emergency Preparedness and Disaster Resilience (3 credits)
- SUST 495 - Sustainability Internship (3 credits)
- An approved Study Abroad Experience or Field Semester can be substituted.

Business and Economics Concentration (15-16 credits)

Choose three from the following (9 credits):
- ECON 320 - Environmental Economics
- ECON 321 - Government and Business
- ECON 333 - Economics of Energy
- ECON 354 - Urban and Real Estate Economics
- HRTM 150 - Tourism and Society
- Or other courses as designated by the department

Choose one from the following (3-4 credits):

- BIOL 481 - Freshwater Ecology (3 credits) AND
- BIOL 481L - Freshwater Ecology Laboratory (1 credit)
- BIOL 484 - Conservation Ecology (3 credits) AND
- BIOL 484L - Conservation Ecology Laboratory (1 credit)
- BIOL 485 - Vertebrate Zoology (3 credits) AND
- BIOL 485L - Vertebrate Zoology Laboratory (1 credit)
- BIOL 488 - Wetland Plant Ecology (3 credits) AND
- BIOL 488L - Wetland Plant Ecology Laboratory (1 credit)
- ENVI 201 – Introduction to Environmental Science (3 credits) AND
- ENVI 201L Introduction to Environmental Science Laboratory (1 credit)
- GEOG 204 Introduction to Geographic Information Systems GIS (3 credits)
- GEOG 311Q Earth Observation (3 credits)
- GEOG 320 Introduction to Weather and Climate (3 credits)
- MSCI 331 - Introduction to Geographic Information Systems (GIS) and Remote Sensing (3 credits) AND
- MSCI 331L - Introduction to Geographic Information Systems Laboratory (1 credit)
- MSCI 401 - Environmental Chemistry (3 credits) AND
- MSCI 401L - Environmental Chemistry Laboratory (1 credit)
- MSCI 475 - Marine Ecology (3 credits) AND
- MSCI 475L - Marine Ecology Laboratory (1 credit)
- MSCI 477 - Ecology of Coral Reefs (3)
- MSCI 479 - Marine Benthic Ecology (3 credits) AND
- MSCI 479L - Marine Benthic Ecology Laboratory (1 credit)
- MSCI 495 - Marine Environmental Issues (3 credits) AND
- MSCI 495L - Marine Environmental Issues Laboratory (1 credit)
- Or other courses as designated by the department

Choose one from the following (3 credits):

- ANTH 300/GEOG 300 - Human Landscapes (3 credits)
- ANTH 391Q - Ethnographic Methods (3 credits)
- ANTH 432 - Cultural Resource Management (3 credits)
- GEOG 341 - Geography of Food and Agriculture (3 credits)
- GEOG 452Q - Digital Heritage: Virtual Landscapes (3 credits)
- HIST 311 - Environmental History (3 credits)
- PHIL 319 - Environmental Ethics (3 credits)
- POLI 371 - Public Policy (3 credits)
- POLI 420 - Global Environmental Politics (3 credits)
- POLI 421Q - Sustainable Development (3 credits)
- POLI 422 - Energy Policy (3 credits)
- POLI 438 - International Human Rights (3 credits)
- POLI 457 - Environmental Law (3 credits)
- PUBH 320 - Public Health Policy and Advocacy (3 credits)
- PUBH 333 - Environmental Health (3 credits)
- PUBH 375 - Global Health Perspectives (3 credits)
- PUBH 440 - Gender, Culture, Literacy and Disparities in Health (3 credits)
- SOC 480 - Environmental Sociology (3 credits
- SUST 350 - Sustainable Systems in Historical Perspective (3 credits)
- WGST 303 - Water and Women (3 credits)

- Or other courses as designated by the department

Electives (13-23 Credits)

Total Credits Required: 120 Credits

Sustainability and Coastal Resilience, B.A.
      Policy and Culture Concentration

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Student Learning Outcomes

When students complete the program in sustainability, they will be able to:
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2. Analyze the concepts and methods of environmental science, economics, politics and geography relevant to the sustainability of environmental resources and social institutions.
3. Apply these concepts and methods to developing sustainable strategies and institutions for water, land, air, and urban management at the local to global level.
4. Communicate and synthesize knowledge of sustainability through interactions with the academic, governmental, and local communities.
5. Use systems thinking to analyze the interconnectedness of the multiple aspects of sustainability.

Degree Requirements (120 Credits)

*Students must earn a grade of 'C' or better in each course used to satisfy foundation and major requirements.***Core Curriculum Requirements**

Core Curriculum (38-40 Total Credit Hours)

Graduation Requirements

Graduation Requirements (3-7+ Credits) *

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- MSCI 112L - Marine Environment Laboratory (1 credit)
- MSCI 302 - Marine Biology (3 credits) AND
- MSCI 302L - Marine Biology Laboratory (1 credit)
- PUBH 121 - Personal and Community Health (3 credits)
- Or other courses as designated by the department

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- SUST 302 – Sustainability and Community Resilience (3 credits)
- SUST 310 – Methods in Sustainability (3 credits)
- SUST 499 – Sustainability Capstone (3 credits)

Experiential Learning Requirement (3 credits)
Choose one of the following options:
- SUST 325Q - Service in Sustainability (3 credits)
- SUST 380 – Emergency Preparedness and Disaster Resilience (3 credits)
- SUST 495 - Sustainability Internship (3 credits)
- An approved Study Abroad Experience or Field Semester can be substituted.

Policy and Culture Concentration (15-16 credits)
Choose three from the following (9 credits):
- ANTH 300/GEOG 300 - Human Landscapes (3 credits)
- ANTH 391Q - Ethnographic Methods (3 credits)
- ANTH 432 - Cultural Resource Management (3 credits)
- GEOG 341 - Geography of Food and Agriculture (3 credits)
- GEOG 452Q - Digital Heritage: Virtual Landscapes (3 credits)
- HIST 311 - Environmental History (3 credits)
- PHIL 319 - Environmental Ethics (3 credits)
- POLI 371 - Public Policy (3 credits)
- POLI 420 - Global Environmental Politics (3 credits)
- POLI 421Q - Sustainable Development (3 credits)
- POLI 422 - Energy Policy (3 credits)
- POLI 438 - International Human Rights (3 credits)
- POLI 457 - Environmental Law (3 credits)

- PUBH 320 - Public Health Policy and Advocacy (3 credits)
- PUBH 333 - Environmental Health (3 credits)
- PUBH 375 - Global Health Perspectives (3 credits)
- PUBH 440 - Gender, Culture, Literacy and Disparities in Health (3 credits)
- SOC 480 - Environmental Sociology (3 credits
- SUST 350 - Sustainable Systems in Historical Perspective (3 credits)
- WGST 303 - Water and Women (3 credits)
- Or other courses as designated by the department

Choose one from the following (3-4 credits):
- BIOL 481 - Freshwater Ecology (3 credits) AND
- BIOL 481L - Freshwater Ecology Laboratory (1 credit)
- BIOL 484 - Conservation Ecology (3 credits) AND
- BIOL 484L - Conservation Ecology Laboratory (1 credit)
- BIOL 485 - Vertebrate Zoology (3 credits) AND
- BIOL 485L - Vertebrate Zoology Laboratory (1 credit)
- BIOL 488 - Wetland Plant Ecology (3 credits) AND
- BIOL 488L - Wetland Plant Ecology Laboratory (1 credit)
- ENVI 201 – Introduction to Environmental Science (3 credits) AND
- ENVI 201L Introduction to Environmental Science Laboratory (1 credit)
- GEOG 204 Introduction to Geographic Information Systems GIS (3 credits)
- GEOG 311Q Earth Observation (3 credits)
- GEOG 320 Introduction to Weather and Climate (3 credits)
- MSCI 331 - Introduction to Geographic Information Systems (GIS) and Remote Sensing (3 credits) AND
- MSCI 331L - Introduction to Geographic Information Systems Laboratory (1 credit
- MSCI 401 - Environmental Chemistry (3 credits) AND
- MSCI 401L - Environmental Chemistry Laboratory (1 credit)
- MSCI 475 - Marine Ecology (3 credits) AND
- MSCI 475L - Marine Ecology Laboratory (1 credit)
- MSCI 477 - Ecology of Coral Reefs (3)
- MSCI 479 - Marine Benthic Ecology (3 credits) AND
- MSCI 479L - Marine Benthic Ecology Laboratory (1 credit)
- MSCI 495 - Marine Environmental Issues (3 credits) AND
- MSCI 495L - Marine Environmental Issues Laboratory (1 credit)
- Or other courses as designated by the department

Choose one from the following (3 credits):
- ECON 320 - Environmental Economics
- ECON 321 - Government and Business
- ECON 333 - Economics of Energy
- ECON 354 - Urban and Real Estate Economics
- HRTM 150 - Tourism and Society
- Or other courses as designated by the department

Electives (13-23 Credits)

Total Credits Required: 120 Credits

Sustainability and Coastal Resilience, B.S.
   Science and Ecosystems Concentration

Mission Statement

The Sustainability and Coastal Resilience program supports student development of strong competencies in Sustainability, with special focus areas in Sustainable Ecosystems, Economics, and Policy and Culture. Students in the program examine the environmental, economic, ethical, political, and social dimensions of sustainability for a holistic perspective on major global challenges as well those specifically related to coastal communities. With sustainability as a future global goal in mind, students develop strong critical reasoning and systems thinking skills for personal and professional development.

Student Learning Outcomes

When students complete the program in sustainability, they will be able to:
1. State and explain the principles, concepts, and processes of sustainability.
2. Analyze the concepts and methods of environmental science, economics, politics and geography relevant to the sustainability of environmental resources and social institutions.
3. Apply these concepts and methods to developing sustainable strategies and institutions for water, land, air, and urban management at the local to global level.
4. Communicate and synthesize knowledge of sustainability through interactions with the academic, governmental, and local communities.
5. Use systems thinking to analyze the interconnectedness of the multiple aspects of sustainability.

Degree Requirements (120 Credits)

Students must earn a grade of 'C' or better in each course used to satisfy foundation and major requirements.
Core Curriculum Requirements

Core Curriculum (38-40 Total Credit Hours)

Graduation Requirements

Graduation Requirements (3-7+ Credits) *

Foundation Requirements (26 - 29 Credits) *

Complete the following courses (20-21 credits):
- SUST 122 - Introduction to Sustainability (3 credits)
- BIOL 121 - Biological Science I (3 credits) AND
- BIOL 121L - Biological Science I Laboratory (1 credit)
  OR
- MSCI 111 - Introduction to Marine Science (3 credits) AND
- MSCI 111L - The Present-Day Marine Environment Laboratory (1 credit)
- CBAD 302 - Business Sustainability (3 credits)
- GEOG 120/ANTH 120 - Cultures and Environments (3 credits)
- GEOG 201 - Introduction to Physical Geography (3 credits) AND
- GEOG 201L - Introduction to Physical Geography Laboratory (1 credits)
- STAT 201 - Elementary Statistics (3 credits) AND
- STAT 201L - Elementary Statistics Computer Laboratory (1 credit)
  OR

- CBAD 291 - Business Statistics (3 credits)

Choose two from the following (6-8 credits):
- BIOL 122 - Biological Science II (3 credits) AND
- BIOL 122L - Biological Science II Laboratory (1 credit)
- BIOL 370 - Principles of Ecology (3 credits)
- CBAD 120Q – Introduction to the Global Culture of Business (3 credits)
- ECON 101 - Survey of Economics (3 credits)
- GEOG 200 - Digital Earth (3 credits)
- POLI 101 - Introduction to World Politics (3 credits)
- MSCI 112 - The Origin and Evolution of the Marine Environment (3 credits) AND
- MSCI 112L - Marine Environment Laboratory (1 credit)
- MSCI 302 - Marine Biology (3 credits) AND
- MSCI 302L - Marine Biology Laboratory (1 credit)
- PUBH 121 - Personal and Community Health (3 credits)
- Or other courses as designated by the department

* Course credit hours only count once toward the total university graduation credit hour requirements.

Major Requirements (30-33 credits)

Required Courses (12 credits)
Complete the following courses:
- SUST 301 – Environmental and Coastal Resilience (3 credits)
- SUST 302 – Sustainability and Community Resilience (3 credits)
- SUST 310 – Methods in Sustainability (3 credits)
- SUST 499 – Sustainability Capstone (3 credits)

Experiential Learning Requirement (3 credits)
Choose one of the following options:
- SUST 325Q - Service in Sustainability (3 credits)
- SUST 380 – Emergency Preparedness and Disaster Resilience (3 credits)
- SUST 495 - Sustainability Internship (3 credits)
- An approved Study Abroad Experience or Field Semester can be substituted.

Science and Ecosystems Concentration (15-18 credits)
Choose three from the following (9-12 credits):
- BIOL 481 - Freshwater Ecology (3 credits) AND
- BIOL 481L - Freshwater Ecology Laboratory (1 credit)
- BIOL 484 - Conservation Ecology (3 credits) AND
- BIOL 484L - Conservation Ecology Laboratory (1 credit)
- BIOL 485 - Vertebrate Zoology (3 credits) AND
- BIOL 485L - Vertebrate Zoology Laboratory (1 credit)
- BIOL 488 - Wetland Plant Ecology (3 credits) AND
- BIOL 488L - Wetland Plant Ecology Laboratory (1 credit)
- ENVI 201 – Introduction to Environmental Science (3 credits) AND
- ENVI 201L Introduction to Environmental Science Laboratory (1 credit)
- GEOG 204 Introduction to Geographic Information Systems GIS (3 credits)
- GEOG 311Q Earth Observation (3 credits)

- GEOG 320 Introduction to Weather and Climate (3 credits)
- MSCI 331 - Introduction to Geographic Information Systems (GIS) and Remote Sensing (3 credits) AND
- MSCI 331L - Introduction to Geographic Information Systems Laboratory (1 credit
- MSCI 401 - Environmental Chemistry (3 credits) AND
- MSCI 401L - Environmental Chemistry Laboratory (1 credit)
- MSCI 475 - Marine Ecology (3 credits) AND
- MSCI 475L - Marine Ecology Laboratory (1 credit)
- MSCI 477 - Ecology of Coral Reefs (3)
- MSCI 479 - Marine Benthic Ecology (3 credits) AND
- MSCI 479L - Marine Benthic Ecology Laboratory (1 credit)
- MSCI 495 - Marine Environmental Issues (3 credits) AND
- MSCI 495L - Marine Environmental Issues Laboratory (1 credit)
- Or other courses as designated by the department

Choose one from the following (3 credits):
- ANTH 300/GEOG 300 - Human Landscapes (3 credits)
- ANTH 391Q - Ethnographic Methods (3 credits)
- ANTH 432 - Cultural Resource Management (3 credits)
- GEOG 341 - Geography of Food and Agriculture (3 credits)
- GEOG 452Q - Digital Heritage: Virtual Landscapes (3 credits)
- HIST 311 - Environmental History (3 credits)
- PHIL 319 - Environmental Ethics (3 credits)
- POLI 371 - Public Policy (3 credits)
- POLI 420 - Global Environmental Politics (3 credits)
- POLI 421Q - Sustainable Development (3 credits)
- POLI 422 - Energy Policy (3 credits)
- POLI 438 - International Human Rights (3 credits)
- POLI 457 - Environmental Law (3 credits)
- PUBH 320 - Public Health Policy and Advocacy (3 credits)
- PUBH 333 - Environmental Health (3 credits)
- PUBH 375 - Global Health Perspectives (3 credits)
- PUBH 440 - Gender, Culture, Literacy and Disparities in Health (3 credits)
- SOC 480 - Environmental Sociology (3 credits
- SUST 350 - Sustainable Systems in Historical Perspective (3 credits)
- WGST 303 - Water and Women (3 credits)
- Or other courses as designated by the department

Choose one from the following (3 credits):
- ECON 320 - Environmental Economics
- ECON 333 - Economics of Energy
- ECON 321 - Government and Business
- ECON 354 - Urban and Real Estate Economics
- HRTM 150 - Tourism and Society
- Or other courses as designated by the department

Electives (11-23 Credits)

Total Credits Required: 120 Credits

Total Credit Hours Required: 120

Curriculum by Year					
Course Name	**Credit Hours**	**Course Name**	**Credit Hours**	**Course Name**	**Credit Hours**
Year 1					
Fall		**Spring**		**Summer**	
SUST 122—Human and Social Behavior	3	ENGL 102	4		
UNIV 110	3	BIO 121 or MSCI 111—Scientific Concepts	3		
ENGL 101	4	BIO 121L or MSCI 111L—Scientific Concepts Lab	1		
CORE—Critical Thinking and Reasoning	3	ELECTIVE	3		
ELECTIVE	3	ELECTIVE	3		
Total Semester Hours	16	Total Semester Hours	14		
Year 2					
Fall		**Spring**		**Summer**	
Foundation Elective	3	Foundation Elective	3		
GEOG 201	3	CBAD 291—Quantitative Literacy	3		
GEOG 201L	1	CORE—Communication Across Cultures	5		
POLI 201 or HIST 201	3	ELECTIVE	3		
CORE—Humanistic Thought	3				
ELECTIVE	3				
Total Semester Hours	16	Total Semester Hours	14		
Year 3					
Fall		**Spring**		**Summer**	
SUST 301	3	SUST 302	3		
SUST Concentration Course 1	3	SUST Concentration Course 3	3		
SUST Concentration Course 2	3	CORE—Humanistic Thought	3		
CBAD 302	3	ELECTIVE	3		
ELECTIVE	3	ELECTIVE	3		
Total Semester Hours	15	Total Semester Hours	15		
Year 4					
Fall		**Spring**		**Summer**	
SUST 310	3	SUST 499	3		
SUST Experiential Learning Requirement	3	SUST Concentration Course 4	3		
GEOG 120—Human and Social Behavior	3	SUST Concentration Course 5	3		
CORE—Artistic Expression	3	ELECTIVE	3		
ELECTIVE	3	ELECTIVE	3		
Total Semester Hours	15	Total Semester Hours	15		

Similar Programs in South Carolina offered by Public and Independent Institutions

No other university in the USA offers an undergraduate degree in Sustainability and Coastal Resilience. In South Carolina, there are no other public institutions offering a degree in sustainability. Furman University offers a degree in Sustainability Science and Winthrop University offers a BA and BS in Environmental Studies and a minor in Sustainability. Thus, Coastal Carolina University will be the first public institution in South Carolina to offer an undergraduate degree with a focus on sustainability.

Program Name and Designation	Total Credit Hours	Institution	Similarities	Differences
Sustainability Science, B.S.	128 credits	Furman University	Interdisciplinary; similar core courses in major	No Bachelor of Arts option; not as much emphasis on policy and culture; focus on security; nothing about coastal resiliency; fewer course offered in area of sustainable business

Faculty

Rank and Full- or Part-time	Courses Taught for the Program	Academic Degrees and Coursework Relevant to Courses Taught, Including Institution and Major	Other Qualifications and Relevant Professional Experience
Assistant Professor, joint appointment with Honors College	SUST 302, SUST 499	Ph.D. in Community Research and Action (Vanderbilt University) M.S. in Community Research and Action (Vanderbilt University) M.P.S. in Environmental and Forest Biology (SUNY College of Environmental Science and Forestry)	Scholarly publications and conference presentations
Assistant Professor, joint appointment with Honors College	SUST 325, SUST 350 SUST 495	Ph.D. in American Studies (University of Texas at Austin) M.A. in American Studies and History (Purdue University)	Scholarly publications and conference presentations, including the book *City in a Garden: Environmental Transformations and Racial Justice in Twentieth Century Austin, Texas*.
Lecturer	SUST 122	M.S. in Environmental Sciences and Policy (Johns Hopkins University)	Publication of policy papers; successful relevant grant-writing
Assistant Professor, joint appointment with IDS	SUST 301, SUST 310, SUST 499	Ph.D. in an interdisciplinary field with a research focus on Sustainability or Environmental Studies	Anticipated start date: August 2020.
Assistant Professor, joint appointment with IDS	SUST 301, SUST 310, SUST 499	Ph.D. in an interdisciplinary field with a research focus on Sustainability or Environmental Studies	Anticipated start date: August 2020.
Assistant Professor, full-time in SUST	SUST 301, SUST 310, SUST 499	Ph.D. in Sustainability or in comparable field with a research focus on Sustainability or Environmental Studies	Anticipated start date: August 2021.
Assistant Professor, full-time in SUST	SUST 301, SUST 325, SUST 499	Ph.D. in Sustainability or in comparable field with a research focus on Sustainability or Environmental Studies	Anticipated start date: August 2022.

Total FTE needed to support the proposed program:
Faculty: 2.86
Staff: .13
Administration: .14

Faculty, Staff, and Administrative Personnel

While CCU has many talented faculty at this institution who are experts in these areas of sustainability, no faculty are committed to this area full time. For this degree to be successful, the department requested **two new hires** to build new course offerings, provide experiential learning opportunities, to oversee the curriculum coordination and programmatic assessment, as well as provide academic advising. The average salary for the two-digit CIP code 30. (Multi/Interdisciplinary Studies) for a New Assistant Professor is $68,488. Administrative support for the major can be covered by the Center for Interdisciplinary Studies administrative staff. Costs for this new program will be entirely covered by tuition generated by enrollment.

Year	New		Existing		Total	
	Headcount	FTE	Headcount	FTE	Headcount	FTE
Administration						
2021-2022	0	0.00	1	0.14	1	0.14
2022-2023	0	0.00	1	0.14	1	0.14
2023-2024	0	0.00	1	0.14	1	0.14
2024-2025	0	0.00	1	0.14	1	0.14
2025-2026	0	0.00	1	0.14	1	0.14
Faculty						
2021-2022	1	1.00	5	0.14	6	1.14
2022-2023	1	1.00	6	1.43	7	2.43
2023-2024	0	0.00	7	2.86	7	2.86
2024-2025	0	0.00	7	2.86	7	2.86
2025-2026	0	0.00	7	2.86	7	2.86
Staff						
2021-2022	0	0.00	1	0.13	1	0.13
2022-2023	0	0.00	1	0.13	1	0.13
2023-2024	0	0.00	1	0.13	1	0.13
2024-2025	0	0.00	1	0.13	1	0.13
2025-2026	0	0.00	1	0.13	1	0.13

Resources

Library and Learning Resources

Kimbel Library and Bryan Information Commons has holdings of over 450,000 items in all formats. The library has access to over 120,000 periodicals: magazines, newspapers, scholarly journals, and proceedings in print and online formats and provides access to its holdings and to over 140 online citation, abstracting, full-text and reference resources via the World Wide Web at (http://www.coastal.edu/library). Library instruction sessions are available to all academic departments covering general library usage as well as project or course-specific sessions for upper-level research-oriented courses. Coastal Carolina University fully supports and participates in PASCAL (Partnership Among South Carolina Academic Libraries), South Carolina's academic library consortium. Students have

access to books from other South Carolina academic libraries through PASCAL Delivers, a rapid book delivery service provided by PASCAL.
Library holdings are as follows:

Monographs
Broad subject areas for sustainability and related fields were identified for this program. Kimbel Library currently has 4,302 print and electronic books.

Audiovisual
The library provides access to streaming video in support of the sustainability curriculum, and currently has 439 relevant titles available on streaming video and 7 DVDs.

Serials and Subscriptions
Kimbel Library currently provides access to over 103 peer reviewed journals focused on sustainability and an additional 833 peer reviewed journals about the environment and related fields. Online access is provided via aggregator databases, publisher packages, open access titles, and direct online subscriptions.

Current access points for sustainability journals and related resources include, but are not limited to:
- JSTOR: Sustainability
- Liebert Online
- Environment Complete
- GreenFIILE
- ProQuest Dissertations & Theses Global
- ScienceDirect
- Web of Science

Student Support Services

Advising
Core faculty will provide advising support without additional cost to initiate the program. All university-wide academic support services (e.g., the Writing Center, Math Lab, Tutoring, Office of Disability Services, etc.) are available to these new majors, as they are to all students.

Counseling Services
Counseling Services are offered to CCU students to assist students in defining and accomplishing their personal and academic goals. Services include:
- Treating mental health concerns,
- Preventing psychological difficulties,
- Educating students to live emotionally and behaviorally healthy lives, and
- Contributing to a healthy campus environment.

Services also include individual, couples and group counseling; psychiatric services; crisis intervention; assessment; nutritional counseling; drug and alcohol education; referrals; and consultation. The aim of Counseling Services is to produce graduates who are healthy citizens. Counseling Services adheres to the standard professional procedure regarding confidentiality of information and records are not part of any other CCU records.

Accessibility and Disability Services
Accessibility and Disability Services offers students with physical, psychological or learning disabilities accommodations and assistance. With appropriate documentation, counselors determine accommodations needed to assist students in taking full advantage of their CCU educational opportunities. Ongoing disability coaching is offered to assist students with disabilities to help ensure their success at CCU. Students should register to access services and accommodations.

Physical Resources/Facilities

This program does not require any special physical resources/facilities beyond what CCU's classrooms and offices already provide.

Newly proposed courses will predominantly take place in classroom space in Kearns Hall. Kearns 108, specifically, features a new Sci-Art Lab that students in this major will utilize. Portions of the major will take place in the field, but most of the existing courses that we draw upon will continue to be held in the classrooms/labs in which they are currently being offered.

Equipment

This program does not require any special equipment or labs beyond what CCU's classrooms and offices already provide.

Impact on Existing Programs

Will the proposed program impact existing degree programs or services at the institution (e.g., course offerings or enrollment)? If yes, explain.

☐Yes
☒No

Financial Support

	Sources of Financing for the Program, by Year											
	1st		2nd		3rd		4th		5th		Grand Total	
Category	New	Total	New	Total	New	Total	New	Total	New	Total	New	Total
Tuition Funding	$214,687	$214,687	$418,054	$418,054	$568,554	$568,554	$704,194	$704,194	$697,152	$697,152	$2,602,641	$2,602,641
Program-Specific Fees	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Special State Appropriation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Reallocation of Existing Funds	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Federal, Grant or Other Funding	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total	**$214,687**	**$214,687**	**$418,054**	**$418,054**	**$568,554**	**$568,554**	**$704,194**	**$704,194**	**$697,152**	**$697,152**	**$2,602,641**	**$2,602,641**
Estimated Costs Associated with Implementing the Program, by Year												
	1st		2nd		3rd		4th		5th		Grand Total	
Category	New	Total	New	Total	New	Total	New	Total	New	Total	New	Total
Program Administration and Faculty/Staff Salaries	$122,097	$122,097	$242,353	$242,353	$290,148	$290,148	$295,951	$295,951	$301,870	$301,870	$1,252,419	$1,252,419
Facilities, Equipment, Supplies, and Materials		$0		$0		$0		$0		$0	$0	$0
Library Resources		$0		$0		$0		$0		$0	$0	$0
Total	**$122,097**	**$122,097**	**$242,353**	**$242,353**	**$290,148**	**$290,148**	**$295,951**	**$295,951**	**$301,870**	**$301,870**	**$1,252,419**	**$1,252,419**
Net Total (Sources of Financing Minus Estimated Costs)	**$92,590**	**$92,590**	**$175,701**	**$175,701**	**$278,406**	**$278,406**	**$408,243**	**$408,243**	**$395,282**	**$395,282**	**$1,350,222**	**$1,350,222**

Note: New costs - costs incurred solely as a result of implementing this program. Total costs - new costs; program's share of costs of existing resources used to support the program; and any other costs redirected to the program.

Budget Justification

Program cost-effectiveness and return-on-investment are evaluated institutionally using an induced revenue/expense model. As shown in the Financial Support table, tuition revenues are based on a 15-credit course load for each student projected to enroll in the program. These revenues represent course revenues derived from both program and general education curriculum requirements. The expenses shown in the Financial Support table represent direct expenses necessary for delivering program courses and administration. Due to an undergraduate program's inducement of additional general education expenses, as well as overall institutional operational expenses, the university uses a 50% gross academic margin assessment to ensure that new programs will provide sufficient revenues to support their expense impact on institutional operations.

To derive gross academic margin, the university calculates total induced revenue ($2,602,641 for the period) minus total direct expenses ($1,252,419 for the period) divided by total induced revenue ($2,602,641 for the period). [(Revenue-Expenses)/Revenue]

For a program to be considered cost-effective, the university looks for undergraduate programs to produce a gross academic margin of 50% or better. The 50% threshold is due to undergraduate participation in the general education curriculum, as well as greater undergraduate reliance on university operational resources. This program's gross academic margin is 51.88% for the period, which indicates that it has a strong likelihood of producing sustainable revenues.

Evaluation and Assessment

Program Objectives	Student Learning Outcomes Aligned to Program Objectives	Methods of Assessment
Knowledge of key concepts in field	State and explain the principles, concepts, and processes of sustainability.	Written assignments and oral presentations across courses in the major; capstone projects; pre- and post-test in SUST 122
Knowledge of interdisciplinary methodologies and theories	Analyze the concepts and methods of environmental science, economics, politics and geography relevant to the sustainability of environmental resources and social institutions.	Written assignments and oral presentations in courses across the majors, specifically in SUST 301, SUST 302, and SUST 310; capstone projects
Knowledge of praxis-based skills leading to effective application	Apply these concepts and methods to developing sustainable strategies and institutions for water, land, air, and urban management at the local to global level.	Capstone projects; experiential learning projects in SUST 315, SUST 380, SUST 410
Knowledge of discipline-specific theory and praxis	Use systems thinking to analyze the interconnectedness of the multiple aspects of sustainability.	Capstone projects; experiential learning projects in SUST 315, SUST 380, SUST 410
Knowledge of information literacy and communication skills	Communicate and synthesize knowledge of sustainability through interactions with the academic, governmental, and local communities.	Capstone projects; community engagement projects in SUST 122, SUST 301, SUST 302, and experiential learning courses

Each assessment cycle will involve the assessment of two different SLOs. Data will be gathered, analyzed, and a detailed report prepared. The assessment results will be used to drive changes to methods or SLOs for subsequent assessments. This assessment schedule affords the opportunity to make changes to the program after analysis and dissemination of assessment results and before data are collected for the next assessment cycle.

Assessment will be based on data from multiple sources using both direct and indirect methods. Direct assessment methods will evaluate the skills of students by testing factual knowledge or skills. Indirect methods will evaluate the interpretation of learning achieved.

In accordance with existing assessment procedures at CCU, the Value Rubric will be employed in evaluation of student work. For each of the above SLOs, the score or evaluation scale will consist of:
"Accomplished (4)"; "Proficient (3)"; "Developing (2)"; "Beginning (1)"; and "Null (0)." The expectation is that all graduating seniors will score "Proficient (3)" or above for each of the four assessment categories.

Accreditation and Licensure/Certification

Will the institution seek program-specific accreditation (e.g., CAEP, ABET, NASM, etc.)? If yes, describe the institution's plans to seek accreditation, including the expected timeline.

☐Yes

☒No

Will the proposed program lead to licensure or certification? If yes, identify the licensure or certification.

☐Yes

☒No

Explain how the program will prepare students for this licensure or certification.

If the program is an Educator Preparation Program, does the proposed certification area require national recognition from a Specialized Professional Association (SPA)? If yes, describe the institution's plans to seek national recognition, including the expected timeline.

☐Yes

☒No