

Graduate Certificate in E-STEM Education

I. Statement of Purpose:

The proposed 12-hour graduate certificate in E-STEM Education (Environment - Science, Technology, Engineering, and Math) is designed for graduate students from all disciplines who wish to focus on issues related to STEM education within the contexts of sustainable management of the environment and natural resources. The goal of the E-STEM Education certificate is to provide graduate students with a comprehensive educational foundation for understanding local and global environmental issues, and the analytical skills needed to effectively implement appropriate environmental education instructional strategies for varying audiences. The E-STEM Education certificate program integrates environmental education concepts, teaching methodology and best practices, and issues and actions in environmental education.

As proposed, the E-STEM Education certificate requires 12 credit hours (four graduate courses) and is aligned with the competencies required for programs seeking the North American Association for Environmental Education Accreditation in Environmental Education (NAAEE): Distinguished Higher Education Programs. It is the desire of the Department of Interdisciplinary Learning and Teaching (ILT) in the College of Education and Human Development (COEHD) to seek national accreditation from NAAEE approximately two years after implementation of the certificate program.

Conceptual Framework

Much of the work in environmental education is guided by the *Belgrade Charter* (UNESCO-UNEP, 1976) and the *Tbilisi Declaration* (UNESCO, 1978). These two documents furnish an internationally accepted blueprint for environmental education. The *Belgrade Charter* provides a widely accepted goal statement for environmental education:

The goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones.

Two years later, at the world's first intergovernmental conference on environmental education, the *Tbilisi Declaration* was adopted. This declaration built on the Belgrade Charter and established three broad goals for environmental education. These goals provide the foundation for much of what has been done in environmental education since 1978:

- *To foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas;*

- *To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment;*
- *To create new patterns of behavior of individuals, groups and society as a whole towards the environment.*

The *Tbilisi Declaration* (1978) also established a globally recognized definition of EE still used today:

Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action. (UNESCO, p. 2)

The generally accepted purpose of environmental education today is built upon the *Belgrade Charter* and the *Tbilisi Declaration*; that is, to provide individuals with the knowledge and skills necessary to protect and improve the environment for all living things. **The purpose of the E-STEM Education Graduate Certificate is to provide the skills and knowledge necessary for the sustainability of the environment and its natural resources to UTSA graduate students for them to be able to share them with others as environmental educators.**

Specification of Licensure/Accreditation Standards and proof of meeting standards: Much of the scholarly work in environmental education focuses on describing environmental literacy—the types of knowledge, skills and dispositions that describe the environmentally literate citizen. In 1993, NAAEE initiated the National Project for Excellence in Environmental Education that developed the *Guidelines for the Preparation and Professional Development of Environmental Educators* (NAAEE, 2010). These *Guidelines* describe what educators need to know and be able to do as environmentally literate citizens. In 2014, NAAEE approved a national accreditation process to recognize exemplary EE programs in higher education. The accreditation is based on the competencies in these *Guidelines*. The competencies of environmental literacy as outlined in the *Guidelines* represent the conceptual framework of the E-STEM Education certificate. To that end, with the establishment of the E-STEM Education certificate, UTSA becomes eligible to seek national accreditation in Environmental Education from NAAEE.

In 2007, the Texas Association for Environmental Education (TAEE), a state affiliate to NAAEE, adopted the NAAEE *Guidelines* and developed an application and certification process to certify environmental educators within the state. Students, upon finishing the E-STEM Education certificate students will be eligible to apply for the Texas Environmental Educator Certification. The coursework offered through the proposed E-STEM Education certificate will meet the competency requirements of state certification. Several current ILT faculty members at UTSA have extensive training and coursework background in the area of environmental education. For example, Dr. Christine Moseley (PhD in Environmental Science, emphasis in Environmental Education) currently serves on both the state committee responsible for revising the Texas certification process and the national committee, which establishes the NAAEE accreditation process. In addition, Drs. Elizabeth Pate, Maria Arreguin-Anderson, Guadalupe

Carmona, Brian Fortney, and John Sutterby all have the necessary graduate level training, teaching experiences, and research backgrounds to teach coursework in curriculum and instruction and early childhood education with an environmental education focus.

It is important to note that while the coursework required to complete the certificate in E-STEM Education at UTSA would prepare students to apply for the Texas Environmental Educator Certification (TEEC), the graduate certificate will be a stand-alone recognition. Completion of the certificate does not require students to apply for TEEC and is separate from the state level certification provided by TAAE.

In addition, Texas does not award teacher certification or endorsement in environmental education. However, the Texas Environmental Education Advisory Council (TEEAC), a subcommittee of Texas Education Agency (TEA) offers a Certificate of Recognition in EE to teachers who complete a minimum of 45 hours in approved professional development experiences. Teachers who complete the E-STEM Education certificate at UTSA will have satisfied these professional development requirements and be eligible to apply for the TEEAC Certificate of Recognition in EE. Accordingly, UTSA is already recognized as an official provider of quality environmental education professional development by TEEAC.

Certificate programs also provide opportunities for postgraduate training to those with undergraduate degrees. Certificate programs are narrower in scope and shorter in duration than master's degrees. The E-STEM Education Certificate is designed to meet the needs of multiple populations:

- environmental educators who want to apply for Texas Environmental Educator Certification and recognize that the graduate certificate will assist them in the application process;
- professionals who are pursuing an MAED degree with a concentration in Curriculum and Instruction or Early Childhood and Elementary Education who would like an environmental education specialization;
- professionals who already hold a Master's degree but wish to specialize in a graduate level certificate in environmental education;
- certified teachers who wish to receive the TEEAC Certificate of Recognition in EE; (e) professionals pursuing a doctoral degree in ILT with concentrations in Curriculum and Instruction or Early Childhood and Elementary Education who would like to focus their research and coursework on STEM education using the environment as an integrating context; and,
- professionals who are interested in a Master's degree but want to start with a certificate.

There is no other similar certificate offered within Bexar County or the surrounding area, especially a graduate level certificate that prepares students for application for the Texas EE Certification. Moreover, there currently exists no higher education environmental education program in Texas that is nationally accredited by NAAEE. This certificate, as aligned to the national accreditation requirements, will allow UTSA to seek national accreditation in the near future.

Link to Existing Programs: The certificate in E-STEM Education will be housed in ILT. The certificate will be closely linked to the Curriculum and Instruction (C&I) and Early Childhood and Elementary Education (ECE) concentration programs. Graduate students in both C&I and ECE will have the option to choose the hours accrued via certificate as their support courses for the MAED, resulting in no additional course load requirements for these students. The certificate in E-STEM Education is also open to eligible students from other programs in the COEHD or other colleges, and for eligible Special graduate students.

II. Statement of Need:

The purpose of the proposed certificate is to meet an identified need expressed by graduate students and educators with interests in working professionally in the field of environmental education. The certificate program will provide graduate students an interdisciplinary perspective in understanding, interpreting, and dealing with both environmental issues and challenges. This approach enables students to focus on a broad spectrum of issues and content related to the sustainability of natural resources and the environment.

The primary focus of this program will be on the acquisition of the skills necessary to address state and national guidelines for environmental education. Since environmental education is frequently integrated into the curriculum rather than addressed as a separate subject, the certificate program will help students acquire program development competencies while increasing their understandings of societal interactions with ecological systems. Additionally, the certificate program will assist individuals who work in, or desire to participate in, non-formal educational settings in curriculum development, creating and presenting professional development opportunities for teachers, or working in agencies that offer supporting programs and services for classroom teachers. Examples of these sites include nature and environmental centers, parks, museums, zoos, etc. Prospective graduate students will include individuals with:

A. Undergraduate degrees in -

- natural resources (range, wildlife, soils, fisheries, etc.)
- education
- liberal arts (sociology, philosophy, etc.)
- traditional sciences (biology, chemistry, physics, geology, botany, etc.)
- forestry
- geography
- outdoor recreation
- environmental science

B. Careers such as -

- Teachers at all grade levels in both public and private schools.
- Outdoor educators and program directors in museums, science centers, nature centers and environmental education programs.
- University researchers and faculty.
- Natural resource managers.
- Instructors in experiential outdoor education programs.

- Executive directors and program managers for nonprofit field science schools.
- Outreach educators for advocacy and conservation groups

III. Statement of Resources:

No additional resources are needed for this certificate. The Curriculum and Instruction and the Early Childhood and Elementary Education graduate program areas, in the Department of Interdisciplinary Learning & Teaching employ quality faculty to direct and teach courses within the proposed certificate program. Existing courses, classrooms, and technologies will support the program delivery. One new course is being created for this certificate.

IV. Description of Curriculum:

The E-STEM certificate will be awarded to graduate students at the Masters or Doctorate level, who have completed 12 credit hours selected from six approved courses. The E-STEM Education certificate requires 12 credit hours (four graduate courses) whose course objectives and assignments are aligned with the NAAEE Accreditation in Environmental Education: Distinguished Higher Education Programs requirements and competencies. The 12 graduate credit hours for the E-STEM Education certificate can be applied towards the MAED degree or the PhD in Interdisciplinary Learning and Teaching with a concentration in C&I or ECE if the student chooses to become a degree-seeking graduate student. However, this UTSA graduate certificate can be a stand-alone recognition that graduate students can complete as a non-degree seeking student. Completion of the certificate will prepare degree and non-degree seeking students to apply for the Texas Environmental Educator Certification (TEEC).

Table 1 demonstrates how the course offerings for the certificate align with TAAE and NAAEE expectations for competencies. Students completing the certificate will have the required coursework and experiences to prepare them to apply for the Texas Environmental Educator Certification. Requirements for the E-STEM Education certificate completion include:

- Completion of **12 graduate** hours of approved UTSA coursework with a GPA of 3.0 or above
- Completion of a project portfolio demonstrating competence in preparation and professional development of an environmental educator. The portfolio may include video and/or written samples of student skills.

A. Courses

Students have the opportunity to register for the courses as either a Curriculum and Instruction course or as an Early Childhood and Elementary course, depending on which concentration under the MAED they are pursuing. These courses are also available for graduate students who are not pursuing the E-STEM Education certificate, but would like to take one or more of the offerings as support courses towards their individual degrees.

C&I C&I 5933	Service-Learning
C&I 6733/ECE 6733	Fundamentals of Environmental Education
C&I 6773/ECE 6773	Environmental Education in the Curriculum
C&I 6513/ECE 6513	Grant Writing
C&I 6943/ECE 6943	Interdisciplinary Internship
C&I 6xxx/ECE 6xxx	Environmental Issues Investigation (new course)

B. Course Descriptions

C&I 5933. Service-Learning.

(3-0) 3 Credit Hours.

History, rationale, research, methodology, and outcomes of service-learning. Students will conceptualize, plan, and participate in a service-learning project. Emphasis is on how service can be incorporated into curriculum with a primary focus on learning.

C&I 6733/ECE 6733 Fundamentals of Environmental Education

(3-0) 3 hours credit.

Provides educators with the knowledge and skills necessary to incorporate quality environmental education into their instruction and curriculum. Explores the explanation of the theory, history, definition, national standards, and goals of environmental education. Provides an understanding of the professional roles and instructional methods and assessment strategies of environmental educators within the context of environmental education.

C&I 6773/ECE 6773 Environmental Education in the Curriculum

(3-0) 3 hours credit.

An exploration of the integration of environmental concepts and environmental education curricula into the total school curriculum. Using local, accessible outdoor locations, students will explore the many aspects that come together to create a "Sense of Place." This course will assist students to discover and interpret the natural history and critical environmental issues of their local communities through a variety of mediums. It is designed for educators who want to help learners of all ages to discover the wonders and intricacies of the natural world.

C&I 6513/ECE 6513 Grant Writing

(3-0) 3 hours credit.

Grant writing basics and specifics. The course is designed to help educators learn how to conceptualize, write, and submit a grant application. Students will learn how to identify funding entities, develop a theoretical and research base for grants, create timelines, and utilize grant-writing strategies.

C&I 6943/ECE 6943 Interdisciplinary Internship

3 or 6 hours credit. Prerequisite: Consent of student's graduate advisor.

Individually supervised experience in assigned placements for one semester to assist students in developing professional and leadership skills. May be taken for teaching internship or student teaching. Enrollment in C&I 6943 (3 credit hours) requires a total of 130 hours in the field and enrollment in C&I 6946 (6 credit hours) requires a total of 260 hours in the field. May be repeated for credit, but not more than 6 hours may be applied toward the M.A. in Education degree.

C&I 6xxx/ECE 6xxx Environmental Issues Investigation (New course)

(3-0) 3 hours credit.

Rationale and strategies for investigating environmental issues at local, state, regional, or national levels; select and implement actions to resolve issues through political, economic, legal, educational, and lifestyle avenues.

C. Course Scheduling

Two courses (6 hours) will be offered each fall and spring semesters; one course each summer, and one course every semester, respectively. Students will be able to complete the certificate coursework either in one or two academic years, depending on how many of the certificate courses they choose to take in any given semester.

	Fall 2015	Spring 2016	Summer 2016	Fall 2016	Spring 2017
C&I Support (at least 2 each semester)	C&I /ECE 6733 Fundamentals of EE C&I/ECE 6943/6 Interdisciplinary Internship	C&I/ECE 6513 Grant Writing C&I/ECE 6943/6 Interdisciplinary Internship	C&I 5933 Service Learning C&I/ECE 6943/6 Interdisciplinary Internship	C&I /ECE 6733 Fundamentals of EE C&I/ECE 6943/6 Interdisciplinary Internship	C&I/ECE 6513 Grant Writing C&I/ECE 6943/6 Interdisciplinary Internship
	C&I /ECE 6773 EE in Curr. C&I/ECE 6943/6 Interdisciplinary Internship	C&I /ECE 6xxx EE Issues C&I/ECE 6943/6 Interdisciplinary Internship	C&I 5933 Service Learning C&I/ECE 6943/6 Interdisciplinary Internship	C&I /ECE 6773 EE in Curr. C&I/ECE 6943/6 Interdisciplinary Internship	C&I /ECE 6xxx EE Issues C&I/ECE 6943/6 Interdisciplinary Internship

V. Faculty List:

Because this certificate draws from existing course offerings within the Department of Interdisciplinary Learning and Teaching, a fulltime, tenured or tenure-track faculty member from C&I or ECE program areas will be appointed to the certificate program. The Program Advisor, a qualified faculty member from ILT, will oversee admissions and advising activities for certificate applicants and students. Additional C&I and ECE faculty will support the program as needed. These include:

- Dr. Elizabeth Pate, Professor, C&I in Middle School Education
- Dr. Guadalupe Carmona, Associate Professor, C&I in STEM Education
- Dr. John Sutterby, Associate Professor, ECE
- Dr. Maria Anderson-Arreguin, Associate Professor, ECE
- Dr. Brian Fortney, Assistant Professor, C&I in Science Education

In addition, this certificate, interdisciplinary in nature, seeks collaboration and support from faculty in other disciplines and departments. ILT Faculty have a history of past academic collaborations in E-STEM Education with faculty in other departments, in the COEHD, College of Sciences, and College of Engineering, including:

- Dr. Aaron Cassill, Professor, Biology
- Dr. Stuart Birnbaum, Associate Professor, Geological Sciences
- Dr. Les Shephard, Professor, Civil and Environmental Engineering
- Dr. Drew Johnson, Professor, Civil and Environmental Engineering
- Dr. Heather Shipley, Professor, Civil and Environmental Engineering
- Dr. Lorena Claeys, Director, Academy of Teacher Excellence

VI. Program Administration:

The E-STEM Education certificate is a joint effort of faculty in the Curriculum and Instruction (C&I) and the Early Childhood and Elementary Education (ECE) graduate program areas. The E-STEM Education certificate will be housed in the Department of Interdisciplinary Learning and Teaching, whose faculty and staff will support graduate students in the program. The program advisor will be a qualified faculty member from the ILT department. The Program Advisor oversees admissions and advising activities for certificate applicants and students. The Program Advisor also will be responsible for overseeing the processes related to admissions' decisions, supervising students' progress, preparing certificate plans for students, and working with the Dean's Office in the College of Education and Human Development to certify students who have completed the certificate requirements. Students who declare the certificate but are not part of a graduate degree program will be admitted as special students in ILT. The Program Advisor will work with faculty members in the C&I and ECE graduate program areas within the department to make decisions about advising, recruitment, scheduling courses, and program policies. Certificates will be awarded upon completion of the 12 approved graduate courses with

a GPA of 3.0 or above, and successful completion of the environmental education project portfolio.

VII. Admissions Requirements:

As per the Graduate Catalog:

“Applicants who are currently enrolled in a graduate degree program at UTSA have already met University requirements for admission. In this case, no formal application process is necessary. The applicant should contact the Certificate Program Advisor and complete a form requesting permission to enter and complete the certificate program. If the request is approved, this form will be signed by the Certificate Program Advisor and the Dean of the College or Director of the Center in which the certificate program is housed. A copy of this form will be sent to the Graduate Advisor of Record for the student’s degree program, the department in which the applicant’s program is housed, and the Graduate School.”

“Students who are not currently enrolled in a graduate degree program will be required to apply for admission to UTSA as a special graduate student and to indicate their intent to seek admission into a certificate program. Applicants will be required to meet University admission requirements for special graduate student status. Once admitted as a special graduate student, the student will contact the Certificate Program Advisor and complete a form requesting permission to enter and complete the certificate program. The Certificate Program Advisor and the Dean of the College of Education and Human Development will sign the form. A copy of this form will be sent to the Graduate School.”

Admissions requirements will be the same as required for either graduate degree-seeking students or special graduate students. As stated in the Graduate Catalog for admission to the MAED: “Applicants without adequate preparation in education may be required to complete preparatory courses as a condition of admission. Individuals who do not meet the University-wide graduate admission grade point average standard may be required to submit Graduate Record Examination (GRE) scores for consideration in admission decisions. International students must have a minimum score of 79 on the TOEFL Internet-based test, 550 on the TOEFL paper-based test, or 6.5 on the IELTS.”

University-wide admission requirements that will also serve as admission requirements for this certificate include:

- D. The student must meet the grade point average requirement of 3.0 or higher (on a 4.0 scale) in all work counted as part of the degree program,
- E. No courses in which grades of less than “C” (below 2.0 on a 4.0 scale) were earned may be applied to a graduate degree, and
- F. To graduate, all graduate students must have a grade point average of at least a 3.0 (on a 4.0 scale) and be in good academic standing.

A maximum of 12 semester credit hours earned as a special graduate student may be applied toward a graduate degree, and then only when the student has been admitted as a graduate degree-seeking student and the credits earned for these courses have been evaluated and approved for this purpose by the appropriate Graduate Program Committee.

VIII. Projected Enrollments:

While the certificate is likely to draw new students to UTSA, it is also probable that current graduate students enrolled in C&I and ECE program areas will pursue the certificate as part of their coursework towards the MAED or PhD degrees in ILT. This certificate will increase the student's marketability in the field for internship and job placement upon completion of the degree. Many students in C&I and ECE are already asking about the certificate.

Projected Admissions and Enrollments

Year	One	Two	Three	Four	Five
Admissions	10	12	15	15	15
Enrollment	10	12	15	15	15

IX. Budget:

There are no additional funds requested in the management of this certificate beyond the specific fees associated with the courses.

X. Endorsements:

The E-STEM Education Certificate is a collaboration between two graduate program areas housed within the same department. Dr. Mari Cortez, Department Chair of ILT has reviewed, accepted the proposal and provided a letter of support.

XI. Evaluations/Reviews:

Evaluation of the certificate program will be conducted annually. Student portfolios will be used for a summative assessment. Student progress will be evaluated formatively based on success in E-STEM Education certificate coursework. The summative evaluation will include student GPA of 3.0 or better in the certificate area coursework and a final portfolio.

The final portfolio for the E-STEM Education certificate will be aligned with the required competencies for certification as a Professional Environmental Educator in Texas. Students will successfully complete evidence and reflections in each of the courses for inclusion in the E-STEM Education certificate portfolio. Upon completion of the E-STEM Education certificate and successful review of the portfolio, students may choose to submit their portfolio in the application packet towards state certification, sponsored by the Texas Association for Environmental Education. Each of the components in the submitted portfolio to TAEE will be evaluated by a panel of reviewers to determine if the competencies reflected are sufficient for certification as a Professional Environmental Educator in Texas. Faculty teaching the courses in the E-STEM Education certificate program will assure that both assignments and projects are aligned to the Texas Environmental Educator Certification requirements. Thus, students in the

program wishing to pursue the E-STEM Education certificate are aware of the state certification application process upon completion of the E-STEM Education certificate requirements

The Program Advisor and participating faculty will also assure that coursework and assignments are aligned with the competencies required for programs seeking the North American Association for Environmental Education Accreditation in Environmental Education: Distinguished Higher Education Programs. It is the desire of the department to seek national accreditation from NAAEE two years after implementation of the certificate program, in which a minimum of two years of data must be evident.

It is the student's responsibility to apply for his or her certificate by submitting a completed Application for Graduate Certificate to the Enrollment Services Center no later than September 15 for the Fall Semester, February 15 for the Spring Semester, or June 15 for the Summer Semester. The application of any student applying for a certificate after the established deadlines will be processed the following semester. The application form is located at <http://utsa.edu/registrar/forms.html>

XII. References

North American Association for Environmental Education. (2010). *Guidelines for the preparation and professional development of environmental educators*. Washington, DC: Author.

United Nations Educational, Scientific, and Cultural Organization (UNESCO). (1978). Tbilisi Declaration. *Connect* 3(1), 1-8.

Table 1
Competencies Required for:
Texas Environmental Educator Certification
NAAEE Certificate of Distinction in EE

Competencies	Evaluation Measures (Courses and/or Experiences)
<p>Theme 1. Environmental Literacy: Educators must be competent in the skills and understandings outlined in <i>Excellence in Environmental Education-Guidelines for Learning (K-12)</i>.</p> <p>1.1 Questioning, analysis, and interpretation skills 1.2 Knowledge of environmental processes and systems 1.3 Skills for understanding and addressing environmental issues 1.4 Personal and civic responsibility</p>	<p>C&I 6XXX C&I 6513</p> <p>Successful completion of community service learning project (score 80% or better)</p> <p>Successful completion of EE grant proposal(score 80% or better)</p> <p>Review and critique of Environmental issues case studies (score 80% or better)</p>
<p>Theme 2. Foundations of Environmental Education: Educators must have a basic understanding of the goals, theory, practice, and history of the field of environmental education.</p> <p>2.1 Fundamental characteristics and goals of environmental education 2.2 How environmental education is implemented 2.3 The evolution of the field</p>	<p>C&I 6733 C&I 6943</p> <p>Portfolio project completed with satisfactory or better score on rubric</p> <p>Successful completion of NAAEE National Guidelines Training</p>
<p>Theme 3. Professional Responsibilities of the Environmental Educator: Educators must understand and accept the responsibilities associated with practicing environmental education.</p> <p>3.1 Exemplary environmental education practice 3.2 Emphasis on education, not advocacy 3.3 Ongoing learning and professional development</p>	<p>C&I 6773 C&I 6733 C&I 6943 C&I 5933</p> <p>Portfolio project completed with satisfactory or better score on rubric</p> <p>Successful completion of community service learning project (score 80% or better)</p> <p>Successful completion of</p>

Competencies	Evaluation Measures (Courses and/or Experiences)
	teacher certification requirements for Project WILD, WET, Learning Tree, PopEd
<p>Theme 4: Planning and Implementing Environmental Education: Educators must combine the fundamentals of high-quality education with the unique features of environmental education to design and implement effective instruction.</p> <p>4.1 Knowledge of learners 4.2 Knowledge of instructional methodologies 4.3 Planning for instruction 4.4 Knowledge of environmental education materials and resources 4.5 Technologies that assist learning 4.6 Settings for instruction 4.7 Curriculum planning</p>	<p>C&I 6773</p> <p>Portfolio project completed with satisfactory or better score on rubric</p>
<p>Theme 5: Fostering Learning: Educators must enable learners to engage in open inquiry and investigation, especially when considering environmental issues that are controversial and require students to seriously reflect on their own and others' perspectives.</p> <p>5.1 A climate for learning about and exploring the environment 5.2 An inclusive and collaborative learning environment 5.3 Flexible and responsive instruction</p>	<p>C&I 6XXX C&I 6513 C&I 5933</p> <p>Successful completion of EE grant proposal (score 80% or better)</p> <p>Successful completion of community service learning project (score 80% or better)</p>
<p>Theme 6. Assessment and Evaluation: Environmental educators must possess the knowledge, abilities, and commitment to make assessment and evaluation integral to instruction and programs.</p> <p>6.1 Learners outcomes 6.2 Assessment that is part of instruction 6.3 Improving instruction 6.4 Evaluating programs</p>	<p>C&I 6773 C&I 6733</p> <p>Portfolio project completed with satisfactory or better score on rubric</p>