NSM 193: EMERGING LEADERS IN STEM

In Workflow

1. NSM College Committee Chair (tsk@csus.edu)
2. NSM Dean (datwyler@csus.edu)
3. Academic Services (torsetj@csus.edu;%20cnewsome@skymail.csus.edu)
4. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
5. Dean of Undergraduate (james.german@csus.edu;%20celena.showers@csus.edu)
6. Dean of Graduate (cnewsome@skymail.csus.edu)
7. Catalog Editor (torsetj@csus.edu)
8. Registrar's Office (wlindsey@csus.edu)
9. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Wed, 17 Feb 2021 23:42:20 GMT
   Thomas Krabacher (tsk): Approved for NSM College Committee Chair
2. Wed, 03 Mar 2021 23:16:54 GMT
   Shannon Datwyler (datwyler): Approved for NSM Dean

New Course Proposal

Date Submitted: Fri, 05 Feb 2021 18:39:10 GMT

Viewing: NSM 193 : Emerging Leaders in STEM

Last edit: Fri, 05 Feb 2021 18:39:09 GMT

Changes proposed by: Julie Fogarty (218645519)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Julie Fogarty	fogarty@csus.edu	916-278-7335

Catalog Title:
Emerging Leaders in STEM

Class Schedule Title:
Emerging Leaders in STEM

Academic Group: (College)
NSM - Natural Sciences & Mathematics

Academic Organization: (Department)
Natural Sciences and Mathematics

Will this course be offered through the College of Continuing Education (CCE)?
No

Catalog Year Effective:
Fall 2021 (2021/2022 Catalog)

Subject Area: (prefix)
NSM - Natural Sciences and Mathematics

Catalog Number: (course number)
193

Course ID: (For administrative use only.)
TBD

Units:
1

In what term(s) will this course typically be offered?
Fall, Spring

Does this course require a room for its final exam?

Yes, final exam requires a room

Does this course replace an existing experimental course?

No

This course complies with the credit hour policy:

Yes

Justification for course proposal:

As part of the development of a STEM leadership program encompassing both the Colleges of Natural Sciences & Mathematics (NSM) and Engineering & Computer Science (ECS) supported by NSF 1953752, this course provides students with professional skills that are not typically covered during their technical coursework, but are vital to their success in STEM careers.

The overarching STEM leadership program has both co-curricular and curricular (this course) components to ensure students at all levels have an opportunity to develop their leadership skills through various degrees of time/energy commitment. Sophomores through seniors can participate in this course to prepare them, not only for internships/careers, but the opportunity to take on a stipend-supported summer experience to propose, vet, and implement a project that impacts the local community and/or university.

A large portion of the content of this course was developed over the past several years for the ECS Hornet Leadership Program (ECS HLP) (started in 2018). That content was initially deployed through workshops to students supported by scholarships (ECS HLP Scholars) and this past year through ME 199 to ensure student accountability in completing tasks/participating in activities. That content is adapted and integrated with the Social Change Model for Leadership Development to be accessible to students enrolled in any STEM-related major for this new course.

Aspects of ECS HLP as well as the pilot NSM Peer Leadership Academy implemented as a summer experience in 2019 are being leveraged for this new overarching STEM Leadership Program (moving forward as the “new” Hornet Leadership Program).

The purpose of this course is to offer the leadership development content to a broader audience (beyond the ECS HLP Scholars which consisted of cohorts of 10 [2018-2019], 30 [2019-2020], and 40 [2020-2021]). Leadership skills have long been sought after by employers and graduate schools as they recruit students from both colleges. Formal leadership training that appears on student transcripts will distinguish Sac State students on graduate school and job applications.

The course classification was selected to be consistent with capstone courses (senior projects) offered in the College of Engineering & Computer Science which are experiential and exploratory laboratory-like settings with dedicated time for students to work in teams through project-based learning. The majority of the learning in this course will occur through students interacting with one another in activities involving real-life scenarios and case studies; this structure is more similar to a practical application laboratory experience capstone course than it is to a lecture or activity classification which typically involves significant instructor-led pedagogy. In this course, the instructor will provide prompts and resources and then give students the time and space to work effectively as a team to craft responses or propose solutions similar to a typical science/engineering laboratory environment.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)

This course focuses on in-depth leadership training for professional STEM success. Students will explore aspects of effective leadership, uncover their own leadership capacity and skills, and enhance their leadership prowess by studying and applying recognized best practices. Topics include setting personal and professional goals, becoming a productive team member, how to step into a leadership role, how to motivate team members, and how to develop productive work-flow processes.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Does this course require safety training?

No

Does this course require personal protective equipment (PPE)?

No

Does this course have prerequisites?

Yes

Prerequisite:

Sophomore standing (must have completed 30 units prior to registration).

Prerequisites Enforced at Registration?
Yes

Does this course have corequisites?
No

Graded:
Letter

Approval required for enrollment?
No Approval Required

Course Component(s) and Classification(s):
Laboratory

Laboratory Classification
CS#16 - Science Laboratory (K-factor=2 WTU per unit)
Laboratory Units
1

Is this a paired course?
No

Is this course crosslisted?
Yes

Do they meet together and fulfill the same requirement?
Yes

Please identify the crosslisted course:
ENGR 193

Can this course be repeated for credit?
No

Can the course be taken for credit more than once during the same term?
No

Description of the Expected Learning Outcomes: Describe outcomes using the following format: 'Students will be able to: 1), 2), etc.'
1. Identify their own perspective and make connections/comparisons across perspectives.
2. Plan, monitor, and assess their own learning.
3. Set personal and/or professional goals.
4. Identify and describe areas of practice enhanced by effective leadership.
5. Describe the professional and ethical responsibilities of STEM leaders.
6. Demonstrate the ability to communicate effectively and understand the importance of effective communications.
7. Describe the benefits and impacts of STEM contributions in a global, economic, environmental, and societal context.
8. Recognize the need and skills required for engaging in life-long learning.
9. Identify contemporary issues in STEM.

Attach a list of the required/recommended course readings and activities:
F21-NSM_193-Syllabus_Final.pdf

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above.
Participation (ELOs 1-9)
Assignments (ELOs 1-9)
Facilitating Peer Leadership Workshop (ELOs 4, 5, 6, 8)

For whom is this course being developed?
Majors in the Dept
Minors in the Dept
Majors of other Depts

Is this course required in a degree program (major, minor, graduate degree, certificate?)

No

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Knowledge of human cultures and the physical and natural world
Personal and social responsibility
Intellectual and practical skills

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?

No

Key: 14382