

NSM 193: STEM LEADERSHIP, ETHICS, AND SOCIAL CHANGE

In Workflow

1. NSM College Committee Chair (mikkel.jensen@csus.edu)
2. NSM Dean (datwyler@csus.edu)
3. Academic Services (catalog@csus.edu)
4. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
5. GE Crs Rev Subcommittee Chair (cappiello@csus.edu)
6. Dean of Undergraduate (james.german@csus.edu; renee.leonard@csus.edu)
7. Dean of Graduate (cnewsome@skymail.csus.edu)
8. Catalog Editor (catalog@csus.edu)
9. Registrar's Office (wlindsey@csus.edu)
10. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Wed, 19 Oct 2022 22:26:42 GMT
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
2. Fri, 21 Oct 2022 20:33:52 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean

History

1. Oct 12, 2022 by Julie Fogarty (fogarty)

New Course Proposal

Date Submitted: Wed, 12 Oct 2022 21:33:31 GMT

Viewing: NSM 193 : STEM Leadership, Ethics, and Social Change

Last approved: Wed, 12 Oct 2022 20:20:04 GMT

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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:

STEM Leadership, Ethics, and Social Change

Class Schedule Title:

STEM Leadership & Ethics

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 2023 (2023/2024 Catalog)

Subject Area: (prefix)

NSM - Natural Sciences and Mathematics

Catalog Number: (course number)

193

Course ID: (For administrative use only.)

203643

Units:

3

Changes to a course's units impact any related programs. As a result, a corresponding change must also be submitted for those programs

Is the only purpose of this change to update the term typically offered or the enforcement of existing prerequisites at registration?

No

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

Fall, Spring

Does this course require a room for its final exam?

No, final exam does not require a room (Last Class)

This course complies with the credit hour policy:

Yes

Justification for course proposal:

This course was originally developed to provide students with professional skills that are not typically covered during their technical coursework, but are vital to their success in STEM careers. Having now offered the course for three semesters, it is clear that a more significant focus should be placed on ethical-decision making as well as the historical and philosophical context for understanding the role of STEM leaders in society as a whole. This has led to a complete redesign of the course.

The goal of this course is to expose students to leadership development and ethics with special attention to the kinds of leadership and ethical dilemmas experienced by STEM leaders. This course is changing from a 1 unit laboratory course (3 hours per week in which students were engaging in discussion and activities, not physical labs) to a 3 unit writing intensive course in Area C2. Reframing the course in this way still provides students with an opportunity to develop skills necessary for success in their future STEM careers, but also helps them to engage with science and engineering from a humanities perspective while working on their written communication skills. This redesigned version of the course has been developed and will be taught by a part-time faculty member with a background in humanities (PhD in English) that has taught similar courses for engineering students at another institution (focused on ethics, leadership, and literature) and is currently working in the Office of Water Programs on campus as a technical writer.

While the target audience for this course is STEM students (all majors in ECS & NSM as well as specific majors from HHS and SSIS), it would be open to all interested students. 30 degrees are offered by NSM & ECS. Only three of those degrees have a required course that satisfies writing intensive requirements and none of them offer a course in upper-division Area C2. Many ECS and NSM students in high-unit majors are advised to double count their writing intensive course in Area C, so this proposal would provide one more opportunity to achieve that and will not impact other Area C Writing Intensive enrollments (a total of 19 courses exist that are writing intensive in C1/C2 based on the GE catalog). For example, in Fall 2022, 14 different courses, with a total of 31 sections are being offered to approximately 929 students. Offering this course would add a single section that served approximately 25 students.

Prerequisite removed - changing this to a writing intensive course requires the students to be at least at the junior level (having passed their Writing Proficiency for Juniors requirements) which is consistent with the target audience (upper-division students) of this course.

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

A writing intensive exploration of leadership and ethical theory applied to literature, film, and history with special attention to the kinds of leadership and ethical dilemmas experienced by STEM leaders. Students will employ critical thinking and writing skills to apply leadership and ethical theory to humanities texts; to inquire into specific problems and dilemmas in leadership; and to critically reflect on one's own values and ethics in one's own development as a leader.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Is this course designated as Curricular Community Engaged 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:

WPJ Score of 70+ or equivalent.

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):

Discussion

Discussion Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Discussion Units

3

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 and Assessment Strategies:

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	GE C2.1: Demonstrate knowledge of the conventions and methods of the study of the humanities.	Applying an Ethical Theory to a Text Essay Inquiry into a Leadership Challenge Personal-Critical-Reflective Essay
2	GE C2.2: Investigate, describe, and analyze the roles and effects of human culture and understanding in the development of human societies.	Reading Responses Applying an Ethical Theory to a Text Essay Inquiry into a Leadership Challenge Participation/class discussion

3	GE C2.3: Compare and analyze various conceptions of humankind.	Reading Responses Leadership Action Project and Reflection Personal-Critical-Reflective Essay Participation/class discussion
4	GE C2.4: Demonstrate knowledge and understanding of the historical development of cultures and civilizations, including their animating ideas and values.	Reading Responses Participation/discussion -Facilitating Peer Leadership Workshop
5	Analyze, compare, and critique various conceptions of leadership and ethics.	Reading Responses Leadership Action Project and Reflection Personal-Critical-Reflective Essay Participation/class discussion
6	Investigate, describe, analyze, and critically examine how various humanities texts engage with leadership and ethical dilemmas.	Reading Responses Applying an Ethical Theory to a Text Essay Inquiry into a Leadership Challenge Participation/class discussion
7	Compose formal writing projects reasoning logically and openly-mindedly about leadership and ethics via argument, inquiry, and synthesis.	Applying an Ethical Theory to a Text Essay Inquiry into a Leadership Challenge Personal-Critical-Reflective Essay
8	Investigate the historical development of Western and nonwestern ethical approaches and leadership theories, including their ramifications for cultural others and their cross-cultural dimensions.	Reading Responses Participation/class discussion
9	Reflect on one's own development as a leader and ethical thinker.	Action Project Reflection Personal-Critical-Reflective Essay Participation/class discussion

Attach a list of the required/recommended course readings and activities:

STEM Leadership, Ethics, and Social Change.docx
STEM Leadership, Ethics, and Social Change Alignment of Outcomes.docx

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?

Yes

In which GE area(s) does this apply?

C2. Humanities

Writing Intensive

Which GE objective(s) does this course satisfy?

Develop an acquaintance and understanding of cultures and major dynamic social institutions which affect one's life.

Read, write, and understand relatively complex and sophisticated English prose.

Find and use common information resources, engage in specialized library research, use computers and seek out appropriate expert opinion and advice.

Possess a significant and useful understanding of peoples from a diversity of cultures and backgrounds, including women and ethnic and other minority groups who have been the objects of prejudice and adverse discrimination within our society.

Construct a non-fallacious verbal argument, recognize fallacious arguments, and follow the verbal arguments of others.

Attach Course Syllabus with Detailed Outline of Weekly Topics:

STEM Leadership, Ethics, and Social Change.docx

Syllabi must include: GE area outcomes listed verbatim; catalog description of the course; prerequisites, if any; student learning objectives; assignments; texts; reading lists; materials; grading system; exams and other methods of evaluation.

Will more than one section of this course be offered?

No

General Education Details - Area C2: Humanities

Section 1.

Indicate in written statements how the course meets the following criteria for Area C2. Relate the statements to the course syllabus and outline. Be as succinct as possible.**Is broad in scope or survey in nature.**

This course is designed to help students examine various Western and nonwestern approaches to leadership and ethical decision-making through a study of humanities texts while reflecting on their own beliefs and values as a developing leader in STEM. The course focuses especially on cultural others and social change leadership. As such, its conceptual scope is wide.

Develops an understanding of and appreciation for the diversity of the human community.

Students in this course will study various leadership and ethical theories and test those theories by applying them to different literary texts, films, and historical events. Because leadership by definition involves making decisions that affect others, students will begin with a study of ethical approaches, discussing their affordances and limitations especially to cultural others—and applying the various theories to specific texts in literature, film, or history. Students will then study social change and other leadership theories, comparing their affordances and limitations—while inquiring into the responsibilities of scientific and other leaders and followers as evinced in humanities texts. Finally, students will focus on the particular challenges inherent in engaging with the cross-cultural “other” and the unknown and reflect on our own experiences as a leader and follower. The aim is to have students look at difference as a resource for illuminating assumptions and broadening their understanding both in their writing and in their development as ethical thinkers and leaders.

Develops a comprehensive understanding and appreciation of the heritage being studied and transmits a knowledge of the Western and Non-Western cultural heritage in the humanities. Students should be able to:**Demonstrate knowledge of the conventions and methods of the study of the humanities.**

Applying an Ethical Theory to a Text Essay (15%): An argumentative essay applying an ethical theory to a particular literary text or film. (1500 words)

Inquiry into a Leadership Challenge (15%): An inquiry paper investigating multiple perspectives, including engagement with humanities texts, on a self-selected leadership challenge. (1500 words)

Personal-Critical-Reflective Essay (20%): The final writing project braids together personal experience, critical engagement with class texts, and reflection on one's own challenges as a developing leader. (2000 words)

Investigate, describe, and analyze the roles and effects of human culture and understanding in the development of human societies.

Readings

- Griffin, Susan. *A Chorus of Stones*. (1992). 978-0385418850.
- Manning, Rita and Scott R. Stroud. (2008). *A Practical Guide to Ethics: Living and Leading with Integrity*. ISBN 978-0-8133-4382-2.
- Sagan, Carl. (2019). *Contact*. 978-1501197987.
- Humanities texts such as Le Guin's "The Ones Who Walk Away from Omelas," Glaspell's *Trifles*, Tanizaki's "In Praise of Shadows"
- Films such as *Contact* and *The Matrix* (watched in class)

Reading Responses

Applying an Ethical Theory to a Text Essay (15%): An argumentative essay applying an ethical theory to a particular literary text or film. (1500 words)

Inquiry into a Leadership Challenge (15%): An inquiry paper investigating multiple perspectives, including engagement with humanities texts, on a self-selected leadership challenge. (1500 words)

Participation/class discussion

Compare and analyze various conceptions of humankind.

Readings

- Komives, Susan and Wendy Wagner. (2016). Leadership for a Better World: Understanding the Social Change Model of Leadership Development ISBN 978-1119207597.
- Manning, Rita and Scott R. Stroud. (2008). A Practical Guide to Ethics: Living and Leading with Integrity. ISBN 978-0-8133-4382-2.
- Readings on specifics of transformational, servant, and other leadership theories.

Reading Responses

Leadership Action Project and Reflection (10%): Each student will engage in a leadership action project either within the class (i.e., leading a class discussion) or out of class and write a two-page reflection. This reflection assignment is scaffolded with notes to take before and after the action project and will be discussed in class. The reflection must include discussion and reflection on one class text. (500 words)

Personal-Critical-Reflective Essay (20%): The final writing project braids together personal experience, critical engagement with class texts, and reflection on one's own challenges as a developing leader. (2000 words)

Participation/class discussion

Demonstrate knowledge and understanding of the historical development of cultures and civilizations, including their animating ideas and values.

Readings

- Manning, Rita and Scott R. Stroud. (2008). A Practical Guide to Ethics: Living and Leading with Integrity. ISBN 978-0-8133-4382-2.

Reading Responses (specifically ones on cross-cultural leadership such as Eleanor Roosevelt's leading of the Universal Declaration of Human Rights) and Junichero Tanizaki's "In Praise of Shadows")

Participation/discussion

In presenting the contribution and perspectives of people, the coursework addresses at least two of the following:

- **Women**
- **Ethnicity**
- **Socio-economic status**
- **Religious affiliation**
- **Disabilities**
- **Gay & lesbians**

This course routinely identifies the roles of ethnicity, gender and socio-economic status in science, technology, and engineering contexts from a perspective of leadership and ethical decision making. Equity in the STEM, whether it is access to its benefits or exposure to its risks, is commensurate with gender, cultural, racial and economic equity.

Includes a writing component described on course syllabus

1) If course is lower division, formal and/or informal writing assignments encouraging students to think through course concepts using at least one of the following: periodic lab reports, exams which include essay questions, periodic formal writing assignments, periodic journals, reading logs, other. Writing in lower division courses need not be graded, but must, at a minimum, be evaluated for clarity and proper handling of terms, phrases, and concepts related to the course.

2) If course is upper division, a minimum of 1500 words of formal, graded writing. [Preferably there should be more than one formal writing assignment and each writing assignment (e.g. periodic lab reports, exams which include essay questions, a research/term paper etc.) should be due in stages throughout the semester to allow the writer to revise after receiving feedback from the instructor. Include an indication of how writing is to be evaluated and entered into course grade determination.]

- Reading Responses (20%): Reading Responses focus on grappling with the texts for the week in a way that practices the different approach of that unit (e.g., application of an ethical theory to a text; inquiry into a leadership problem; critical and personal reflection on an aspect of one's developing leadership). They are each two pages long (500 words).
- Applying an Ethical Theory to a Text Essay (15%): An argumentative essay applying an ethical theory to a particular literary text or film. (1500 words)
- Inquiry into a Leadership Challenge (15%): An inquiry paper investigating multiple perspectives, including engagement with humanities texts, on a self-selected leadership challenge. (1500 words)
- Leadership Action Project and Reflection (10%): Each student will engage in a leadership action project either within the class (i.e., leading a class discussion) or out of class and write a two-page reflection. This reflection assignment is scaffolded with notes to take before and after the action project and will be discussed in class. The reflection must include discussion and reflection on one class text. (500 words)
- Personal-Critical-Reflective Essay (20%): The final writing project braids together personal experience, critical engagement with class texts, and reflection on one's own challenges as a developing leader. (2000 words)

Section 2.

If you would like, you may provide further information that might help the G.E. Course Review Committee understand how this course meets these criteria and/or the G.E. Program Objectives found in the CSUS Policy Manual, General Education Program, Section I.B.

N/A

General Education Details - Writing Intensive

Section 1.

Indicate how the course meets the following criteria for Writing Intensive. Relate the statement to the course syllabus and outline. Be as succinct as possible. Courses must comply with the general criteria for Writing Intensive courses:

The course must build on the basic skills and knowledge acquired by students in their foundation courses in General Education or the major.

This course builds on A2 and second-semester composition requirements by using a variety of scaffolded writing projects—furthering student understanding of composition/rhetorical theories and applications.

The course must expand students' knowledge by examining complex issues.

This course is designed to help students examine various Western and nonwestern approaches to leadership and ethical decision-making through a study of humanities texts while reflecting on their own beliefs and values as a developing leader in STEM. The course focuses especially on cultural others and social change leadership.

The course must expand students' abilities to reason logically and to write clearly in prose.

Each writing project expands the students' ability to reason logically in writing by engaging with a different approach (argument; inquiry; synthesis) and are scaffolded by reading responses exploring the same kind of approach.

Students must be required to write not less than 5,000 words of clear and logical prose (not to include simple narrative or diary writing).

- Reading Responses (20%): Reading Responses focus on grappling with the texts for the week in a way that practices the different approach of that unit (e.g., application of an ethical theory to a text; inquiry into a leadership problem; critical and personal reflection on an aspect of one's developing leadership). They are each two pages long (500 words).
- Applying an Ethical Theory to a Text Essay (15%): An argumentative essay applying an ethical theory to a particular literary text or film. (1500 words)
- Inquiry into a Leadership Challenge (15%): An inquiry paper investigating multiple perspectives, including engagement with humanities texts, on a self-selected leadership challenge. (1500 words)
- Leadership Action Project and Reflection (10%): Each student will engage in a leadership action project either within the class (i.e., leading a class discussion) or out of class and write a two-page reflection. This reflection assignment is scaffolded with notes to take before and after the action project and will be discussed in class. The reflection must include discussion and reflection on one class text. (500 words)
- Personal-Critical-Reflective Essay (20%): The final writing project braids together personal experience, critical engagement with class texts, and reflection on one's own challenges as a developing leader. (2000 words)

Instructors must work actively with students to sharpen analytical abilities and to improve their writing styles.

Each of the formal writing projects (an argumentative essay, an inquiry paper, and a critical-personal-reflective essay) is scaffolded with low-stakes writing assignments (reading responses; action project reflection) and is begun together, developed, and revised through in-class practices like freewriting, loop writing, hotspotting, and peer response. Students can expect to practice and expand their academic and other writing skills with various strategies and multiple genres.

Writing assignments must be spread over the entire semester (with at least 3,000 of the 5,000 words due before the last two weeks of instruction).

The attached syllabus indicates due dates for writing assignments over the course of the semester; a minimum of 3000 words are due before the last two weeks of instruction.

Instructors must provide timely responses and evaluation of each writing assignment, and evaluations and comments must not only be about the subject matter content but also about writing skills.

In order to make sure that students will receive timely and effective feedback, rubrics focusing on content and writing skills will be provided; narrative feedback will also be provided (in a letter). One important guideline in this class is that subsequent writing projects will not be turned in until students have sufficient time to review instructor response to previous graded writing projects.

Section 2.

WRITING INTENSIVE

Recognizing the value of writing in all disciplines, as a tool in learning as well as conveying knowledge, the Academic Senate mandated that the teaching of writing be an all university responsibility. To that end, the Senate recommended that three units of Writing Intensive be a graduation requirement.

The chief aim of Writing Intensive is to promote students' ability to write logically and clearly, using standard written English, in their major discipline or in a discipline outside their major.

Course Requirement

The Writing Intensive requirement can be satisfied in one of three ways: a) Departments/programs may specify that the Writing Intensive requirement must be met in the major; b) In cases where the requirement is not specified as required in the major, the requirement must be satisfied by taking an Writing Intensive course in the General Education program, or c) student's choice. Departments/programs wishing to have courses approved as Writing Intensive must submit the course syllabus to the General Education Review Committee which shall review and approve the course for listing as Writing Intensive. (General Education courses must also be approved for G.E. listing in the normal way.)

Criteria

Courses designated as Writing Intensive build on the basic skills and knowledge acquired by students in their foundation courses in General Education or the major. These courses are to expand students' knowledge by examining complex issues and they are to advance students' abilities to reason logically and to write clearly in prose.

The English Composition and Critical Thinking courses and the Writing Proficiency Examination are prerequisites to all Writing Intensive courses. Some Writing Intensive courses listed in the General Education program may explore more specialized topics and may thus require prerequisites, but most are to be courses of a broader nature and generally require no formal preparation in the discipline offering the course. Writing Intensive courses not in the General Education Program may also have prerequisites, but they should focus on the broad and general rather than the more technical areas of a discipline.

Students are required to write not less than 5,000 words (20 typed, double-spaced pages) of clear and logical prose in Writing Intensive classes. (Once a course is approved for Writing Intensive, all students enrolled in the class, whether they are taking it to fulfill their Writing Intensive requirement or not, must write no less than 5,000 words in order to receive a passing grade.)

An important aspect of the task of instructors is working actively with students to sharpen their analytical abilities and to improve their writing styles. Simple narrative and diary-type writing will not fulfill the requirement.

Writing assignments must be analytical in nature, discipline specific and spread out over the entire semester. (At least a total of 3,000 words of writing assignments must be due before the last two weeks of instruction.) Instructors must provide timely responses and evaluations of each writing assignment. Evaluations and comments must only be about the subject matter content but also address the writing skills. Additionally, evaluations and comments must be given to the students early enough to be reviewed before their next formal writing assignment is due.

Recommendations for Implementation

Although Writing Intensive courses have a 5,000 word requirement, this word requirement can be met by both formal and informal writing assignments. Instructors might require 10 pages each of formal and informal assignments (journals, responses to reading, for example). Yet all should require analysis in order to promote learning as well as improved writing skills.

Although the number of writing assignments depends upon the discipline and nature of the course, a study conducted by the Writing Intensive Committee in Spring 1988 discovered that those students who had been assigned a number of shorter assignments (usually four 5 page ones) reported that their writing had improved as a result, in part, of more frequent feedback. Those with only two long assignments reported that they did not feel the assignments had helped them improve their writing.

Key: 14382