NS A010N: MESA (MATH, ENGINEERING, SCIENCE ACHIEVEMENT) SEMINAR

Item	Value
Curriculum Committee Approval Date	03/12/2025
Top Code	493014 - Study Skills
Units	0 Total Units
Hours	63 Total Hours (Lecture Hours 9; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Noncredit: Support Course (U)
Material Fee	No
Basic Skills	Basic Skills (B)
Repeatable	Yes; Repeat Limit 99
Open Entry/Open Exit	Yes
Grading Policy	P/NP/SP Non-Credit (D)

Course Description

Noncredit course focusing on supporting students majoring in the fields of science, technology, engineering, and math (STEM) through workshops, enrichment activities, and professional connections. Intended for students participating in the MESA program. Not Transferable.

Course Level Student Learning Outcome(s)

1. Apply basic college- and STEM-related skills towards the advancement of major degree requirements and career goals.
2. Produce higher rates of persistence in MESA students compared to other calculus-based STEM major students.
3. Improvement in STEM content mastery.

Course Objectives

- 1. Apply basic college-related skills that support effective studying, time management, and academic advancement
- 2. Apply basic STEM-related skills that support success in STEM courses.
- 3. Engage in a STEM-based community of student peers, faculty mentors, and professional connections

Lecture Content

Ongoing MESA eligibility requirements College navigation Registration overview and timeline Website and catalog navigation ASOCC Related clubs Basic college skills - examples include: Orientation to MyCoast Orientation to Canvas How and when to use office hours Writing emails to professors Accessing tutoring Study skills Time management Stress management/mental health Introduction to Industry - examples include: Exposure to information about local industry Participation in conferences, research, and internships Participation in professional development organizations (e.g. SHPE, NCAS)

Lab Content

Basic STEM skills - examples include: Lab orientations for BIO, CHEM, and ENG Pipet use/training (e.g. gel electrophoresis) Operation of graphing calculators Applications of linear curve fitting and/or basic statistics Basic computer coding Application skills (for college, internship, and research applications): Personal statement writing Resume writing Interview techniques and practice

Method(s) of Instruction

- Enhanced NC Lect (NC1)
- Enhanced NC Lab (NC2)

Instructional Techniques

Workshops engage students in developing and applying basic college- and STEM-related skills. Interactive presentations, seminars, and activities build community and foster the exchange of ideas amongst students, faculty, and professional connections.

Reading Assignments

Up to one hour per week as assigned by the instructor from texts, technical manuals, and/or instructor handouts

Writing Assignments

Up to one hour per week on written materials related to academic and career advancement (e.g. resumes, cover letters, applications)

Out-of-class Assignments

Up to two hours per week on assignments emphasizing application of basic college- and STEM-related skills

Demonstration of Critical Thinking

Application of basic college- and STEM-related skills towards the advancement of major degree requirements and career goals

Required Writing, Problem Solving, Skills Demonstration

Application of basic college- and STEM-related skills towards the advancement of major degree requirements and career goals. Development of resumes, cover letters, applications, and/or other career-related documentation.

Eligible Disciplines

Astronomy: See physics/astronomy Master's degree required. Biological sciences: Master's degree in any biological science OR bachelor's degree in any biological science AND master's degree in biochemistry, biophysics, or marine science OR the equivalent. Master's degree required. Chemistry: Master's degree in chemistry OR bachelor's degree in chemistry or biochemistry AND master's degree in biochemistry, chemical engineering, chemical physics, physics, molecular biology, or geochemistry OR the equivalent. Master's degree required. Computer science: Master's degree in computer science or computer engineering OR bachelor's degree in either of the above AND master's degree in mathematics, cybernetics, business administration, accounting or engineering OR bachelor's degree in engineering AND master's degree in cybernetics, engineering mathematics, or business administration OR bachelor's degree in mathematics AND master's degree in cybernetics, engineering mathematics, or business administration OR bachelor's degree in any of the above AND a master's degree in information science, computer information systems, or information systems OR the equivalent. Note: Courses in the use of computer programs for application to a particular discipline may be classified, for the minimum

qualification purposes, under the discipline of the application. Master's degree required. Counseling: Master's degree in counseling, rehabilitation counseling, clinical psychology, counseling psychology, guidance counseling, educational counseling, social work, or career development, marriage and family therapy, or marriage, family and child counseling, OR the equivalent. (NOTE: A bachelor's degree in one of the above listed degrees and a license as a Marriage and Family Therapist (MFT) is an alternative qualification for this discipline.) Master's degree required. Title 5, section 53410.1 Earth science: Master's degree in geology, geophysics, earth sciences, meteorology, oceanography, or paleontology OR bachelor's degree in geology AND master's degree in geography, physics, or geochemistry OR the equivalent. Master's degree required. Ecology: Master's degree in ecology or environmental studies OR the equivalent OR see interdisciplinary studies. Master's degree required. Engineering: Master's degree in any field of engineering OR bachelor's degree in any of the above AND master's degree in mathematics, physics, computer science, chemistry, or geology OR the equivalent. (NOTE: A bachelor's degree in any field of engineering with a professional engineer's license is an alternative qualification for this discipline.) Master's degree required. Title 5, section 53410.1 Mathematics: Master's degree in mathematics or applied mathematics OR bachelor's degree in either of the above AND master's degree in statistics, physics, or mathematics education OR the equivalent. Master's degree required. Physical sciences: See interdisciplinary studies Master's degree required. Physics/Astronomy: Master's degree in physics, astronomy, or astrophysics OR bachelor's degree in physics or astronomy AND master's degree in engineering, mathematics, meteorology, or geophysics OR the equivalent. Master's degree required.

Other Resources

1. Instructor-provided resources as needed