

Northern Marianas College

CURRICULUM ACTION REQUEST

Effective Semester / Session: Fall 2021

Type of Action:

- New
- Modification
- Move to Inactive (Stop Out)
- Cancellation

Course Alpha and Number: NS120

Course Title: Research Comprehension for STEM

Reason for initiating, revising, or canceling:

This course is being created as an elective course geared toward students who aim to pursue a career in STEM fields. The course will become a requirement for students utilizing Louis Stokes Alliance for Minority Participation (LSAMP) grant funds and will provide them with skills in understanding and engaging in scholarly research for fields in high demand and in which Pacific Islander students are vastly underrepresented.

Laura Taylor *Laura Taylor* 5/26/2021

Proposer Date

JM

Velma C. Deleon Guerrero 5/24/2021

Department Chair Date

Adam Walsh

Adam Walsh 05.21.21

Language & Format Review Specialist Date

Ajani Burrell

Ajani Burrell 05.24.2021

Academic Council Chair Date

Charlotte Cepeda

Charlotte Cepeda 05/26/2021

Dean of Learning & Student Success Date

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Course: NS120 Research Comprehension for STEM

1. Department

Sciences, Mathematics, Health, and & Athletics

2. Purpose

In paragraph form, expound on the purpose of this particular course.

3. Description

Research Comprehension for STEM is designed to provide students with methods to thoroughly understand scholarly research in the STEM fields and communicate research findings to their peers. Students will gain practice in reading primary scientific literature, analyzing and critiquing research, and summarizing findings. It will teach students how to effectively present on published research and will build upon skills in information literacy.

A. Required/Recommended Textbook(s) and Related Materials

Required: None

Recommended: None

B. Contact Hours

1. **Lecture:** 3 per week / 45 per semester
2. **Lab:** None
3. **Other:** None

C. Credits

1. **Number:** 3
2. **Type:** Regular Degree Credits

D. Catalogue Course Description

This is an introductory course that provides an opportunity for students to advance their understanding of current research through the critical exploration of published scholarly work in the STEM fields. The course introduces students to ways in searching for peer-reviewed literature, present on the articles, and critique and summarize the research findings. Students will use these skills to create and present on their own scholarly work at the end of the semester. Prerequisites: BE111, EN101, and MA089. (Offered Fall and Spring).

E. Degree or Certificate Requirements Met by Course

This is a required course for all LSAMP Scholars. A grade of "C" or higher earned in this course fulfills an elective requirement for any A.S. degree with a science major.

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F. Course Activities and Design

Course activities include: lectures, group work, discussions, homework, web-based assignments, viewing audio-visual materials, periodic quizzes, tests, comprehensive final exam, and research projects that require presentations.

4. Course Prerequisite(s); Concurrent Course Enrollment

Prerequisites: BE111 and EN101

Concurrent Course Enrollment: None

Required English/Mathematics Proficiency Level(s)

English Placement Level: EN202

Mathematics Placement Level: MA091

5. Estimated Cost of Course; Instructional Resources Needed

Cost to the Student: Tuition for a 3-credit course; research activities expenses, and instructional materials fee.

Cost to the College: Instructor's salary, supplies, materials, and internet.

Instructional resources needed for this course include: whiteboard and pen, audio-visual programs/software, multimedia projectors, and internet access.

6. Method of Evaluation

Students learning will be assessed on the basis of class attendance and participation, homework completion, in-class collaboration, written assignments, and presentations. NMC's grading and attendance policies will be followed.

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7. Course Outline

This is a topical outline and does not necessarily indicate the sequence in which the material will be presented.

1.0 Introduction to Finding Scholarly Research Articles

2.0 The Structure of a Scientific Publication

3.0 Critical Analysis of Research

4.0 Research Presentation Skills

5.0 Communicating Research in Written Form

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8. Instructional Goals

The course will introduce students to:

- 1.0 Critical interpretation and presentation of published data;
- 2.0 Strengths and weaknesses of research studies;
- 3.0 Critical thinking in regards to modern research issues;
- 4.0 Communication skills required for presenting published data; and
- 5.0 Means to display research .

9. Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1.0 Demonstrate how to search and procure current peer-reviewed journal articles using research databases;
- 2.0 Distinguish between peer-reviewed, published literature, and popular science writing;
- 3.0 Analyze published research and demonstrate understanding of the information effectively;
- 4.0 Critically discuss the research methodology used in each scientific study;
- 5.0 Present information clearly and concisely; and
- 6.0 Lead discussions with peers and provide relevant discussion points.

10. Assessment Measures of Student Learning Outcomes

Assessment of student learning may include, but not be limited to, the following:

- 1.0 Quizzes;
- 2.0 Written Assignments;
- 3.0 Homework; and
- 4.0 Presentations.