

University of Arkansas - Fort Smith
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General Syllabus

STEM 1001 College Preparation for STEM Majors

Credit Hours: 1 Lecture Hours: 1 Laboratory Hours: 0

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Promotes college success by early development of the skills and attitudes needed to achieve educational and personal goals. Includes successful approaches to studying science, and math, effective writing, college orientation and resources, effective organizational and study skills, degree expectations, and career exploration.

B. Additional Information - None

II. Student Learning Outcomes

A. Subject Matter

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

1. Adjust to college life, take advantage of campus resources, and establish student-mentor relationships.
2. Employ effective college-success skills including studying, note taking, decision-making, goal setting, planning and management of time and financial resources.
3. Do the basic mathematical manipulations needed for freshman science courses.
4. Understand the rudiments of writing effectively for the sciences and mathematics.
5. Understand degree expectations, requirements, and career opportunities.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Quantitative Reasoning: Students will demonstrate command of the SQ5R method, GPA, pertinent excerpts of the science of learning, the basic mathematical manipulations for freshman sciences, differences between writing in STEM vs

writing in the liberal arts, and college support and resources. Students will apply their knowledge to propose suitable solutions to avoid and solve common problems encountered during college.

Communication Skills (written and oral)

Students will recognize the organization of ideas and information, including main ideas, supporting details, and actual and implied relationships within and between sentences. Students will draw logical inferences and conclusions.

Global and Cultural Perspectives

Students will understand the socioeconomic and global imperative of STEM including issues affecting the practice of STEM. Students will understand the fiscal and cultural value of a STEM education. Students will gain an understanding and appreciation of the interdependence of all STEM disciplines. Students will understand the roles played by STEM in causing and solving many of the major human and ecological crises.

III. Major Course Topics

- A. Introduction to Science, Technology & Mathematics
- B. Academic Success Skills
- C. Basic mathematics and manipulations for freshman-level science courses
- D. Writing in STEM
- E. College details
 - 1. Degree plans and course sequencing
 - 2. Professional testing and licensing as appropriate to the discipline.
- F. Career opportunities and expectations
 - 1. Why form relationships with mentors
 - 2. Successful and prolonged student/mentor relationships
 - 3. Mentorships to careers
- G. Rules and expectations of Mentor/Mentee relationships