**RES 100 Beginning STEM Research**

**Non-credit, this course is a prerequisite for RES 110**

Instructor Contact Information Here

**Course Description:** Students learn research methodology in STEM by accessing scientific databases, by using online bibliographic search techniques, consulting doctoral-level research scholars, by summarizing their review of literature in writing, and by making presentations at scientific symposia. Students will also select a research question with a mentor that will lead to original research. Students will maintain a scientific journal notebook and a comprehensive portfolio of all research work. Permission of instructor. This course is a prerequisite to RES 110 and RES 210

**Course Objectives**: By the end of this course, you should be able to:

* Review basic concepts in research methodology
* Apply critical thinking about research methodology
* Examine scientific literature in chosen research topic
* Make use of library databases
* State research question in writing explaining relevance and importance of the research question
* Identify a professional researcher as a mentor
* Summarize the scientific knowledge and methods in chosen research topic citing primary literature
* Communicate research topic visually by creating a review of literature poster and presenting the poster at a public symposium

**Academic Success Center:** Students are encouraged to use the support offered by the Academic Success Center (ASC) located on the ground floor of the Library. Its *Writing Center* is excellent in supporting your class writing assignments. For the most updated hours of operation, check the ASC website at [http://www.easternct.edu/asc/](http://www.easternct.edu/asc/%22%20%5Ct%20%22_blank)***[.](http://www.easternct.edu/asc/%22%20%5Ct%20%22_blank)***

**Academic Misconduct**: Students are responsible for familiarizing themselves with the University’s numerous policies and procedures contained in the University Catalog and Student Handbook. The Code of Conduct policies and the Policy on Academic Misconduct are of special significance, since cheating, plagiarism, and personal misconduct are strictly prohibited and carry severe penalties. Students should read and understand Eastern's Academic Misconduct Policy, which can be found in the student handbook. https://easternct.makekb.com/entry/307/

**Accommodations for Students with Disabilities** Eastern Connecticut State University is committed to following the requirements of the Americans with Disabilities Act (ADA) of 1990, the ADA Amendment Act of 2008, and Section 504 of the Rehabilitation Act of 1973, as amended in 1998. If you are a student with a disability (or think you might have a disability) and require accommodations or assistance evacuating a building in the case of an emergency, please contact the Office of AccessAbility Services (OAS) at 860- 465-0189 to discuss your request further. Please note that accommodations are not retroactive and must be communicated through a Letter of Accommodation, which is drafted by the OAS

**Advice**: Class involves a hefty work load. But it is very manageable if you stay on top of the things and you *do not procrastinate* in completing goals. If you are having any problems at all, *please* contact me for assistance; I’m glad to help. Following this advice will reduce your stress and anxiety.

**Methods for Assessment of Learning**

***Research Proposal*:** A primary activity for this course is the completion of an APA style research proposal for an independent research project. The proposal includes all the major sections of an APA-style paper, copies of all proposed instruments and copies of all cited reference articles. This submission must include: 1) an electronic copy of your proposal (including title page, Abstract, Introduction, Method, Proposed Analyses, Discussion, and References), 2) all appendices (including drafts of informed consent form, debriefing form, etc.), and 3) copies of all articles cited in your proposal.

***Homework***: Time logs chronicling approximately 8 hours of research every week. Annotations of research must be in scientific notebook.

***Biweekly assessments***: Meet with instructor every two weeks to discuss goals and review research

***Exams:*** Mid-term evaluation paper that details contributions by specific scientists, rationale for topic selection and relevance of this topic (Introduction of your research paper)

Final evaluation will be writing your research proposal and submitting it to the SRB and making a poster of a review of literature for your research and presenting it at a science symposium.

***Attendance***: Attendance will be taken and is part of your Class Participation grade. Students need to document about 3 hours of work each week for class time. They will also submit reviews of presentations made during class.

***Class Participation*:** You can earn up to 50 points for participation.

* *40****-5****0 points*: Attended almost every class. Student asked and answered questions, submitted all assignments on time, demonstrated knowledge of materials, participated actively in exercises, and attended office hours with regularity.
* *25-39 points*: Attended about two thirds of in-class and online meetings, student asked and answered some questions including chat, demonstrated some knowledge of materials, participated in exercises, and attended a few office hours.
* *0-24 points*: Student attended class intermittently, did not participate by asking and answering questions including chat, and/or did not participate in demonstrating knowledge of materials, did not participate actively in exercises, and did not attend office hours.

Therefore, there are a possible 1000 *points* for the course:

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| --- | --- | --- | --- | --- |
|   |   |   | **Points**  | **Total Points**  |
| Proposal  |   |   |     50  | 50  |
| Homework  |   |   | 400  | 400  |
| Biweekly assessments  |   |   |          200  | 200  |
| midterm  |   |   | 150  | 150  |
| Final paper and poster  |   |   |  150  | 150  |
| Class Participation  |   |   | 50  | 50  |

Grades for this course will be determined as follows:

* A = 93-100%
* A- = 90-92%
* B+ = 87-89%
* B = 83-86%
* B- = 80-82%
* C+ = 77-79%
* C = 73-76%
* C- = 70-72%
* D+ = 67-69%
* D = 60-66%
* F = Below 60