SCIN499

Course Summary

Course : SCIN499 **Title :** Senior Seminar in Natural
Sciences **Length of Course :** 8 **Faculty :**
Prerequisites : SCIN400 **Credit Hours :** 3

Description

Course Description:

Instruction in analysis and presentation of original scientific research. Each student will carry out an original independent research project which was proposed in SCIN400. After data collection, each student will analyze and interpret data collected from the experimental project executed as part of this upper-level course. Each student will prepare a scientific paper and a live webinar presentation of their research. This is considered the capstone course for students completing majors within the natural sciences. (Prerequisites: SCIN400 and completion of a minimum of 106 hours towards your program) **Course Scope:**

Students will complete an approved academic research project and produce a major research paper and presentation that demonstrates knowledge in the chosen project from the natural sciences. The topic should reflect the depth and challenge appropriate for a 400-level science course. Students are expected to select a subject area focused enough to be able to research, write, and present within the 8-week course. The resulting products of work will be a 20+ page research paper and scientific presentation.

This course and does not follow the traditional course structure. There are no formal content, tests, or quizzes in this course. Reading materials are selected by the student in support of the research paper.

Objectives

CO-1 Plan and carry out an independent research project on a topic in the natural sciences with quantitative analysis

CO-2 Select credible sources of information in the natural sciences

CO-3 Formulate and deliver constructive peer feedback

CO-4 Write a scientific paper based on research

CO-5 Create and deliver an oral presentation of a research project developed in this natural science course

Outline

Week 1:

Learning Outcomes

CO-1

Assignments

Assignment 1: Research Project Approval (Week

1) Week 2:

Learning Outcomes

CO-1

CO-2

CO-3

Assignments

Week   2

Discussion   **Week**

3:

Learning Outcomes

 CO-1

CO-2

CO-3

Assignments

Week 3 Discussion

Assignment 2 Draft Outline & Introduction

Week 4:

Learning Outcomes

CO-1

CO-3

CO-4

Assignments

Week 4 Discussion

Assignment 3 Draft

Methods **Week 5:**

Learning Outcomes

CO-1

CO-3

CO-4

Assignments

Week 5 Discussion Assignment 4

Draft Analysis & Results **Week 6:**

Learning Outcomes

CO-1

CO-3

CO-4

Assignments

Week   6   Discussion

Assignment   5   Draft

Conclusions **Week 7:**

Learning Outcomes

CO-1

CO-3

CO-5

Assignments

Week 7 Discussion

Assignment 6 Presentation

Slides **Week 8:**

Learning Outcomes

CO-1

CO-4

CO-5

Assignments

Week 8 Discussion

Assignment 7 Final Research Paper

Deliver Live Presentation

Evaluation

The grading will be based on the following:

- Eight Discussion Assignments
- Five Draft Assignments for Research Paper
- Oral Presentation
- Final Research Paper

Detailed directions on each of these assessments are provided in the classroom.

Grading:

Name	Grade %
Week 1	2.00 %
Week 1: Introduce Yourself	1.00 %
Week 1: Project Abstract	1.00 %
Discussions	13.00 %
Week 2: Research Methods Selection	1.86 %
Week 3: Data Collection Report	1.86 %
Week 4: Progress Report	1.86 %
Week 5: Progress Report	1.86 %
Week 6: Progress Report	1.86 %
Week 7: Progress Report	1.86 %
Week 8: Reflection	1.86 %
Proposal	5.00 %
Assignment 1: Research Project Approval (Week 1)	5.00 %
Introduction & Outline	5.00 %
Assignment 2: Draft Introduction & Outline (Week 3)	5.00 %
Methods Draft	10.00 %
Assignment 3: Draft Methods (Week 4)	10.00 %
Analysis & Results Draft	10.00 %
Assignment 4: Draft Analysis & Results (Week 5)	10.00 %
Discussion & Conclusions Draft	10.00 %
Assignment 5: Draft Discussion & Conclusion (Week 6)	10.00 %
Presentation	20.00 %
Assignment 6: Presentation (Week 7)	20.00 %
Final Paper	25.00 %
Assignment 7: Final Research Paper (Week 8)	25.00 %

Materials

Book Title: There are no required books for this course.

Author: No Author

Specified **Publication**

Info: ISBN: N/A

Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- Tutor.com offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

LATE WORK

The University encourages all work to be completed according to the course schedule. The University Late Work Policy can be found in the Student Handbook here.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and

    submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Discussion

- Discussions are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the discussion. The purpose of the discussions is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

Identity Verification & Live Proctoring

- Faculty may require students to provide proof of identity when submitting assignments or completing assessments in this course. Verification may be in the form of a photograph and/or video of the student's face together with a valid photo ID, depending on the assignment format.
- Faculty may require live proctoring when completing assessments in this course. Proctoring may include identity verification and continuous monitoring of the student by webcam and microphone during testing.

University Policies

Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- Academic Probation
- Appeals
- Disability Accommodations

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation's military and public service communities by offering

respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.