RARITAN VALLEY COMMUNITY COLLEGE
ACADEMIC COURSE OUTLINE

SCIE 128H - SCIENCE SEMINAR HONORS

I. Basic Course Information

A. Course Number and Title: SCIE 128H - Science Seminar Honors

B. New or Modified Course: Updated course outline

C. Date of Proposal: Semester: Spring Year: 2015

D. Effective Term: Fall 2015

E. Sponsoring Department: Science & Engineering

F. Semester Credit Hours: 3

G. Weekly Contact Hours: 3 Lecture: 3
Laboratory: 0

H. Prerequisites: Minimum GPA 3.5 or permission of the instructor.

I. Laboratory Fees: none

J. Name and Telephone Number or E-Mail Address of Department Chair at time of approval: Dr. Sarah Imbriglio, sarah.imbriglio@raritanval.edu

II. Catalog Description

Prerequisites: Minimum GPA 3.5 or permission of the instructor.

This is an interdisciplinary course based on the Science and Engineering Department's Science Seminar series. By attending the seminars, students will be exposed to current research, breaking science news, and historical backgrounds in a variety of fields. Each student will present a short seminar on a topic of his or her choice.

III. Statement of Course Need

A. This course may serve as an elective for science programs, and may also serve as a non-laboratory Science requirement in other programs. The course should also be of interest to citizens of the college community and the community at large. Science Seminar (Honors) is normally taught as independent study, linked to the department's Science Seminar series.

The special value of this course is the involvement of members of the science faculty, other faculty and staff in related disciplines, and invited speakers from local industrial, governmental, or educational institutions. This provides students with an exposure to and understanding of a broad spectrum of current research, and an appreciation of the interdisciplinary nature of scientific research.

B. This course has no laboratory component.

C. This course may transfer as a general elective, or a non-lab science elective.

IV. Place of Course in College Curriculum

A. Free Elective.

B. This course does not meets a program requirement for any degree program.

C. This course will transfer to some institutions as elective credit, to some as science general education credit, and is not transferable to some institutions. Please check with individual institutions for further information.

D. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, www.njtransfer.org; b) for all other colleges and universities, go to the individual websites.

V. Outline of Course Content

Since 1997, the Science and Engineering Department at RVCC has presented a weekly series of Science Seminars, modeled after the discipline-specific seminars sponsored by many academic departments in research universities, but adapted to the community college environment. The choice of topics is eclectic and driven by the interests and expertise of the speakers, drawn from RVCC faculty and staff, faculty of nearby colleges and universities, industry, and government. The seminars provide the substance of this Honors Science Seminar course. Students are required to attend the seminars, write brief response papers, and present their own seminars. The series has become a part of the college culture, regularly attended by students, faculty, and staff, as well as a contingent of interested community members.

Seminar topics may cover a wide range of scientific and mathematical disciplines, depending on current events as well as the availability of speakers. Recent topics have included:

- The Chemical Bond and Bioenergetics
- How interactions between human exploitation and mating system structure may limit the reproductive potential of blue crabs, Callinectes sapidus.
- The Undergraduate Research program in Chemistry at Rutgers University
- Food Labeling
- The Next Pandemic?
- Broken Biological Clocks: The Tale of an Early bird Hamster
- Pacemakers and Defibrillators: the Technology of Implantable Cardiac Devices
- Einstein and the World Year of Physics 2005
- Sedna and the Outer Solar System
- Asthma: Current Understanding of the Disease, and Summary of the Harlem Children's Zone Asthma Initiative
- Foraging Behavior in Timber Rattlesnakes: Site Selection and Prey Choice

Among the student seminars, recent presentations have included the following topics:

- Human Cloning: A Brief History from Farming to Fashion
- Diabetes: Holistic Therapies
- The Prosthetic Larynx
- Antonio Stradivari and Early Musical Instrument Construction
- Psychology of Language in Children
- Overview of genetic and environmental causes of cleft palates and the social, emotional and psychological benefits of corrective surgery in a third world country.

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes:

At the completion of the course, students will be able to:

1. Develop an enhanced understanding of the conduct of scientific research and investigation. (NJ-GE 4*)
2. Analyze the process of preparing and giving a scientific presentation. (NJ-GE 1*)
3. Conduct research using print and electronic sources. (NJ-GE 1, 3)
4. Present, orally and in writing, the results of their research (NJ-GE 2)

(* embedded critical thinking)

B. Course Learning Outcomes:

At the completion of the course, students will be able to:

1. Respond in writing to a variety of science seminars, analyzing both the content and the presentation.
2. Prepare a seminar presentation, using printed, electronic, and other sources.
3. Present a seminar, using both electronic (e. g. Powerpoint) and printed material.

C. Assessment Instruments

A. brief response papers (to the Science Seminars)
B. science seminar presentations

VII. Grade Determinants

A. Response papers to the seminars: these are graded both for their analysis of the seminar content and for their insight into the art of presentation.
B. Student seminars: graded for the quality of the research and the skill and clarity of the presentation.

VIII. Texts and Materials

A. The Science & Engineering Department's Science Seminar series, and any materials from that series made available by the presenters.
B. Resources available from the library, the internet, and other reputable sources.

IX. Resources

Same as VIII above.

X. Honors Options:

None.