RARITAN VALLEY COMMUNITY COLLEGE
ACADEMIC COURSE OUTLINE

CISY 296 Computer Science Capstone Research Honors

I. Basic Course Information

    A. Course Number and Title: Computer Science Capstone Research Honors
                                                          CISY 296

    B. New or Modified Course: New

    C. Date of Proposal: Semester: Fall Year: 2017

    D. Effective Term: **Fall 2018**

    E. Sponsoring Department: Computer Science

    F. Semester Credit Hours: 3

    G. Weekly Contact Hours: Lecture: 0
                                                         Laboratory: 0
                                                          Out of class student work per week: 9

    H. Prerequisites/Corequisites: Student must be enrolled in his or her last Honors College academic year before graduation

    I. Laboratory Fees: none

    J. Name and Telephone Number or E-Mail Address of Department Chair and Divisional Dean at time of approval: Steven Schwarz – steven.schwarz@raritanval.edu (Chair), Sarah Imbriglio – Sarah.Imbriglio@raritanval.edu (Divisional Dean)

II. Catalog Description

Prerequisite: Student must be enrolled in his or her last Honors College academic year before graduation

The course is intended to guide sophomore Honors College students from all disciplines through the stages of conducting a semester-long research project and/or developing an artistic pursuit. Topics include planning, research and documentation, prose style and editing, document design, ethics, abstracts, and oral presentations. Because the course

will enroll from different disciplines students will also become acquainted with research topics, ways of framing arguments, and making points outside their fields of study, which will help them develop a more interdisciplinary perspective. Class will include research training, developing a timeline, as well as independent study of research.

III. Statement of Course Need

A. Research on the value of intensive undergraduate research experiences abounds, and requiring enrollment in this research capstone will provide RVCC Honors College students with: a strong student-faculty collaboration and scholarship; an original research in the discipline; an understanding of intensive research in preparation for classes in the major or for more intensive graduate school research; and a high profile project that will aid in transfer applications.

Class will consist of five major components: library instruction, research and guidance with faculty member, group discussions on topics and progress, the final written (or artistic) project, and a formal presentation.

B. This course has no lab component

C. This course is not designed for transfer, yet dependent on transfer institution may transfer as a Computer Science program elective.

IV. Place of Course in College Curriculum

A. Free Elective
B. This course does not meet a General Education requirement
C. This course meets a program requirement for the Honors College
D. CIS Elective on the Computer Science Elective List
E. 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

Class will consist of the following major components
A. Information literacy instruction to support research in Computer Science
B. Advanced Computer Science topic exploration
C. Literature research utilizing discipline-specific information sources, databases, interlibrary loan, etc.
D. Background research and discussion of the capstone topic with capstone Computer Science faculty advisor to create a timeline of completion
E. Develop methods to understand and analyze the Computer Science research topic
F. Application of Computer Science research topic and results to relevant situations

G. Research and guidance with capstone Computer Science faculty advisor via weekly consultations to discuss results, assess progress and adjust timeline as needed.
H. The final Computer Science capstone project
I. A formal capstone presentation (Capstone Day).

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes:

At the completion of the course, students will be able to:
1. Logically and persuasively state and support orally and in writing their findings from the research or creative project (GE-NJ1, *)
2. Evaluate relevance and authority of information (GE-NJ IL)
3. Create and revise drafts and/or review artistic process to address capstone objectives and employ standard appropriate editing practices for the specified discipline (GE-NJ1)
4. Use discipline-specific information sources and/or databases to better understand the research topic and find existing research in the field. (GE-NJ IL)
5. Complete a research project or develop an artistic product that incorporates newly acquired and prior information and is delivered in a medium appropriate to the discipline and intended audience. (GE-NJ Il, NJ1)
6. Cite sources, compile a bibliography, and make consistent and correct use of a citation style appropriate to the discipline (GE-NJ IL)

* embedded critical thinking

B. Course Learning Outcomes:

At the completion of the course, students will be able to:
1. Explain and present all aspects of their Computer Science capstone project

C. Assessment Instruments

1. Research process
2. Final capstone product
3. Capstone project presentation

VII. Grade Determinants

A. research process
B. completion of agreed upon timeline deadlines

C. revisions of drafts and/or review of artistic process
D. final capstone product oral presentation

Given the goals and outcomes described above, the primary formats, modes, and methods for teaching and learning that may be used in the course:
   A. lecture/discussion
   B. small-group work
   C. computer-assisted instruction
   D. guest speakers and lectures
   E. student oral presentations
   F. student-faculty collaboration
   G. independent study and research

VIII. Texts and Materials

Any texts and materials will be dependent upon individual capstone project requirements.

IX. Resources

   A. Databases
   B. Archives
   C. Museums/performances
   D. Subject matter experts
   E. Additional hardware/software might be acquired through a budget request process