Raritan Valley Community College
Academic Course Outline

CISY 299 - Advanced Topics in Computer Networking

I. Basic Course Information

A. Course number and Title:	CISY 299- Advanced Topics in Computer Networking
B. New or Modified Course:	Modified
C. Date of Proposal:	Semester: Fall Year: 2016
D. Effective Term	Fall 2017
E. Sponsoring Department	Computer Science (CS)
F. Semester Credit Hours:	3
F. Weekly Contact Hours:	Lecture: __3__ Laboratory: n/a Out of class student work per week: 6
G. Prerequisites:	A grade of C or better in CISY 253 –Advanced Computer Networking or CISY 273 Connecting Networks
H. Laboratory Fees:	No

I. Name and Telephone Number or E-Mail Address of Department Chair: Steven Schwarz, steven.schwarz@raritanval.edu

II. Catalog Description

Prerequisite: A grade of C or better in CISY 253 – Advanced Computer Networking or CISY 273 - Connecting Networks. This course provides the opportunity for students to study selected computer networking topics that are not covered in depth in any other Computer Science course at RVCC. The topics covered are defined by the Instructor and vary from semester to semester. Therefore, students must obtain the course description of the special topic coverage from the course schedule in any given semester.

III. Statement of Course Need

A. Computer Networks have become a common part of everyday life for business, education, and social networking. In our networking programs, many topics are only introduced and not covered in depth due to the sheer volume of information that needs to be taught and learned. This course will give us the opportunity to select current topics of interest and cover them in much greater depth. Examples include wireless networking, TCP/IP Version 6, advanced routing and switching, firewall design and implementation, cryptography, and emerging standards from the Internet Engineering Task Force and the IEEE.

B. This course does not have a lab component. However, access to the Internet is required and thus a general purpose Computer Lab is required.

C. Transferability of Course: This course could transfer as a free elective or a Computer Science elective.

IV. Place of Course in College Curriculum

A. Free Elective

B. CIS Elective on the Computer Science Elective List

C. Course Transferability: for New Jersey schools go to the NJ Transfer website, www.njtransfer.org . For all other colleges and universities, go to their individual websites.

V. Outline of Course Content

Since the special topic varies each semester, the outline of the course content will be included with the course syllabus. Each syllabus must be submitted and approved by the CS Department Chair before being listed on the schedule. It is expected that this course will often be offered as a Guided Study section.

It is understood that since this is a special topics course that the actual content from semester to semester must vary

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes

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

1. Determine the appropriate Professional and Technical sources of literature on the networking topics chosen for the course (GE-NJ IL)

2. Research the fundamentals and applications of the networking topics chosen for the course and present their findings (GE-NJ 1, IL)

B. Course Learning Outcomes:

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

1. Classify or Categorize the specific technical organizations which provide subject matter expertise and information compendia relevant to the topics chosen for the course (Goal 1)

2. E valuate the course topics and be able to place them in the taxonomy of appropriate Networking Subjects(e.g., Network Design Architecture, Network Monitoring Architecture, Network Protocols and Standards, etc.)

3. Apply acquired knowledge and skills from the topics to current issues in the Networking field as demonstrated by written or oral reports (Goal 2)

C. Assessment Instruments

1. Quizzes (optional)
2. Research Paper
3. In-class exercises
4. Homework Assignments -- Short papers and problems.
5. Exams -- Exams will assess both conceptual knowledge and practical knowledge

VII. Grade Determinants

In order to evaluate achievement of the learning outcomes above, possible grade determinants include:

A. Homework assigned from the text book and/or Instructor's Notes
B. Required Research Paper
C. Class Participation
D. Periodic Examinations and/or Quizzes
E. Final Examination

Modes of Teaching and Learning

A. Lecture/Discussion--New concepts will be introduced during interactive lecture sessions.
B. Group Work (if applicable)
C. Student Presentations of Case Studies or other research
D. Independent Research and Study

VIII. Text and Materials

Suggested Textbook—This will vary from semester to semester

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

A. Library
B. Computer Lab with Internet access