

RARITAN VALLEY COMMUNITY COLLEGE

CISY 132 – Systems Analysis & Design

I. Basic Course Information

- A. Course Number and Title: CISY 132 - Systems Analysis & Design
- 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) Department
- F. Semester Credit Hours: 3
- G. Weekly Contact Hours: Lecture: 2
Laboratory: 2
Out of class student work per week: 6
- H. Corequisite: *CISY 102 Computer Literacy or
CISY 103 Computer Concepts & Programming or
CISY 105 Foundations of Computer Science or
CISY 119 Networking Essentials or
CISY 270 Introduction to Cisco Networking*
- I. Laboratory Fees: Yes, at current rate
- J. Name and Telephone Number or E-Mail Address of Department Chair at time of approval: Steven Schwarz, Steven.Schwarz@raritanval.edu

II. Catalog Description

(Corequisite: *CISY 102 Computer Literacy or CISY 103 Computer Concepts & Programming or CISY 105 Foundations of Computer Science or CISY 119 Networking Essentials or CISY 270 Introduction to Cisco Networking*) The course is structured so that the student develops a basic understanding of today's business system's problems and experience in using proven techniques to solve them. The course stresses practical, goal-oriented systems analysis design and documentation while emphasizing human relations and communications skills critical to the success of the system professional. Includes record design, form design, documentation and systems development and the preparation of a comprehensive systems proposal.

III. Statement of Course Need

- A. The Systems Analyst is the key person that is responsible for the development of Information Systems. The Systems Analyst is the key liaison between the business unit that requests the system and the Information Systems area that will create the system. The Systems Analyst is responsible for accurately and efficiently gathering user requirements, analyzing the needs of the system, and designing what the system will do and how it will perform.

This course focuses on the role of the Systems Analyst in the Software Development Life Cycle (SDLC) from the beginning with the preliminary investigation through the creation of the Systems Proposal.

- B. This course has a weekly lab component. The lab is essential for providing students hands on experience using tools that are used by Systems Analysts when designing Information Systems
- C. This course generally transfers as a Computer Science elective

IV. Place of Course in College Curriculum

- A. Free Elective
- B. CIS Elective on the Computer Science CISY Electives List
- C. This course meets a program requirement for:
 - a. Accounting Information Systems, A.A.S.
 - b. Computer Networking A.A.S
 - c. Computer Networking and Security Certificate
 - d. Computer Programming A.A.S.
 - e. Computer Programming Certificate
 - f. Game Development A.A.S.
 - g. Information Systems & Technology A.S.
 - h. Information Systems & Technology A.A.S.
 - i. Management Information Systems Option in Business Administration A.S.
 - j. Web Developer, Associate of Science
- 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

The major topics of the course are as follows:

- A. The Systems Analyst Role
- B. Organizational Style
- C. Feasibility and Managing Process
- D. Sampling and Investigation Data

- E. Interviewing
- F. Questionnaires
- G. Decision Making Behavior
- H. Data-Flow Diagrams
- I. Data Dictionaries
- J. Process Specifications and Structured Decisions
- K. Analyzing Semi-Structured Decision Support Systems
- L. Preparing the Systems Proposal
- M. Writing and Presenting the Systems Proposal

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes:

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

1. Prepare a systems proposal used in the development of an Information System for a business and communicate the proposal in a clear and logical manner (NJ GE 1)
2. Apply quantitative reasoning to interpret data used in the analysis and design of business systems (NJ-GE 2)

B. Course Learning Outcomes :

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

1. Identify the functions and responsibilities of the Systems Analyst
2. Create a feasibility study as the first phase of the Systems Life Cycle
3. Identify and graphically represent processes in a system
4. Identify decision making processes and the Information Systems that can support those processes
5. Conduct interviews and create questionnaires as part of fact gathering and requirements gathering
6. Create and analyze data flow diagrams using appropriate symbols
7. Create data dictionaries using appropriate procedural logic
8. Prepare and present a systems proposal
9. Identify various sampling techniques for data gathering
10. Identify various observation techniques for observing a Decision Maker

C. Assessment Instruments:

The following assessment methods may be used:

1. Projects
2. Labs
3. Presentations
4. Data Flow Diagrams
5. Project Plans
6. Systems Proposal
7. Exams

VII. Grade Determinants

- A. Projects
- B. Labs
- C. Homework
- D. Exams
- E. Final Exam and/or Final Project

Modes of Teaching and Learning used in the course

- A. Lecture/Discussion
- B. Demonstrations of problem solving techniques and software where applicable
- C. Laboratory Time for group and individual work.

VIII. Texts and Materials

Textbook: *Kendall, Kenneth and Kendall, Julie, Systems Analysis and Design, Ninth Edition, Prentice Hall, 2014*

(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. Computer Lab for classroom instruction and exercises
- B. Technology Support
 - a. A tool to create data flow diagrams such as Microsoft Visio
 - b. A tool to create a project plan, such as Microsoft Project
 - c. Microsoft Office to create presentations and to prepare a Systems Proposal