RARITAN VALLEY COMMUNITY COLLEGE

ACADEMIC COURSE OUTLINE

CSIT 132 – Systems Analysis & Design

I. Basic Course Information

A. Course Number and Title: **CSIT 132 - Systems Analysis & Design**

B. New or Modified Course: Modified

C. Date of Proposal: Semester: **Fall** Year: **2024**

D. **Effective Term: Fall 2025**

E. Sponsoring Department: Mathematics and Computer Science

F. Semester Credit Hours**:** 3

G. Weekly Contact Hours**: 4**

Lecture**:** 2
Lab**:** 2
Out of class student work per week: 5

H. ☐ Prerequisite (s):
☒ Corequisite (s):

COMP 102 Computer Literacy or
CSIT 103 Computer Concepts & Programming or
CSIT 105 Foundations of Computer Science or
NTWK 119 Networking Essentials or
NTWK 270 CCNA1 Intro to Networking

I. Additional Fees **:** None

II. Catalog Description

(Corequisite: *COMP 102 Computer Literacy or CSIT 103 Computer Concepts & Programming or CSIT 105 Foundations of Computer Science or NTWK 119 Networking Essentials or NTWK*

270 CCNA1 Intro to 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 dependent on the transfer institution.

IV. Place of Course in College Curriculum

A. Free Elective
B. Computer Elective on the Computer and Programming Electives List
C. This course meets a program requirement for:
   a. **Accounting Information Systems, A.A.S.**
   b. **Computer Networking & Cybersecurity A.A.S**
   c. **Computer Programming A.A.S.**
   d. **Computer Programming Certificate**
   e. **Game Development A.A.S.**
   f. **Information Systems & Technology A.S.**
   g. **Management Information Systems Option in Business Administration A.S.**

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. A. Course 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 (GE 1)
2. Apply quantitative reasoning to interpret data used in the analysis and design of business systems (GE 2)
3. Identify the functions and responsibilities of the Systems Analyst
4. Work as a member of a team to create a feasibility study as the first phase of the Systems Life Cycle
5. Identify and graphically represent processes in a system
6. Identify decision making processes and the Information Systems that can support those processes
7. Work as a member of a team to create questions for interviews and questionnaires to be used as part of fact and requirements gathering
8. Work as a member of a team to create and analyze data flow diagrams using appropriate symbols
9. Create data dictionaries using appropriate procedural logic
10. Work as a member of a team to prepare and present a systems proposal
11. Identify various sampling techniques for data gathering

12. Identify various observation techniques for observing a Decision Maker

B. <u>Assessment Instruments</u>

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: *Tilley, Scott and Rosenblatt, Harry, Systems Analysis and Design, Twelfth Edition, Shelly Cashman*

(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

X. Check One: ☐Honors Course ☐Honors Options ☒ N/A