Lecture Contact Hours: 16-18; Homework Hours: 32-36; Total Student Learning Hours: 48-54
Laboratory Contact Hours: 48-54; Homework Hours: 0; Total Student Learning Hours: 48-54

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

COMPUTER AND INFORMATION SCIENCE 162 – TECHNICAL DIAGRAMMING USING MICROSOFT VISIO

1 hour lecture, 3 hours laboratory, 2 units

Catalog Description
Networking and telecommunications professionals must know how to create technical diagrams and drawings, and use computer tools to manage Information Technology (IT) projects. Using Microsoft Visio, students will learn how to create basic and advanced networking and telecommunications diagrams and drawings, building plans, project schedules, and flow charts. Students will also learn how to visualize and create presentations of complex technical and business information systems. Challenging case studies will provide real-world technical and business experiences.

Recommended Preparation
Basic computer skills

Entrance Skills
Without the following skills, competencies and/or knowledge, students entering this course will be highly unlikely to succeed:
1) Basic knowledge of computer hardware components and their functions.
2) Basic skills using the Microsoft Windows operating system.
3) Familiarity with Microsoft Office products.
4) Think logically and conceptualize computer concepts.
5) Think critically in order to assess logical and physical computer connectivity concepts.

Course Content
1) Visio orientation (Visio environment, templates, help features)
2) Visio basics (working with Visio features)
3) Formatting shapes and creating flowcharts
4) Creating project schedules and organization charts
5) Creating office space diagrams
6) Creating network diagrams
7) Using Visio to respond to a Request for Proposal (RFP)
8) Integrating Visio diagrams to provide solutions to technical issues

Course Objectives
Students will be able to:
1) Utilize Visio to plan, design, create, save, and print the following types of diagrams:
    a. Flow charts
    b. Organization charts
    c. Project schedule diagrams including timelines and Gantt charts
    d. Network and telecommunications diagrams
    e. Office space diagrams
    f. Building plans
2) Apply the following Visio features to create diagrams and charts:
    a. Templates and stencils
    b. Shapes, lines, connectors, text blocks
    c. Backgrounds, borders, titles
    d. Page setup, preview, and printing options

   e. Custom shape properties
3) Use the Request for Proposal (RFP) process by responding to an actual technical RFP in a case study approach using both technical and cost estimation concepts.

Method of Evaluation
A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in subject matter determined by multiple measurements for evaluation, one of which must be essay exams, skills demonstration or, where appropriate, the symbol system.
1) Quizzes and exams that measure students' ability to utilize computer hardware and Microsoft Visio in order to navigate through Visio, draw, edit, and use Visio shapes and stencils.
2) Exercises that measure students' ability to use Microsoft Visio to visualize solutions to complex technical problems and to represent those solutions in a Visio diagram.
3) Exercises that assess students' ability to conceptualize design and create specific diagram types to represent technical concepts.
4) Case studies that assess students' ability to identify and create graphical solutions to technical issues.

Special Materials Required of Student
1) Access to web-based course material and Microsoft Visio as specified in syllabus
2) File storage system

Minimum Instructional Facilities
Computer lab with Internet access, appropriate software

Method of Instruction
1) Lecture and demonstration
2) Hands-on practice
3) Assignments

Out-of-Class Assignments
1) Read textbook and assignment instructions
2) Complete assignments and online quizzes
3) Review online resources, including videos

Texts and References
1) Required (representative example): Blokdyk, Geradus. *Microsoft Visio A Complete Guide – 2019 Edition*. Microsoft Press, 2019.
2) Supplemental: None

Exit Skills
Students having successfully completed this course exit with the following skills, competencies and/or knowledge:
1) Use Microsoft Visio to visualize and create graphical representations of complex technical and business information systems.
2) Create graphical representations of real-world computer networks and project timelines.
3) Determine when to use basic and advanced networking and telecommunications diagrams and drawings, building plans, project schedules, organizational charts, and flow charts to represent technical solutions.
4) Apply analysis, research, and graphic design skills to depict a proposed solution to satisfy a technical RFP.

Student Learning Outcomes
Upon successful completion of this course, students will be able to:

1) Create a comprehensive project including submissions from Microsoft Visio (>6 pages) that meets 70% of the technical, organizational, structural, and presentation requirements outlined in a detailed scoring rubric based on the course content and objectives.