

ITDEV-177: Systems Analysis and Design

Course Description:

This course will teach techniques and approaches to developing new software systems effectively and efficiently. It will introduce the phases a project must undergo from inception to completion as well as the various methodologies and models that can be employed to properly manage a project. It will also identify the skills and team members required to successfully develop and launch the new system. MATC strongly recommends that students complete ITDEV-150 and ITDEV-164, or have the equivalent skills, prior to enrolling in this course.

Total Credits: 3.00

Course Competencies

- 1. Analyze the role of the system analyst in a software project**
- 2. Construct a project plan to meet the project task timeline**
- 3. Apply Use-Case diagrams to model business processes**
- 4. Construct an Activity Diagram to reflect high-level business workflows**
- 5. Illustrate the required classes through the use of class diagrams**
- 6. Analyze the communication between objects using Sequence Diagrams**
- 7. Construct a Communications Diagram to show object message-passing relationships**
- 8. Categorize the various states of a single object using a Behavioral State Machine Diagram**

- 9. Conduct a Windows Navigation Diagram to show the relationship between the various user displays**
- 10. Assess the various physical architectures for the group project**
- 11. Asses the various object-oriented databases for the group project**
- 12. Develop a detailed software design that fulfills the user requirements**
- 13. Code the project according to the detailed software design**