

Course Description**TRA2402 | Intermodal Transportation Operations and Project Management | 3.00 Credits**

Students will learn the fundamental elements necessary to plan, implement and control efficient and market-responsive integrated transportation systems. Topics include strategic, operational, and project management roles of transportation in supply chains. Emphasis is placed on services pricing, carrier selection, equipment and shipment planning, intermodal operations, financial/budgetary constraints, security and distribution services. Prerequisites: AVM2120, TRA2010. Co-requisites: TRA1410, TRA1420, TRA1430.

Course Competencies:

Competency 1: The student will identify the characteristics and benefits of intermodal transportation by:

1. Comparing various shipping options
2. Demonstrating knowledge of packaging and labeling requirements
3. Demonstrating knowledge of the advantages and disadvantages of combining given modes of transportation (air/sea/land)
4. Analyzing types of goods and products and the impact on logistics
5. Identifying the characteristics of a full-service transportation organization
6. Demonstrating knowledge of mode-specific logistics
7. Demonstrating knowledge of contemporary issues in intermodal transportation
8. Demonstrating knowledge of International Commercial (INCO) terms
9. Demonstrating knowledge of geography
10. Demonstrating knowledge of how goods move through a freight forwarder and customs broker
11. Demonstrating knowledge of warehousing

Competency 2: The student will demonstrate knowledge of performance and quality measurements in a transportation system by:

1. Developing/tracking performance measures
2. Analyzing system performance
3. Developing process maps
4. Developing contingency plans
5. Demonstrating knowledge of process analysis
6. Identifying various quality initiatives (ISO, Six Sigma, etc.)

Competency 3: The student will demonstrate knowledge and skill in project management by:

1. Utilizing project management software
2. Identifying planning/scheduling techniques such as Program Evaluation and Review Technique (PERT) and Critical Path Method
3. Developing a project management plan
4. Coordinating a project

Competency 4: The student will demonstrate knowledge of the logistical and supply chain system as it relates to cost, time, and safety of goods by:

1. Identifying the quickest method of shipping different types of goods
2. Identifying the safest method of shipping different types of goods
3. Identifying the least expensive method of shipping different types of goods
4. Identifying the various intermodal systems available for a given supply chain or shipping method

Competency 5: The student will demonstrate the ability to conduct operations analysis within a given single mode or intermodal transportation system by:

1. Identifying methods of analyzing system performance
2. Tracking on-time performance measures of a given system
3. Identifying the modern technological tools available for systems analysis

Learning Outcomes:

- Solve problems using critical and creative thinking and scientific reasoning.
- Use quantitative analytical skills to evaluate and process numerical data.
- Formulate strategies to locate, evaluate, and apply information.