Learning Goals and Objectives – Master of Supply Chain Management

1. Ability to use logistics theories and methodologies to design and manage logistics systems
   a. Demonstrate an understanding of inventory theory, forecasting, aggregate planning, and project management to design effective supply chains
   b. Demonstrate an understanding of the supply chain, evaluate factors influencing its performance, and recommend actions for improving supply chain performance
   c. Apply quantitative techniques to evaluate logistics problems involving complexity and uncertainty
   d. Demonstrate an understanding of economic, political, and social issues in designing and managing a global supply chain
   e. Demonstrate an ability to collect, manage and analyze logistics information, and to derive lessons from real-life cases in logistics and supply chain.

2. Ability to effectively utilize and understand technology impacting logistics problems
   a. Utilize enterprise resource planning software to solve logistics problems
   b. Demonstrate an understanding of new technologies that have influenced advanced logistics and their benefits

3. Ability to evaluate contemporary issues from a logistics perspective
   a. Evaluate the role of logistics in dealing with emergencies and formulate logistics strategies to address emergency situations
   b. Demonstrate an understanding of transportation and logistics security issues and solutions, including cyber security issues and solutions.

4. Effective written communication skills
   a. Write grammatically correct, well organized papers that effectively address logistics issues

5. Ability to recognize ethical dilemmas and make ethical decisions
   a. Demonstrate an understanding of ethical implications of decisions
   b. Demonstrate the ability to identify solutions that take ethical implications into account

6. Understand leadership practices
   a. Identify and demonstrate leadership style
Learning Goals and Objectives – Master of Science in Transportation & Urban Systems

1. Ability to use transportation theories and methodologies to design and manage transportation systems
   a. Demonstrate an understanding of transportation planning and the legal environment in designing effective urban transportation systems
   b. Utilize analytical techniques such as traffic forecasting and system capacity analysis to assess the performance of urban transportation systems and recommend improvements
   c. Use an understanding of the relationships between transportation and land use, and the impact of transportation on the community, including transportation safety, to design a transportation system that has positive impacts on the economy, the environment, and society
   d. Demonstrate an understanding of economic, political, and social issues in designing, planning, and managing a public transportation system

2. Ability to evaluate contemporary issues from a transportation perspective
   a. Evaluate the impacts of transportation on the environment and identify policies that may be used to deal with congestion and environmental impacts associated with transportation
   b. Demonstrate an understanding of transportation security issues and solutions, including cyber security issues and solutions
   c. Demonstrate an understanding of the crucial transportation problems currently faced by major urban areas and possible remedies to those problems, including innovative, sustainable, and multi-modal transportation solutions
   d. Demonstrate an understanding of technologies that influence and benefit transportation

3. Strong research skills in the area of urban transportation
   a. Write a thesis that contributes new knowledge to the area of urban transportation systems

4. Ability to recognize ethical dilemmas and make ethical decisions
   a. Demonstrate an understanding of ethical implications of decisions
   b. Demonstrate the ability to identify solutions that take ethical implications into account

5. Understand leadership practices
   a. Identify and demonstrate leadership style
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Learning Goals and Objectives – PhD in Transportation and Logistics

1. Ability to use transportation theories and methodologies to design and manage transportation and logistics systems
   a. Demonstrate knowledge of economic, engineering, geographic, and operations research theories and their applications to transportation and logistics
   b. Apply optimization techniques, econometric methods, and other quantitative and statistical techniques to evaluate transportation and logistics problems
   c. Demonstrate an understanding of the characteristics of various transportation modes, evaluate their performance, and recommend improvement
   d. Demonstrate an understanding of the supply chain, evaluate factors influencing its performance, and recommend actions for improving supply chain performance

2. Ability to effectively utilize technology in addressing transportation and logistics problems
   a. Utilize geographic information systems software, such as ArcGIS or TransCAD, to analyze transportation/logistics problems
   b. Utilize enterprise resource planning software to solve logistics problems
   c. Utilize statistical and optimization software, such as SAS, to construct and estimate statistical models and optimization models in addressing transportation and logistics problems

3. Ability to evaluate contemporary issues from a transportation and logistics perspective
   a. Evaluate the role of transportation and logistics in dealing with emergencies, and formulate transportation and logistics strategies to address emergency situations
   b. Identify and evaluate the societal, economic, and environmental impacts of transportation, and identify policies that address those impacts.
   c. Evaluate the desirability of various transportation policies using economic, engineering, geographic, and operations research theories
   d. Demonstrate an understanding of technologies that influence and benefit transportation

4. Advanced research skills in the areas of transportation and logistics
   a. Present original research to other PhD students and faculty in a research seminar
   b. Present original transportation or logistics research at a national or international conference
   c. Write high quality original transportation and/or logistics papers to submit to refereed journals

5. Ability to recognize ethical dilemmas and make ethical decisions
   a. Demonstrate an understanding of ethical implications of decisions
   b. Demonstrate the ability to identify solutions that take ethical implications into account

6. Understand leadership practices
   a. Identify and demonstrate leadership style

7. Be prepared for teaching responsibilities in higher education
   a. Complete a teaching assistant field experience