Students who successfully complete this course will be able to (Specific ABET outcomes are provided at the end of each course outcomes):

1. Design, conduct and administer surveys to provide the data required for transportation planning. [1, 2, 6] : Exam 1\_Q1\_Closed Book
2. Learn and understand zonal demand generation and attraction regression models. [1, 2, 6, 7]\_Exam 1\_Q1\_Open Book
3. Learn and understand demand distribution models (gravity models). [1, 2, 6, 7] : Exam 1\_Q2\_Open Book
4. Learn and understand modal split models for mode choice analysis. [1, 2, 6, 7] : Exam 1\_Q3\_Open Book
5. Develop and calibrate trip generation rates for specific types of land use developments. [2, 6, 7]: Exam 1\_Q2\_Closed Book
6. Estimate the traffic impact of new developments using the four-stage sequential models. [2, 6, 7] \_Final Exam\_Q1\_Closed Book
7. Summarize pavement condition of a transportation network. Course Project
8. Develop a pavement management system using optimization techniques. [1] \_Final Exam\_Q2\_Open Book
9. Identify high risk locations for safety improvements. [1] \_Final Exam\_Q2\_Open Book
10. Develop a safety management system using optimization techniques. [1]\_Final Exam\_Q3\_Open Book
11. Understand transportation project planning and development. [1] Exam 1
12. Understand and apply the process of financing to transportation projects [1, 2, 7] \_Final Exam\_Q2\_Closed Book
13. Learn the federal legislation and planning regulations pertaining to transportation planning issues [1] \_Final Exam\_Q3\_Closed Book
14. Impact of the transportation project on the land use. [1, 2, 6, 7] Exam 1
15. Understand selected emerging contemporary transportation issues including congestion management and environmental mitigation. [1] \_Final Exam\_Q4\_Open Book
16. Make final decisions among planning alternatives that best integrate multiple objectives such as technical feasibility and cost minimization. [1, 2, 6]\_Final Exam\_Q5\_Open Book
17. Communicate effectively via class technical discussions and presentations. [3, 4]\_Course Project
18. Design transportation related project in a team of two or three students and submits a final report and conduct a presentation. [1 to 7]\_Course Project