

CE381: Transportation Engineering Spring 2018

Student Outcome Assessment (1 & 7)

Project

General Theme: **Transportation System and Policy of a Metropolitan Area**

- i) Discuss about the transportation system of the selected Metropolis.
- ii) Analyze transport characteristics of the city
- iii) Discuss about the government's transport policy for the selected city
- iv) Discuss about the application of the knowledge you gathered in the context of Saudi Arabian Urban Transport System and Jeddah City Transport.

Step:

- a) Identify the city
- b) Formulate analysis procedure and collect information
- c) Conduct engineering analysis and discuss about the results
- d) Reflect on relevant information for application in

Report Layout:

- i. Cover page
- ii. Introduction
- iii. Literature review
- iv. Methodology
- v. Data collection and Analysis
- vi. Results and Discussion
- vii. Comparison with other countries
- viii. Conclusion
- ix. References

Presentation:

- 5 minute presentation by every student

Instructions:

- Every student must submit the report individually
- Follow the rubrics and include the rubrics in the report
- Must submit the report and make presentation on time (Sunday of the last class-week)
- Student in the group must submit the self-grading
- Must resubmit the report after receiving the feedback

Each student selects one city from the list below:

London	Vancouver	Dubai	Curitiba	Ankara	Lagos
Paris	Sao Paulo	Mumbai	Bogota	Kiev	Rotterdam
New York	Rio De Janeiro	New Delhi	Amsterdam	Jakarta	Alexandria
Los Angeles	Santiago	Bangkok	Madrid	Manila	Sidney
Boston	Cairo	Kuala Lumpur	Rome	Singapore	Melbourne
Chicago	Rabat	Beijing	Vienna	Tokyo	Perth
Austin	Moscow	Shanghai	Stockholm	Hiroshima	Auckland
Toronto	Berlin	Shenzhen	Istanbul	Kyoto	Venice

Outcome 1: Student work samples demonstrate the student's ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. For the following key performance indicators (KPIs) categories, the student can or may:					
#	KPI	Excellent (3)	Good (2)	Needs Improvement (1)	Unsatisfactory (0)
1.1	Problem definition	define the problem to be solved using relevant information without any extraneous data, recognize missing information, and correctly estimate missing data using sound principles of math, physics and engineering principals.	define the problem to be solved using relevant information, recognize missing information, and Correctly estimates missing data BUT may include some extraneous data, or present unjustified assumptions for missing values.	fail to identify all relevant information, find difficulty in clarifying what is needed, or fail to make appropriate assumptions.	fail to identify or assemble relevant information.
1.2	Problem formulation	apply principals of engineering, science and mathematics to develop a model for the real-life problem taking into account all essential features, efficiently apply engineering principles, with no conceptual or procedural errors, and demonstrate rigorous knowledge in relevant technical areas.	apply principals of engineering, science and mathematics to develop a model of the real-life problem taking into account all essential features, and demonstrate rigorous knowledge in relevant technical areas. BUT have minor conceptual or procedural errors, or include unessential details that unnecessarily complicates the model.	develop an incomplete model that needs further improvements, have difficulty to apply sound knowledge in one more of relevant technical areas, or Present several conceptual or procedural errors.	has significant technical problems in approaching or modeling the problem.
1.3	Problem solving	demonstrate creative synthesis by combining knowledge and information, obtain meaningful solution(s), and reflect upon results.	demonstrate solution with integration of diverse concepts but fail to reflect upon results.	demonstrate solutions by implementing only simple applications with close analogies to class/lecture problems.	· fails to have coherent strategy for problem solving, or · fail to obtain meaningful solutions.

Outcome 7: Student Work samples demonstrates the student's ability to acquire and apply new knowledge as needed, using appropriate learning strategies For the following key performance indicators (KPIs) categories, the student can or may:					
#	KPI	Excellent (3)	Good (2)	Needs Improvement (1)	Unsatisfactory (0)
7.1	Recognition of the Need	go beyond what is required in completing an assignment, by bringing credible value-adding information from outside sources.	go beyond what is required in completing an assignment, but the collected information may lack credibility, authenticity, or added values.	complete only what is required.	have trouble completing even the minimum required tasks.
7.2	Accessing Information	access information from a variety of sources and critically assess their quality, validity, and accuracy.	access information from a variety of sources and assess their quality, validity and accuracy to some extent.	access information from a variety of sources without any attempt to assess their quality, validity or accuracy.	be unable to access information unless clearly guided to pending sources.
7.3	Self Learning	analyze new content by breaking it down, comparing, contrasting, recognizing patterns, and/or interpreting information.	analyze new content with some difficulties.	need guidance to analyze new knowledge.	fail to analyze new knowledge
7.4	Reflection on Learning	regularly reflect on his/her learning process, evaluate personal performance and progress, and take required actions and improvements.	reflect on his/her learning process, evaluate personal performance and progress, but fail to take required actions.	occasionally reflect on his/her learning process if asked to do.	fail to recognize his/her own shortcomings or deficiencies.
7.5	Apply New Knowledge to Perform Tasks	apply new knowledge successfully to solve real life complex engineering problems.	apply new knowledge to solve complex engineering problems.	apply new knowledge to solve simple problems.	fail to apply new knowledge.