

## Subject Description Form

<b>Subject Code</b>	CSE1BN01W
<b>Subject Title</b>	Transport and Society
<b>Credit Value</b>	3
<b>Level</b>	1
<b>Pre-requisite / Co-requisite/ Exclusion</b>	<del>Nil</del> <u>CEE students are allowed to take CSE1BN01W.</u>
<b>Objectives</b>	This course aims to familiarize students with the major and current issues affecting transportation in local and global contexts. The significance of transport to social and economic development is analyzed with particular emphasis on the concept of sustainability. Students will acquire knowledge of different forms of transportation and be able to discuss and analyze their significance to society in various aspects.
<b>Intended Learning Outcomes</b>	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> <li>(a) Identify the role and characteristics of transportation systems</li> <li>(b) Describe the role of transportation in social and economic development, and its environmental impacts</li> <li>(c) Appraise transportation challenges in Hong Kong and overseas, and ways in addressing these issues</li> <li>(d) Describe the contemporary trends in transportation development, such as smart city/ smart transportation</li> </ul>
<b>Subject Synopsis/ Indicative Syllabus</b>	<ol style="list-style-type: none"> <li>1. <b>Overview</b> – What is transportation, nature of transport demand, the role of transportation in society</li> <li>2. <b>Evolution of transportation</b> – Development of transport modes. Transport and spatial organization in global, regional, and local scale</li> <li>3. <b>Transportation modes and travel patterns</b>– characteristics of transportation systems and modes for: (i) passenger transport: urban, regional, long-distance; and (ii) freight transport. Passenger and freight travel patterns. Advanced technology and future developments.</li> <li>4. <b>Transportation, Economy and Society</b> – Transport and economy. The full cost of transportation. Social impacts of transportation – health, safety, and equity issues</li> <li>5. <b>Environmental impacts of transportation</b> – Fuel consumption, emission, noise, urban sprawl, ecology</li> <li>6. <b>Sustainable transport</b></li> </ol>

	<p>6.1. Introduction – Mobility needs and costs, automobile dependence, unsustainable travel pattern. Business as usual versus sustainable transport</p> <p>6.2. Spectrum of Sustainable Transport solutions – Options for sustainable mobility: avoid, shift, improve. Global and local policies, personal actions. Barriers to implementation. Sustainable transport in developing countries</p> <p>6.3. Technological solutions – Advances in fuel, vehicle technology (emission and energy efficiency), information and communication technology (ICT) in transport, smart transportation</p> <p>6.4. Policy &amp; Planning solutions – Travel demand management, land-use policy, smart city</p> <p>6.5. Fiscal measures – congestion pricing, fuel tax, carbon tax, tradable permits</p> <p>6.6. Transport policy evaluation and planning – conventional economic evaluation approach, hidden costs. Public policy planning process, public participation. New planning paradigm.</p>
<p><b>Teaching/Learning Methodology</b></p>	<p><u>This subject is delivered in the flipped classroom approach which consist of:</u></p> <ul style="list-style-type: none"> <li>• <u><b>Weekly self-study video lectures</b> – students are expected to gain fundamental understanding of the subject contents by completing the video lectures and the accompanying concept-check exercises before the tutorial sessions</u></li> <li>• <u><b>Interactive tutorials</b> – students are expected to expand and deepen their understanding by engaging in interactive activities, including but not limited to group discussions, mini-research, presentation, and case studies, during the tutorial sessions. These activities are going to be conducted in small groups to facilitate peer learning, under the guidance of the subject lecturers.</u></li> </ul> <p><del>In this subject, various teaching/ learning activities and assessment approaches are employed to facilitate collaborative learning both inside and out of classroom.</del></p> <p><del>Basic concepts and techniques are being introduced in weekly lectures, achieving learning at knowledge level.</del></p> <p><del>Students are expected to read relevant materials in textbooks and online (such as websites and videos) to reinforce their knowledge and broaden their learning. In the <b>interactive tutorial sessions</b>, students will present, discuss, or debate the reading materials to stimulate critical thinking and higher order reasoning. In the tutorial sessions, students will have opportunity to apply the numerical techniques learnt in class through exercises.</del></p>

~~Teaching/ learning activities extends to the online platform.~~ Each student will write an **term paper** upon transport development and sustainability issue to demonstrate their overall understanding of the subject contents and ability to extend their knowledge to discuss more recent issues. ~~Students will receive comments from their peers before the revised article is being graded by the instructor.~~

**EW/ER requirements**

To enable students to meet the **EW requirement**, students can refer to an online lecture series provided by ELC. The series aims at equipping students with writing skills to enable them to write more effectively in English.

Students are also **required to** submit **two drafts** of the **term paper** to staff of ELC in order to gain feedback regarding their writing. The submissions will allow ELC staff to assess the progress made by students in the writing process and the quality of their work.

To enable students to meet the **ER requirement**, students can also refer to the respective online lecture service developed by ELC. The kit comprises resources that will enhance students’ reading skills. In addition to the materials covered in lectures, students are expected to study the prescribed textbook in order to attempt the tests.

**Assessment Methods in Alignment with Intended Learning Outcomes**

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)			
		a	b	c	d
<u>1. Lecture Exercise</u>	<u>10%</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
2. Test (ER requirement)	<del>30</del> <u>20</u> %	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
3. Tutorial activities ( <del>^</del> )	<del>30</del> <u>30</u> %		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4. Term Paper ( <del>#</del> ) <i>30% by instructors, 10% by ELC for EW requirement)</i>	<del>40</del> <u>40</u> %		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total	100 %				

**Students must attain at least grade D in both coursework and final examination (whenever applicable) in order to attain a passing grade in the overall result.**

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

	<p>The accuracy of students' understanding of and ability to apply the concepts learnt in class <b>and reading the textbook</b> (mostly ILOs (a) and (b)) are assessed through <b>the lecture exercises (10%) and a tests (two tests, 15% + 1520%)</b>.</p> <p><b>△</b>—The <b>tutorial</b> sessions provide opportunities for students to demonstrate their level of learning with respect to ILO (b), (c) and (d). Assessment of students' performance (such as preparation, participation, and quality of presentation) is formative in nature but still carries some weighting (<b>2030%</b>) to promote continuous participation in these teaching/ learning activities.</p> <p><b>#</b>—Each student needs to write a <b>term paper</b> (40%) upon a transport development and sustainability issue, which allows students to demonstrate their learning in ILO (b), (c) and (d) in a more elaborated manner. Students will submit two drafts (first draft: a writing plan, second draft: at least 1500 words) to ELC for comments and improvements before submitting the final version (1500-2500 words). The term paper will be <b>graded by the instructor (4030%)</b> and ELC (10%). <b>Students must obtain grade D or above in this the term paper in order to pass this subject.</b></p>	
<b>Student Study Effort Expected</b>	Class contact:	<b>Average hours per week</b>
	<ul style="list-style-type: none"> <li>▪ Lectures / Tutorials</li> </ul>	<b>326</b> Hrs.
	Other student study effort:	
	<ul style="list-style-type: none"> <li>▪ <b>Preparing for tutorial sessions</b><u>Completing video lectures</u></li> </ul>	<b>439</b> Hrs.
	<ul style="list-style-type: none"> <li>▪ <b>Reading required text</b><u>Revision</u></li> </ul>	<b>26</b> Hrs.
	<ul style="list-style-type: none"> <li>▪ Writing term paper</li> </ul>	<b>326</b> Hrs.
	Total student study effort	<b>9117</b> Hrs.
<b>Reading List and References</b>	<p><b>Textbook: [ER Requirement]</b>  Rodrigue, J.-P. (<del>2013</del><b>2024</b>). <i>The Geography of Transport Systems</i> (<del>Third</del><b>Sixth</b> ed.). New York: Routledge.  Remark: around 200 pages of assigned reading from this textbook will be used to fulfil the ER</p> <p><b>Major references:</b>  Schiller, P., Brunn, E., &amp; Kenworthy, J. (2010). <i>An introduction to Sustainable Transportation</i>. London, UK: Earthscan.  Banister, D. (2005). <i>Unsustainable Transport</i>. Oxfordshire: Routledge.</p>	

Hoyle, B., & Knowles, R. (Eds.). (1998). *Modern Transport Geography* (Second, revised ed.). West Sussex, England: John Wiley & Sons Ltd.

***Other references:***

Cahill, M. (2010). *Transport, Environment and Society*. Berkshire: Open Univesity Press, McGraw-Hill Education.

Khisty, J. C., & Lall, K. B. (2002). *Transportation Engineering: An Introduction* (Third ed.). New Jersey: Prentice Hall.

Vuchic, V. (2005). *Urban Transit: operations, planning, and economics*. New Jersey: John Wiley & Sons.

Vuchic, V. (2006). *Urban transit systems and technology*. New Jersey: John Wiley & Sons.

International Transport Forum. (2011). *Transport for Society - Highlights. 2011 Annual Summit*. Leipzig, Germany: OECD Publishing.

Proceedings of the Motor Vehicle Emissions Control Workshop (MoVE)