

Annexure D – Course syllabus
Module 6: Climate Change and Urban Mobility

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General Data	Module Number	6
	Semester weeks (duration)	As appropriate
Description	Description of module / key content	<ol style="list-style-type: none"> I. Definitions II. Why link urban mobility with climate change? III. Adaptation response strategies IV. Mitigation: technology responses V. Mitigation: logistical responses VI. Comprehensive response strategies VII. Summary VIII. Essential and supplementary reading <p>Long Case Studies</p>

		<ol style="list-style-type: none"> 1. Rapid urban bus system in Mexico City 2. Bicycle sharing systems in Lyon and other cities <p>Short Case Studies</p> <ol style="list-style-type: none"> 3. Egypt's clean fuels Initiative 4. Sustainable urban development in Kunming 5. China's first electro voltaic taxi fleet in Shenzhen 6. Regaining street space for pedestrians in Turkey 7. Promotion of reading in the subway of Mexico City 8. Medellin's amazing metro system to drive societal change 9. The brick bridges in Saint Luis, Senegal 10. Curitiba: integrated urban density and mobility plan 11. Bus rapid transit: Transmilenio in Bogotá 12. Good municipal transportation in Seattle 13. 150 case studies in data bank of good urban mobility policies
	Rationale for the module	<p>Transportation accounts to 28% of all energy consumption in a country like the USA. When discussion climate change and ways to reduce (or better: reverse) it. Alternative mobility concepts play a major role. Current transportation solution also have other problems such as air pollution and traffic jams, which can be fixed at the same time when shifting to more climate friendly mobility policies and strategies.</p>

	Some people believe that mobility issues are too complex and should therefore be left to transportation specialists. But precisely this complexity calls for location better solutions between different disciplines – which is a typical field of activity for urban planners. Therefore a comprehensive module on urban mobility needs to be taught in schools of planning and architecture as well.
Module objective(s)	To provide urban planning professionals an interdisciplinary understanding of urban mobility requirements in the light of climate change, and to enable them to formula urban transportation needs and to outline and assess potential and future oriented solutions.
Learning outcomes	After completion of the course the participants will be prepared to: <ul style="list-style-type: none"> ▪ Define scope of urban planning needs and services; ▪ Explain the linkages between climate change and urban mobility; ▪ Understand the impact of climate change on urban transportation; ▪ Analyze qualitatively the impact of urban transportation decisions on climate change; ▪ Be able to connect climate change requirements with other and independent mobility needs; ▪ List the most recent and currently discussed urban transport trends in the international debate; and ▪ Name progressive and climate responsible urban mobility programs from abroad
Methodology and Key ideas of student led learning	The backbone of the module is a comprehensive lecture composed of 77 slides which are complemented with 5 pages of key and secondary literature, extensive lecture notes also suggesting different type of student work, 2 main case studies and a larger number of smaller case studies. The suggested student work also includes field studies and group work.
Class hours	Minimum twice two hours up to one week full time as the program schedule permits

Student led learning hours and expected hours of individual study	Plus 50% to 100% of class hours.
Target Learners (Related fields of study/compatible specializations/associated programs) (incl. year and degree level)	Third year tertiary undergraduate in urban studies, urban planning, environmental management, geography, international development, public administration, public policy
(Suggestions) of Collaboration	The module is closely linked to module 5-A Urban Energy. For water borne transportation also cooperation possible with module 4 (water)
Means of assessment	<p>Two main means of student assessment are proposed for this module:</p> <ol style="list-style-type: none"> 1. The lecture comments provide ample suggestions for exercises which can be completed individually or within a group. The results shall be presented in a poster or short presentation which can become the base of the assessment. 2. If the class is working on an urban project covering several assignments, then students would have to develop a suitable climate neutral mobility concept for that overriding project. <p>Additional assessment options could be considered, such as incorporating module content in a final exam for the course, or assessing individual student presentations given during the studio.</p>
Annexure A: Lecture	One comprehensive PowerPoint presentation is attached. The PowerPoint can be delivered over two lectures. Lecture notes are incorporated in the Notes section of the ppt. Relevant background reading is indicated where free access is available in

		the internet.
	Annexure B: Case study	Long Case Study on Bicycle Sharing Systems (Lyon)
	Annexure C: Case study	Long Case Study on Rapid Bus Service Systems (Mexico)
	Annexure D.	Course Syllabus
	Annexure E: Reference Cases	A pack of additional small case studies with references are intended to facilitate student work on other cases.
	Annexure F.	Reading List. Included in the PowerPoints. The course lecturer is advised to examine and select the material before delivering the module since directed student reading is not recommended to read material the lecturer has not read his or herself.