Universidade de Brasília

PLANO DE ENSINO

Código/Disciplina	PPGT0233 - Transportation and Environment		
Carga Horária	15 horas	**Créditos**	1 CR
Natureza	MSc		
Tipo	Optional		
Área de Concentração	Logística, Operação e Planejamento de Transportes		
Professor Responsável	Augusto Brasil		
Semestre	1/2025		
Horário de aulas	Wednesday: 10:00 – 11:50.		
Local	SG-12 Classroom AT 10/18		
Objetivos da Disciplina	The objective of the course is to give the students the ability to assess the energy and environmental impacts of mobility. Theories and methodologies are presented for the assessment of environmental impacts, for the understanding of available energy resources, energy transformation and emissions of pollutants as a consequence of daily mobility. The life cycles related to mobility, with their impacts on energy consumption and pollutant emissions, are also presented		
Metodologia de Ensino	Traditional classroom lectures, study groups, paper development, writing and presentation (review, methodology and results). As an option, synchronous and asynchronous presentations can be scheduled. A conference paper format is required for final evaluation		
Programa	Topics 1. Introduction		

	2. Relationships between Transportation, Energy and Environment. 3. Propulsion of transportation vehicles. 4. Internal combustion engines emissions of air pollutants. 5. Influence of speed and traffic flow on energy consumption and emissions. 6. Methodologies for the assessment of energy consumption and emissions. 7. Top-Down and Bottom-Up methodologies. 8. Vehicle emissions and Atmospheric dispersion of pollutants. 9. Life Cycle Analysis.
Critério de Avaliação	**The final grade is based on the presented paper, with the following composition:** **Individual score:** **Df = Oral presentation and answers** **Group score:** **Te = Presentation (Slides and text quality).** **At = Final manuscript (conference paper format).** **Score = (Df + Te + At)/3** **** Scores are from 0 to 10.** **The final grade is based on the UnB system:** **SS (Superior) 9,0 – 10,0** **MS (Average Superior) 7,0 – 8,9** **MM (Average) 5,0 – 6,9** **MI (Average Inferior) 3,0 – 4,9** **II (Inferior) 0,1 – 2,9** **SR (Nill) 0,0**

	Minimum grade for credits is MM.
Calendário de Atividades	
Bibliografia Recomendada	**BIBLIOGRAFIA BÁSICA** 1. Vasconcelos, Eduardo Alcântara de. Transporte e meio ambiente: conceitos e informações para análise de impactos. Ed. Do Autor, 2006. ISBN 978-85-7419-893-4. 2. Susan Hanson and Genevieve Giuliano. The geography of urban transportation. 3rd ed. 2004. The Guilford Press. Black, William R. Sustainable transportation: problems and solutions. 2010. The Guilford Press.
Informações Adicionais	_

[Nome do professor da disciplina]

Brasília, 24 de agosto de 2022