



Microcredential EXAMPLE

Description of example Microcredential from Trinity College



Microcredential: Transport Modelling and Planning (Trinity College Dublin)

Who is this Micro-credential for?

- ◆ Transport professionals, planners, and policymakers that need to interact with macro transport models and interpret their outputs.
- ◆ The models used in this micro-credential follow the structures mandated by the National Transport Authority and will provide the learner a comprehensive overview of the structure of these models and as such would be valuable to those requiring knowledge on how these models are used in transport appraisals.

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Why should I take this Micro-credential?

- ◆ Transportation is responsible for almost 20% of our annual CO2 emissions in Ireland. Therefore, it is more important than ever to understand how and why people travel and to collect data on these movements with the goal of reducing travel time and emissions.
- ◆ Both the Climate Action and Low Carbon Development Bill 2021 and the recent Programme for Government stipulate that transport emissions must fall by 51%.
- ◆ This micro-credential examines pathways to lowering emissions through promoting shifts to sustainable modes of transport and reducing emissions from existing modes of transport and is part of the only Level 9 course dedicated to transport engineering and modelling.
- ◆ It covers the basis of the four-stage transport model used by National Transport Authority in the evaluation of transport projects.
- ◆ Providing students with detailed knowledge of the concepts and processes of transportation modelling.
- ◆ Our Micro-credentials are all CPD approved by Engineers Ireland

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What will I learn?

- ◆ Advanced fundamental knowledge on macro transport modelling and evaluation of transportation schemes. Public transport network design and the interactions between land use planning and transport are also covered in this micro-credential.
- ◆ Case studies are used to explain the stages in transport analysis and design.
- ◆ Evaluate transport networks using the four-stage model.
- ◆ Discuss how transport networks are designed.
- ◆ Apply discrete choice models to transportation problems.
- ◆ Explain how activity-based transport models link into the traditional four stage model.
- ◆ Identify the links between land use and transport planning.
- ◆ Design and plan public transport routes.
- ◆ Model the interactions between transport and emissions.

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What will I do?

- ◆ Attend a series of lectures from national experts in the field.
- ◆ Identify innovative methods to model mobility and estimate interventions to reduce travel time.
- ◆ Model the emissions from transport and examine how using alternative fuel types can assist in decreasing carbon footprints.
- ◆ Examine the transport planning process and how local and area plans need to adapt to changing mobility needs.

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How will this Micro-credential be delivered?

- ◆ 33 hours lectures (3 hours per week).
- ◆ There will be blended delivery with all lectures recorded live while also giving the option for face-to-face lectures.

How is this Micro-credential assessed?

- ◆ Individual assignment – examining public transport planning. Students will present a written report (20%).
- ◆ Individual assignment – modelling transport emissions. Students will present a written report and detailed analysis (30%).
- ◆ 3-hour examination (50%).

What do I need to be accepted onto this Micro-credential? – Entry requirements & Prerequisite documents

- ◆ CV & Transcript (2:1)