



Sustainable Transport and Mobility

Addressing emissions from the transportation sector is vital for achieving net zero goals. A module on sustainable transport would cover topics like electric vehicles (EVs), alternative fuel technologies, public transportation systems, intelligent transportation systems, and urban planning for sustainable mobility. It would also examine the role of policy, regulations, and incentives in promoting low-carbon transport solutions.

Who Should Attend

The course is aimed at engineers, designers, technology and material experts, environmental specialists and health and safety personnel working in industry, business and local government with responsibilities towards the changes required to reduce the environmental impact of greenhouse gas emissions. Since everyone in society is affected by the changes required and has a role in achieving a successful result, the course is of universal interest to each of us.

Aims

To provide an overview of the challenges and strategies associated with achieving net zero carbon emissions by 2050. The delegate will come away with an appreciation of the various technologies associated with replacing climate-damaging fossil fuels with alternative means of power generation, together with developments in material technology, optimisation of industrial processes and government regulations, which will contribute to meeting this goal.

Learning Outcomes

After completing this course, the delegates will be able to demonstrate improved knowledge and understanding of the revolutionary changes required in transportation and mobility to face the challenges posed by climate change. In general, participants will:

- Understand the key role society has in reducing their carbon footprint.

- Gain an appreciation of the Government's current actions and current and future strategies designed to address the many issues involved.
- Be aware of the developments in technology and materials that aim to reduce greenhouse gas emissions.
- Appreciate the benefits of reducing emissions in terms of both health and well-being.

Be aware of the economic and social impact of the necessary transportation changes and the future regulations and policies required to achieve the vital target of net zero carbon by 2050.

Course Programme

- Climate change and the harmful effects of fossil fuels on the environment
- Current transport emissions
- Government actions and strategies, both short and long-term, aimed at addressing the issues
- Electric vehicle technology
- Hydrogen technology
- Autonomous vehicles
- Material manufacture and selection
- Offsetting carbon emissions
- Infrastructure for the electric revolution
- Policies and regulations
- Economics of change
- Environmental and social impacts
- Health and wellbeing
- The role of the individual
- Novel future modes of transport

Course Delivery

The course is conveniently delivered through Swansea University's Learning Management System, Canvas, providing a seamless online learning experience. Students are granted a generous three-month period to complete the course, allowing for personalised learning at their own preferred pace.

Throughout the course, participants will engage in three progressive assessment quizzes, complemented by a comprehensive final written assessment that culminates their learning journey. All assessments are conveniently submitted through the secure and user-friendly platform, Canvas.

To ensure a supportive and enriching learning environment, expert guidance and assistance are readily available from our project lecturers and dedicated learning technologists. These experienced professionals can be easily reached through Canvas or via email.

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