

Module Template for New and Revised Undergraduate Modules

Module Code	PSU34770
Module Name	Behavioural science and road safety
ECTS credit weighting	5 ECTS
Semester taught	Semester 2
Module Coordinator/s	Michael Gormley
Module Learning Outcomes with embedded Graduate Attributes	<ol style="list-style-type: none">1) Describe the complexity of the driving task from a cognitive and behavioural perspective and indicate that error is the inevitable consequence of a system that relies on human action, which is minimally monitored.2) Appreciate how many of the different areas of psychology help explain driver performance and related aberrant behaviours. The main areas discussed will be Biological, Cognitive and Social, while reference will also be made to Developmental, and Personality and Individual differences.3) Critically evaluate the different theoretical models used to explain driver behaviour and how they relate to different road safety initiatives.4) Discuss the reasons for the reliance on the car as a mode of transport, and identify the barriers to more environmentally friendly options.5) Identify different road user groups and explain how their interactions impact road safety.
Module Content	<p>This module provides an introduction to traffic psychology and the factors that influence human behaviour within the road environment. Road users—including pedestrians, cyclists, riders of powered two-wheelers, learner drivers, professional drivers, and chauffeurs—make countless decisions while interacting with the traffic system. While the majority of these decisions contribute to safe road use, some can lead to serious or fatal consequences.</p> <p>The module examines a range of theoretical models of driver behaviour, highlighting the complexity of the driving task and the multitude of cognitive, social, developmental, and environmental factors that influence behaviour on the road. Students will develop an understanding of the driver as an active information processor who continuously evaluates multiple sources of information, compares alternatives, and makes decisions about how to respond.</p> <p>A holistic approach to understanding road traffic collisions will be adopted, enabling students to appreciate that serious road safety outcomes are rarely the result of isolated accidents. Rather, they typically arise from an interaction of multiple contributing factors and behavioural decisions.</p> <p>As an applied field, traffic psychology draws upon theories and research from across the major areas of psychology. For example, developmental psychology demonstrates that children are generally unable to accurately judge the speed of an approaching vehicle until approximately 12 years of age, while social psychology shows that behaviours such as speeding are strongly influenced by factors identified</p>

within the Theory of Planned Behaviour, including perceived social norms. Throughout the module, perspectives from the five core areas of psychology will be integrated to explain traffic-related behaviours and to explore evidence-based approaches to improving road safety. Topics covered will include:

- Theoretical models of driving
- Inherent difficulties experienced by young drivers: extent, origins and solutions
- Older drivers – problems encountered by one of the safest cohorts
- Impact of gender across the life span on transport choices and outcomes
- Psychometric and experimental methods of assessing driver behaviour and performance
- Origins of road user group discordance and coherence
- Antecedents of speeding and effecting behavioural change
- Transport modal choice – encouraging more environmentally friendly choices
- Road safety education: theoretical foundation, problems of delivery and assessing impact

Teaching and Learning Methods

The course will be presented in a traditional format of weekly face-to-face lectures. Discussion will be encouraged, and will give visiting students the opportunity to discuss their road safety experiences and values, and how these might differ from the Irish/EU experience. Content will be research led and informed by both grey literature (commissioned reports) and academic journals. The use of social media to impart road safety messages will also be investigated. Education for sustainable development will be addressed when considering environmentally friendly transport choices.

Assessment Details

Please include the following:

- Assessment Component
- Assessment description
- Learning Outcome(s) addressed
- % of total

It is recommended that module co-ordinators

Assessment Component	Assessment Description	LO Addressed	% of total
Evaluation of a road safety intervention	Students will be asked to align a road safety intervention to a	1, 2 & 3	100%

consider assessment types used across the year to ensure varied assessment methods.

	particular theory and determine how effective the intervention was.		

Contact Hours and Indicative Student Workload

Consider how much time an average student needs to invest in the elective to demonstrate the learning outcomes at threshold level. Take into account attendance and time for preparation, including self-study, for all teaching, learning and assessment associated with the module. Workload should be commensurate with ECTS size, which is equivalent to 100-125 student learning hours.

Contact hours: 11 x 1hr lectures
Independent Study (preparation for course and review of materials): 50 hr
Independent Study (preparation for assessment, incl. completion of assessment): 50 hr

Inclusive Curriculum

	PLEASE TICK
1. Have you reviewed the teaching / assessment methods and materials for possible barriers to learning, e.g. students with English as a second language, disabilities, significant external responsibilities, students with IT issues / requiring specific accessibility software etc.?	<input checked="" type="checkbox"/>
2. Have you adapted your resources and teaching materials taking into account Trinity's Accessible Information Guidelines (https://www.tcd.ie/disability/teaching-info/TIC/materials.php)?	<input checked="" type="checkbox"/>
3. Does the content of your module address diversity? For example, including a diverse demographic profile of authors, diversity of ideas and perspectives, or representation (e.g. pictures of conditions on different skin tones), or by acknowledgement of the homogenous context of the discipline/topic?	<input checked="" type="checkbox"/>
4. Highlight at least two ways which your course/module incorporates principles of inclusivity and accessibility into the curriculum design 1) Road safety is heavily influenced by age, gender and ethnicity, and these will be discussed throughout the lectures. 2) Lectures will be recorded and made available, while slides will be provided in advance.	

(i.e. supports engagement and representation of **all** Trinity students, presents information and content in a variety of ways, and offers variety and options of assessment type. See: [Universal Design for Learning - AHEAD](#) for more information and guidance, and [Inclusive Curriculum - Equality - Trinity College Dublin \(tcd.ie\)](#) for insights from Trinity students)

**Indicative Reading List
(approx. 4-5 titles)**

Bjork, J. M., & Pardini, D. A. (2015). Who are those "risk-taking adolescents"? Individual differences in developmental neuroimaging research. *Dev Cogn Neurosci*, 11, 56-64. doi:10.1016/j.dcn.2014.07.008

Buckley, L., Truelove, V., & Love, S. (2025). What does the research tell us about contributory factors related to inattention and driving in rural areas? A systematic review. *Accid Anal Prev*, 222, 108246. doi:10.1016/j.aap.2025.108246

Lheureux, F., Auzoult, L., Charlois, C., Hardy-Massard, S., & Minary, J. P. (2016). Traffic Offences: Planned or Habitual? Using the Theory of Planned Behaviour and habit strength to explain frequency and magnitude of speeding and driving under the influence of alcohol. *Br J Psychol*, 107(1), 52-71. doi:10.1111/bjop.12122

Wang, Y., & Sun, L. (2025). Effects of safe driving climate among peers on the reckless driving behaviours of young drivers: The moderating effects of family climate and safety attitudes. *Transportation Research Part F: Traffic Psychology and Behaviour*, 112, 90-98. doi:10.1016/j.trf.2025.04.004

Module Pre-requisite

Introduction to psychology

Module Co-requisite

n/a

Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.

no