Module Template for New and Revised Undergraduate Modules[1]

Module Code	**PSU34710**
Module Name	**CASE STUDIES IN NEUROPSYCHOLOGY**
ECTS credit weighting	5 ECTS
Semester taught	Michaelmas Term
Module Coordinator/s	Paul Dockree
Module Learning Outcomes with embedded Graduate Attributes	**On successful completion of this module students should be able to:** LO1 - Analyse and evaluate the different types of behaviours and symptoms expressed by neuropsychological syndromes. LO2 - Describe and explain the dysfunctional brain regions and networks underlying different neuropsychological impairments. LO3 - Understand and critique the different case- and group- study methods for assessment of brain damage. LO4 - Critically discuss the relationship between case studies in neuropsychology and techniques in cognitive neuroscience (e.g. imaging and electrophysiological methods) LO5 - Critically evaluate the mechanisms and methods of recovery and rehabilitation following brain damage. This module primarily develops the Trinity Graduate Attribute **"To Think Independently"** through critical analysis of neuropsychological theory, methodology, and evidence. It also supports **"To Act Responsibly"** through engagement with ethical and clinical issues in brain injury assessment and rehabilitation, **"To Communicate Effectively"** through critical discussion and evaluation of evidence, and **"To Develop Continuously"** through engagement with contemporary research and evolving scientific understanding of brain–behaviour relationships.
Module Content	Case studies of patients with brain damage remain a critical part of neuroscientific methods for understanding the organisation of cognitive systems, and devising principled approaches to rehabilitation. In this topic, there is great scope for clinicians and researchers to inform and learn from one another with respect to the manifestation of clinical disorders, their potential causes, and paths to rehabilitation. Students are aware of famous patients with brain damage (e.g. Phineas Gage and patient H.M.) but this module will address lesser-known cases, who have nevertheless provided important insights into contemporary research problems across several domains including perception, attention, memory, dysexecutive syndrome and disorders of motivation, metacognition and awareness.

[1] An Introduction to Module Design from AISHE provides information on designing and re-designing modules.

The following topics will be covered:

Introduction to concepts and methods in neuropsychology

Perceptual Disorders:

- Visual agnosia
- Art and brain injury

Memory Disorders:

- Remembering and forgetting our autobiographical pasts
- Confabulation

Executive function Disorders:

- Breakdown of executive functions
- Dysexecutive Syndrome

Motivational Disorders:

- Apathy
- Impulsivity and disinhibition

Metacognitive Disorders:

- Anosognoisa
- Impaired self-awareness

Connectomics and neuropsychology

- Diaschisis: remote effects of brain lesion
- Maladaptive and compensatory brain changes
- Guided recovery and rehabilitation

Teaching and Learning Methods

The module is delivered through weekly in-person lectures, with recorded lectures also provided after each lecture; however, in-person attendance is required. Students are encouraged to participate actively through questions and discussion. Teaching is research-led and informed by current journal articles available on Blackboard, while students are also expected to engage in independent research. Relevant podcasts and videos may be provided to complement the reading materials.

Assessment Details[2] Please include the following:

- **Assessment Component**
- **Assessment description**

Assessment Description	LO Addressed	% of total	Week due
Case Studies Analysis Assignment. Four case histories are presented, which each describe a patient's symptoms in daily life and neuropsychological impairments identified at assessment. Students are required to choose two out of the four case histories and produce	LO1-LO5	100%	End of semester. Data TBA.

[2] https://www.tcd.ie/CAPSL/resources/assessment

• **Learning Outcome(s) addressed** • **% of total** • **Assessment due date**	two 1,500-word reports organised into 4 sections that: 1/ Analyse and evaluate the behaviour and symptoms expressed by the patient, and provide a well-reasoned and logical account of what neuropsychological condition or co-morbid conditions the patient may be exhibiting. Please focus on the conditions covered in the lectures. 2/ Critically examine what perceptual, cognitive and/or emotional domains are affected in this condition(s) and what likely brain mechanisms or networks have been damaged. 3/ Critically evaluate the additional neuropsychological tests, and/or neuroimaging investigations that would be most useful in further characterising the patient's condition and increasing confidence in the diagnosis (including any potential co-morbid diagnoses). Based on the available evidence, recommend and justify appropriate rehabilitation approaches, evaluating their effectiveness. Support your recommendations throughout with evidence from published research. 4/ Reflective component of your assignment research			

Contact Hours and Indicative Student Workload[3]	**11 scheduled lectures and 110 hours of Independent Study (comprising review and study of topics and preparation and planning of continuous assessment).**
Inclusive Curriculum	*All modules should be inclusive for all students who learn differently. Please respond to the following questions (i.e. ensuring the course supports engagement and representation of all students)*

[3] TEP Guidelines on Workload and Assessment

		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.?	☒
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)?	☒
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?	☒

4. Highlight at least two ways which your course/module incorporates principles of inclusivity and accessibility into the curriculum design

1. **By providing and range of teaching approaches the incorporate traditional lecture-based teaching combined with opportunities for group discussions, Q&A and multimedia presentations for effective learning.**
2. **Providing additional sessions on assessment, with opportunity for Q&A and Blackboard Discussion Board exchange.**

*(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)*

Recommended Reading List (selection)

There is no core textbook for this module.

Journal articles: Articles from journals including *Brain, Neuropsychologia, NeuroCase, Cognitive Neuropsychology* and *Neuropsychological Rehabilitation* will be uploaded to Blackboard on a weekly basis together with lecture slides.

Books for orientation to Neuropsychology:

Introduction to Neuropsychology. 2nd Ed. J. Graham Beaumont.

	Into the Silent Land: Travels in Neuropsychology. Paul Broks
Module Pre-requisite	It is recommended that visiting students have completed an cognitive neuroscience module or equivalent in Year 1-2 of their degree.
Module Co-requisite	
Module Website	All teaching materials will be presented via TCD Blackboard.
Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.	No