| Course Code    | HP4272   |
|----------------|--|
| Course Title   | Introduction to Clinical Neuropsychology       |
| Pre-requisites | HP1000 Introduction to Psychology              |
|                | HP1100 Fundamentals of Social Science Research |
|                | HP2200 Biological Psychology                   |
|                | HP2700 Abnormal Psychology                     |
|                | HP3702 Introduction to Neuropsychology         |
| No of AUs      | 4  |

# **Course Aims**

This is an introductory course to clinical neuropsychology. This course will provide the foundation for students interested to pursue graduate studies in clinical neuropsychology. We will briefly survey clinical disorders involved and relate how neuropsychological disorders are associated with brain function and anatomy covered in the prerequisite HP3702 course. Students will also be able to briefly experience scoring a brief neurocognitive test battery and brief cognitive screeners.

Consideration of the contributions of neurology, experimental and clinical neuropsychology to the understanding of normal cognitive and affective functioning and of disturbances resulting from brain damage in selected areas will also be presented. Background knowledge in Biopsychology will be required.

### Intended Learning Outcomes (ILO)

By the end of this course, you should be able to:

- 1. Describe and explain theories of abnormal brain function in humans
- 2. Describe and justify assessment and treatment options for neuropsychological disorders
- 3. Use relevant language in the field of clinical neuropsychology to accurately conceptualize an example clinical case

### **Course Content**

At the completion of this course, students should have the knowledge to describe and explain two areas of investigation related to clinical neuropsychology.

- 1) How do disorders of the brain affect our thinking and behaviour?
  - a. Disorders of cerebral asymmetry
  - b. Disorders of perception
  - c. Disorders of attention and consciousness
  - d. Disorders of memory and language
  - e. Executive dysfunction
  - f. Social and emotion dysfunction
  - g. Neurological and psychiatric disorders
- 2) What are the assessments, strategies and treatment options available for different types of neuropsychological disorders?
  - a. RBANS
  - b. Rehabilitation

| Assessment (includes both continuous and summative assessment) |         |                            |                      |                 |
|--|---------|----------------------------|----------------------|-----------------|
| Component  | ILO     | Related Programme LO or    | Weighting            | Team/Individual |
|  | Tested  | Graduate Attributes        |                      |                 |
| 1.CA1:   | 1, 2, 3 | Communication, Character,  | 10%                  | Individual      |
| Participation and  |         | Civic-mindedness, and      |                      |                 |
| <b>Discussion Board</b>  |         | Creativity & Competence    |                      |                 |
| 2.CA2: Group   | 2, 3    | Communication, Character,  | 25% (15% individual; | Team            |
| Activity   |         | Civic-mindedness, and      | 10% peer evaluation) |                 |
|  |         | Creativity & Competence    |                      |                 |
| 3. CA3: 8 weekly   | 1, 2, 3 | Competence                 | 40%                  | Individual      |
| quizzes  |         |                            |                      |                 |
| 4. CA4: Critical   | 1, 2, 3 | Communication, Civic-      | 25%                  | Individual      |
| Thinking Paper   |         | mindedness, and Creativity |                      |                 |
|  |         | & Competence.              |                      |                 |
| Total  |         | •                          | 100%                 |                 |

# Formative feedback

Feedback is central to this course. You will receive formative feedback through verbal feedback from inclass discussions and group activity. You will receive summative group feedback on the critical thinking paper following the conclusion of the module.

# Learning and Teaching approach

| Approach  | How does this approach support you in achieving the learning outcomes?   |
|---|--|
| Lecture/Seminar<br>discussions                        | To effectively convey information on the fundamental theories key concepts (LO1). Students will need to participate actively in class and online discussions by voicing their perspectives, analyses, or criticism on the reading materials. Students will be evaluated on theoretical and methodological grounds. This component confers training on intellectual debates and critical thinking skills.   |
| Online Discussion<br>Board and Class<br>participation | Discussion topics to help students analyze real-life scenarios and apply knowledge to solve problems (LO1, 2, 3); have students to share their discussion points by presenting to their group and the entire class (LO3)   |
| Group Activity  | Students will participate in 7 group activities to learn a brief neuropsychological assessment battery, some common screens and standardized neurocognitive tests and a case study. It will be made clear to students that they will be evaluated on criteria such as: (a) accuracy and reliability of their scoring, (b) interpretation of the evaluation profile, and (c) the depth and comprehensiveness of their conceptualization of the case studies. The goal of this component is to provide training of case conceptualization and hands-on practice in administering a brief neuropsychological battery. This skill will be useful for future research and graduate training, if the students wish to pursue clinical careers. (LO1, 2, 3) |

| Weekly Quiz                | Students will have to do a weekly quiz on the relevant material learnt during lecture. As this course is very content heavy, the students will be able to assimilate knowledge in chunks through these weekly quizzes. This will also encourage students to keep up with the readings of the course where knowledge is needed from previous lectures to scaffold and synthesize learning for future lectures. This will help students to learn the material in a more consistent manner that will be manageable for them. (LO1, 2, 3)   |
|----------------------------|---|
| Critical Thinking<br>Paper | This component is meant to help the student synthesize what they have learnt in this course. This will consist of a short critical thinking paper on a topic they have learnt in this course.<br>The format of the paper is to be determined. This component will emphasize a) theoretical novelty, b) the ability to evaluate and synthesize information, and c) the ability to present concise and coherent writing, all of which will be the main criteria of evaluation. The main purpose of this component is to provide opportunities on academic writing and further training on critical thinking skills. (LO1, 2, 3) |
| <b>Reading and Refere</b>  | nces  |

Kolb, B., & Whishaw, I. Q. (2015). *Fundamentals of Human Neuropsychology*, 7<sup>th</sup> edition. New York, NY: Worth Publishing Ltd.

# **Course Policies and Student Responsibilities**

You are expected to complete all assigned pre-class readings and activities, attend all classes punctually and take all scheduled assignments and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements for sessions that you have missed. You are expected to participate in all discussions and activities.

Absence from class without a valid reason will affect your overall course grade and no makeup/extensions will be given unless there is a valid reason. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies.

### Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the <u>academic integrity website</u> for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

| Planne | d Weekly Schedule  |         |                                   |
|--------|--|---------|-----------------------------------|
| Week   | Торіс  | ILO     | Readings/Activities               |
| 1      | What is Clinical Neuropsychology?  | 1, 3    | Reading Materials                 |
| 2      | Clinical evaluation and assessment of the brain<br>Navigating the Brain  |         | Chapter 7, 28<br>Online Materials |
| 3      | Brain Development and Plasticity<br>Quiz 1   |         | Chapter 23                        |
| 4      | Disorders of the Brain: Disorders of Cerebral Asymmetry<br>Online Discussion 1<br>Quiz 2   |         | Chapter 11, 12                    |
| 5      | Disorders of Perception<br>Group Activity 1: RBANS overview<br>Quiz 3  | 1, 2, 3 | Chapter 13, 15, 21                |
| 6      | Disorders of Attention and Consciousness<br>Group Activity 2: Tests on Perception and Attention (RBANS)<br>Online Discussion 2<br>Quiz 4 | 1, 2, 3 | Chapter 14, 22                    |
| 7      | Language and Memory Disorders<br>Group Activity 3: Tests on Language and Memory (RBANS)<br>Quiz 5  | 1, 2, 3 | Chapter 15, 19                    |
| 8      | Executive Dysfunction<br>Group Activity 4: Tests of Executive Function (RBANS)<br>Online Discussion <u>3</u><br>Quiz 6                   | 1, 2, 3 | Chapter 16                        |
| 9      | Emotional and Social Dysfunction<br>Group Activity 5: Anxiety and Depression Scales<br>Quiz 7  | 1, 2, 3 | Chapter 20                        |
| 10     | Neurological Disorders<br>Group Activity 6: Cognitive Screeners<br>Online Discussion 4<br>Quiz 8   | 1, 2, 3 | Chapter 26                        |
| 11     | Psychiatric and Related Disorders  | 1, 2, 3 | Chapter 27                        |
| 12     | Neuroplasticity and Rehabilitation<br>Critical Thinking Paper Announced Online   | 1, 2, 3 | Chapter 25                        |
| 13     | Critical Thinking Paper Open for Submission  |         |                                   |