



Module Specification

Methods in Neuroscience

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Part 1: Information

Module title: Methods in Neuroscience

Module code: USPKJN-15-3

Level: Level 6

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Health & Applied Sciences

Department: HAS Dept of Social Sciences

Partner institutions: None

Field: Psychology

Module type: Module

Pre-requisites: Mind, Brain, and Development 2023-24

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module explores multiple technical methodologies that provide researchers and practitioners insight into the neurological underpinnings of cognition. Alongside traditional lectures, students will develop their practical technical skills (operation, data collection and analysis) in laboratory based workshop sessions.

Features: Not applicable

Educational aims: The aims of this module are to equip students with basic skills for using select technical apparatus used in neuroscience and to develop a critical understanding of the various methodologies and evaluate the strengths/limitations of usage in various applications such as health, clinical and research settings.

Outline syllabus: The content of the module varies from year to year to take account of the expertise of staff and developments in the field. However, the list below provides a summary of the potential content of this module which focuses on physiological and neurophysiological research methods in psychology and cognitive neuroscience.

Potential topics include:

- nerve conduction velocity, autonomic measures, EDA, EMG, EEG, EOG, fMRI, and eye-tracking;
- methodological issues with each measure including timing, directness of measure, analysis, and interpretation;
- behavioural and neuropsychological testing;
- programming experiments.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning will take a variety of forms, such as lectures, seminars, workshops, and online materials. Independent learning includes essential and further reading, assignment preparation and completion, etc. Throughout the module students will collect a portfolio of evidence for the module learning outcomes.

The following Generic Graduate Skills will be also be Introduced (I), Practiced (P), or Evidenced (E): 1. Communication 2. Professionalism (E) 3. Critical Thinking (E)

4. Digital Fluency (E) 5. Innovative and Enterprising (E) 6. Forward Looking (E) 7. Emotional Intelligence 8. Globally Engaged

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Demonstrate a critical understanding of a variety of physiological and neurophysiological methods used in psychology and cognitive neuroscience

MO2 Critically evaluate information that is captured by different physiological and neurophysiological methods

MO3 Critically evaluate the utility, effectiveness and efficiency of methods in terms of time, cost, specificity and sensitivity in a research and clinical context.

MO4 Demonstrate an understanding and awareness of theoretical, psychological, behavioural, experimental timing, and methodological issues in the design and execution of cognitive neuroscience and psychology research that involves physiological or neurophysiological methods

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/uspkin-15-3.html) via the following link <https://uwe.rl.talis.com/modules/uspkin-15-3.html>

Part 4: Assessment

Assessment strategy: There will be three assessments where students will demonstrate their understanding and knowledge of physiological and neurophysiological methodologies as employed in contemporary psychology and cognitive neuroscience research. These assessments will be described in the

module handbook and will include 1) a portfolio of online quizzes set at multiple points in the module based on the core learning materials, 2) demonstrations of technical skills (operating, data collection) using multiple methodological approaches, and 3) a written assignment demonstrating a critical understanding of research methodologies in various applications such as health, clinical and/or research settings.

Students will also evidence strategy development, time management and problem solving skills. They will demonstrate understanding of analytical instrumentation and associated specialist software. Throughout the module students will receive continuous formative opportunities.

Assessment tasks:**Portfolio** (First Sit)

Description: Online quizzes

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO4

Practical Skills Assessment (First Sit)

Description: Practical skills demonstration of lab methods

Weighting: 15 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1

Written Assignment (First Sit)

Description: Written work demonstrating a critical understanding of research methods in application

Weighting: 55 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3

Portfolio (Resit)

Description: Single online MCQ quiz

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO4

Practical Skills Assessment (Resit)

Description:

Weighting: 15 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1

Written Assignment (Resit)

Description:

Weighting: 55 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Psychology (Applied) [Frenchay] BSc (Hons) 2023-24

Law with Psychology [Sep][FT][Frenchay][3yrs] LLB (Hons) 2021-22

Psychology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Applied Psychology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Health Psychology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Social Psychology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Biological Psychology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Psychology and Mental Health [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Criminology with Psychology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Sociology with Psychology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Psychology with Criminology [Sep][FT][Frenchay][3yrs] BSc (Hons) 2021-22

Sociology with Psychology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Law with Psychology [Sep][SW][Frenchay][4yrs] LLB (Hons) 2020-21

Criminology with Psychology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Psychology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Health Psychology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Psychology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2020-21

Applied Psychology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Social Psychology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Biological Psychology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Psychology and Mental Health [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Sociology with Psychology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2020-21

Criminology with Psychology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2020-21

Psychology with Criminology [Sep][SW][Frenchay][4yrs] BSc (Hons) 2020-21

Psychology with Criminology {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2020-21

Criminology with Psychology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2019-20

Sociology with Psychology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons)
2019-20

Psychology [Sep][PT][Frenchay][6yrs] BSc (Hons) 2019-20

Psychology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2019-20

Psychology with Criminology [Sep][PT][Frenchay][6yrs] BSc (Hons) 2019-20

Psychology with Criminology {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons)
2019-20

Sociology with Psychology [Sep][PT][Frenchay][6yrs] BSc (Hons) 2018-19

Psychology with Criminology [Sep][PT][Frenchay][6yrs] BSc (Hons) 2018-19

Psychology with Sociology [Sep][PT][Frenchay][6yrs] - Withdrawn BSc (Hons) 2018-
19

Psychology [Sep][PT][Frenchay][6yrs] BSc (Hons) 2018-19

Criminology with Psychology [Sep][PT][Frenchay][6yrs] BSc (Hons) 2018-19

Applied Psychology [Sep][PT][Frenchay][6yrs] BSc (Hons) 2018-19