**COURSE OUTLINE**

1. **GENERAL**

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| **SCHOOL** | HEALTH SCIENCES |
| **ACADEMIC UNIT** | DEPARTMENT OF BIOLOGICAL APPLICATIONS AND TECHNOLOGY |
| **LEVEL OF STUDIES** | undergraduate |
| **COURSE CODE** | **ΒΕΕ613** | **SEMESTER** | **8th** |
| **COURSE TITLE** | COGNITIVE NEUROSCIENCE |
| **INDEPENDENT TEACHING ACTIVITIES** *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits* | **WEEKLY TEACHING HOURS** | **CREDITS** |
| Lectures | 2 | 3 |
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| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).* |  |  |
| **COURSE TYPE***general background, special background, specialised general knowledge, skills development* | specialized background |
| **PREREQUISITE COURSES:** | - |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | English |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | Yes (Working language in class: English) |
| **COURSE WEBSITE (URL)** | <http://ecourse.uoi.gr/enrol/index.php?id=1909> |

1. **LEARNING OUTCOMES**

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| **Learning outcomes** |
| *The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.**Consult Appendix A* * *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
* *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
* *Guidelines for writing Learning Outcomes*
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| The cognitive neuroscience course is designed to provide students with an overview of the study of the human brain and its cognitive development.* Students by the end of the course are expected to understand the processes that govern higher cognitive functions of our brain such as language comprehension, learning, perception, thinking.
* Students will be familiarized with the tools that can be used to view the human brain through brain imaging or recording.
* Students will be introduced to relevant, cutting-edge literature on most recent discoveries in the field.
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| **General Competences**  |
| *Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?* |
| *Search for, analysis and synthesis of data and information, with the use of the necessary technology* *Adapting to new situations* *Decision-making* *Working independently* *Team work**Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*  | *Project planning and management* *Respect for difference and multiculturalism* *Respect for the natural environment* *Showing social, professional and ethical responsibility and sensitivity to gender issues* *Criticism and self-criticism* *Production of free, creative and inductive thinking**……**Others…**…….* |
| * Search for, analysis and synthesis of data and information, with the use of the necessary technology
* Working independently
* Team work
* Working in an international environment
* Working in an interdisciplinary environment
* Production of new research ideas
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1. **SYLLABUS**

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| * The brain (and the mind)
* The tools: Imaging the living brain
* Vision
* Hearing and speech
* Consciousness and attention
* Learning and memory
* Thinking and problem solving
* Language
* Goals, executive control, and action
* Emotion
* Social cognition: Perceiving the mental states of others
* Developmental plasticity
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1. **TEACHING and LEARNING METHODS - EVALUATION**

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| **DELIVERY***Face-to-face, Distance learning, etc.* | *Face-to-face* |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY** *Use of ICT in teaching, laboratory education, communication with students* | Use of PowerPoint softwareCourse information available on the electronic platform e-courseAnnouncements on the course websiteCommunication through e-mail correspondence |
| **TEACHING METHODS***The manner and methods of teaching are described in detail.**Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.**The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS* |

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| ***Activity*** | ***Semester workload*** |
| Lectures | 26 |
| Group (3-4 people) oral presentation of a relevant journal paper selected by the students under the guidance of the instructor | 20 |
| Study | 38 |
| Course total | 84 |
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| **STUDENT PERFORMANCE EVALUATION***Description of the evaluation procedure**Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other**Specifically-defined evaluation criteria are given, and if and where they are accessible to students.* | Ι. Average score of two written tests examination (65%) that are based on objective assessment (objective question types include true/false answers, multiple choice, multiple-response and matching questions etc.)ΙΙ. Group oral presentation of a journal paper (35%)Evaluation criteria: They are reported at the first lecture of the course and repeated during the course if necessary. They are also posted on the course page (e-course). |

1. **ATTACHED BIBLIOGRAPHY**

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| Book: Instructor’s notes*- Suggested bibliography:** Baars & Gage (2014): Cognition, brain, and consciousness: Introduction to cognitive neuroscience (2nd ed.), Amsterdam: Academic Press.
* Gazzaniga, Ivry & Mangun (2014): Cognitive Neuroscience: The Biology of the Mind (4th ed.), New York, NY: W. W. Norton.
* Purves et al. (2013): Principles of Cognitive Neuroscience (2nd ed.), Sunderland, MA: Sinauer.
* Kolb, Whishaw & Teskey (2016): An Introduction to Brain and Behavior (5th ed.), New York, NY: Worth Publishers.

*Related academic journals:** Biological psychiatry. Cognitive neuroscience and neuroimaging (Elsevier)
* Cognitive, affective & behavioral neuroscience (Springer)
* Cognitive neuroscience (Taylor & Francis)
* Developmental cognitive neuroscience (Elsevier)
* Journal of cognitive neuroscience (MIT Press)
* Social cognitive and affective neuroscience (Oxford University Press)
* Social neuroscience (Routledge)
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