STUDENT GUIDE

MODULE:

Research and Innovation in Neurorehabilitation

Coordinator: Dr. Eloy Opisso Salleras

eopisso@guttmann.com

UAB Code: 44135

Modality: mandatory

9 ECTS

Presential classes:

Dates: from November 29th to December 03rd, 2021 and from May 30th to June 03th, 2022

Schedule: from 9 a.m. to 3 p.m.

Objective

Review the lines of research related to neurorehabilitation and study the methodological aspects of Neuroscience and Neurorehabilitation research: project design, hypothesis formulation, research, analysis and treatment of the bibliography.

Workload

9 ECTS: equivalent to 225 hours of student work, of which 67,5 h are presential.

Competences and learning outcomes

E01 Demonstrate and advanced domain of knowledge and technologies in Neurorehabilitation, as well as techniques of patient care and attention to improve the quality of life of people affected by disability of neurological origin.

- E01.15 Recognize the scientific and ethical principles of biomedical research.
- E01.16 Describe the tools and develop a research study.
- E01.17 Recognize the most innovative technologies in the field of neurological rehabilitation, as well as the prescription of support products.

E05 Use the necessary methodological bases to plan, design and develop research projects oriented to the clinical practice of neurorehabilitation that generate new knowledge in this field.

- E05.04 Use bibliographic and biomedical data storage and analysis programs.
- E05.05 Read critically a scientific article and discuss its different parts.
- E05.06 Identify the unmet needs and convert them into clinical and non-clinical requirements of a technology-based solution.

Transversal Competences

GT01 Analyze, synthesize and make decision by reasoning critically about the different actions.

GT02 Raise work protocols through information research in the scientific literature.

GT03 Work according to professional ethics and responsibility.

Teaching methodology

The methodological approach of the module starts from considering the student as the protagonist of his teaching and learning process. The student must be active and autonomous throughout the process and the teacher will give support by providing the information and resources necessary for the learning to take place.

The module is presential and have an obligatory attendance of the 80% of the subjects. The methodology in class is an expository presentation with audiovisual support and workshops.

Through the e-learning Guttmann platform you will have access, among others, to the calendar and class schedules, to bibliographic support documentation, and you can also use it to do a collaborative work between the students and, between the students and teachers to clarify doubts, to share interesting findings, news, articles, books, conferences, etc.

The information presented in this document provides a summary of the main features of the program and learning outcomes that you could reasonably expect and achieve if you make the most of the learning opportunities provided to you.

Contents description:

- Lines of research and scientific evidences
- Methodological tools to develop research projects
- Biomedical data storage and analysis programs
- Ethical principles in human and experimental research
- Definition of innovation, presentation of new technologies in rehabilitation and methodology for the definition of clinical requirements

Competences evaluation

The evaluation activities will be carried out through and at the end of the module. These are activities that you must work individually and consists of:

- Theoretical tests: It has a value of **30% of the final grade of the module** and will consist of two short quizzes with short questions at the end of each week of classes.
  The maximum dates of delivery of the tests will be on **December 19th, 2021 and June 19th, 2022**, respectively.
- Preparation of three works. It has a value of **60% of the final grade of the module**.
  1. **Critical commentary of a scientific article**. As explained in the workshop, the student must critically comment on a scientific article.
  2. **Statistical analysis of a database**. As explained in the workshop, the student analyzes a database and report the results in a document.
     The maximum date for the delivery of this two works will be **February 28th, 2022.**
  3. **Innovation Portfolio**. It consists of a collection of ideas that the student must detail through the methodology explained in class
     The maximum date for the delivery of the portfolio will be **June 19th, 2022.**
- The attendance and participation in class has a weight of **10% in the final mark of the module**.
  If you do not present evidence of learning or you have not attended the minimum number of hours of the programmed activities of the module (80%), the subject will be "not evaluable". The qualification of not evaluable in the final evaluation report implies exhausting the inherent right in the module's enrollment.
  You will pass the subject if you obtain a minimum score of 5 points (scale 0-10) as the average mark of the two evidences of learning.
  The final grade will be calculated with the weight corresponding to the theoretical tests (15% each test), preparation of three works (20% each work), and attendance (10%)

Procedure and recovery criteria

The re-evaluation is a process that will be put into operation once the period of publication of the final grades has ended.

- You will be entitled to a re-evaluation if you have obtained between 3.5 and 4.9 in the average grade of the subject.
- The test submitted to the re-evaluation process may not exceed 5.0 points (approved) in the final grade.

The module's web

In the web of each module you Will find information of interest for the follow-up of the study:

- Forum of the module. Through this space you can keep in touch with the teachers or among the other students, to provide suggestions, answer questions, etc.
- News. It is the space from where you Will receive news and announcements about the evolution of the module.
- Programs. The module can be downloaded in PDF format, indicating the subjects, schedules and the teaching staff.
- Documentation. Here you Will find information and bibliography of interest that you can consult for the later study of the topics.
- Evaluation of competences. In this space you Will find all the necessary information and the delivery dates of the evaluation that will be done for this module

Satisfaction surveys

It is very important that students send us your comments, complaints and suggestions regarding the module. That's why we put t your disposal two evaluation surveys. The surveys are **anonymous**:

- Teacher evaluation. Daily, at the end of the classes, you Will receive an email (on your computer or on your mobile) that Will link you to a brief satisfaction questionnaire about the teachers that have taught that day. The objective of these surveys is to collect your opinion that will be a great help for the improvement of this module.
- Module evaluation. Also, at the end of the course you can answer the general evaluation survey of the module.

Coordination

For any aspect of the organization and planning of the module you can contact

Dr. Eloy Opisso Salleras
Doctor en Ingeniería
Institut Guttmann - UAB
E-mail: eopisso@guttmann.com

RECOMMENDED BIBLIOGRAPHY

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2. Turner-Stokes L. Handbook of neurological rehabilitation, 2nd edition. Journal of Neurology, Neurosurgery & Psychiatry. April 1, 2004;75(4):664-664.
3. Introduction | EBRSR - Evidence-Based Review of Stroke Rehabilitation [Internet]. [cited May 3, 2019]. Available in: http://www.ebrsr.com/
4. Journal of NeuroEngineering and Rehabilitation [Internet]. Journal of NeuroEngineering and Rehabilitation. [cited May 3, 2019]. Available in: https://jneuroengrehab.biomedcentral.com/
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6. Barnes MP. Principles of neurological rehabilitation. Journal of Neurology, Neurosurgery & Psychiatry. December 1, 2003;74(suppl 4):iv3-7.
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