

Guía docente de la asignatura

Fecha de aprobación por la Comisión Académica: 28/06/2023

## Juicios y Toma de Decisiones (M30/56/2/32)

**Máster**

Máster Universitario en Neurociencia Cognitiva y del Comportamiento

**MÓDULO**

Neurociencia Cognitiva y del Comportamiento

**RAMA**

Ciencias de la Salud

**CENTRO RESPONSABLE DEL TÍTULO**

Escuela Internacional de Posgrado

**Semestre**

Segundo

**Créditos**

4

**Tipo**

Optativa

**Tipo de enseñanza**

Presencial

### PRERREQUISITOS Y/O RECOMENDACIONES

It is recommended for the student to have an English level sufficient to follow lessons and participate in them.

### BREVE DESCRIPCIÓN DE CONTENIDOS (Según memoria de verificación del Máster)

- Assessing beliefs and updating hypotheses. The bases of decision making.
- Heuristics and biases. The limits of human rationality.
- Critical thinking. How do we reason and how can we improve our thinking skills?
- Social cognition and thinking: moral judgments and dilemmas.
- Paradoxes, dilemmas, and intuitive decisions.
- Perception of risk and risky behavior.
- Emotion, decisions, and risky behavior.

### COMPETENCIAS

#### COMPETENCIAS BÁSICAS

- CB6 - Poseer y comprender conocimientos que aporten una base u oportunidad de ser originales en desarrollo y/o aplicación de ideas, a menudo en un contexto de



investigación.

- CB7 - Que los estudiantes sepan aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio.
- CB8 - Que los estudiantes sean capaces de integrar conocimientos y enfrentarse a la complejidad de formular juicios a partir de una información que, siendo incompleta o limitada, incluya reflexiones sobre las responsabilidades sociales y éticas vinculadas a la aplicación de sus conocimientos y juicios.
- CB9 - Que los estudiantes sepan comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades.
- CB10 - Que los estudiantes posean las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo.

## RESULTADOS DE APRENDIZAJE (Objetivos)

The student is expected to know/understand:

- Neuroanatomical and psychological processes involved in judgment and decision making, as well as tasks and protocols used to study them.
- Relations between judgment, decision making, emotion, and different forms of social cognition.
- Origins and determinants of risky behavior and its relationship with affect.
- Decision-making models, specially stressing its intuitive and rational determinants.
- Brain areas and circuits involved in decision making and risky behavior.

The student will be able to:

- Complete a bibliographic search to deepen into her understanding of a particular aspect of judgment and decision making.
- Distinguish between different theoretical approaches to the study of judgment and decision making.

## PROGRAMA DE CONTENIDOS TEÓRICOS Y PRÁCTICOS

### TEÓRICO

#### Block I

1. Fundamentals of judgment and decision making
2. Heuristics and biases: boundaries of human rationality
3. Dual processing models and thinking dispositions

#### Block II

1. Decision making under risk and under ambiguity
2. Influence of emotion on decision making
3. From decision making to self-regulation



**PRÁCTICO**

Each unit includes practical activities: simulations, exercises, questionnaires, discussion of audiovisual materials, readings, and writing a mini-review as one of the final assessment activities.

**BIBLIOGRAFÍA****BIBLIOGRAFÍA FUNDAMENTAL**

- Dennison, Jeffrey B., Sazhin, Daniel, & Smith, David V. (2022). Decision neuroscience and neuroeconomics: Recent progress and ongoing challenges. *Wiley Interdisciplinary Reviews: Cognitive Science*, 13(3), e1589.
- Evans, Jonathan B.T. & Stanovich, Keith E. (2013). Dual-process theories of higher cognition: Advancing the debate. *Perspectives on Psychological Science*, 8, 223-241.
- Fischhoff, Baruch., & Broomell, Stephen B. (2020). Judgment and decision making. *Annual Review of Psychology*, 71, 331-355.
- Fox, Craig R., & Poldrack, Russell A. (2013). Prospect theory and the brain. In Glimcher, P. W., & Fehr, E. (Eds.). *Neuroeconomics: Decision Making and the Brain*. (pp. 533-568). Academic Press.
- Gigerenzer, Gerd. (2020). What is bounded rationality? In Viale, Riccardo (ed.). *Routledge handbook of bounded rationality*. (pp. 55-69). Routledge.
- Ruggeri, Kai, Alí, Sonia, Berge, Mari L., Bertoldo, Giulia, Bjørndal, Ludvig. D., Cortijos-Bernabeu, Ana, ... & Folke, Tomas (2020). Replicating patterns of prospect theory for decision under risk. *Nature human behaviour*, 4(6), 622-633.
- Lerner, Jennifer S., Li, Yie, Valdesolo, Piercarlo, & Kassam, Karim S. (2015). Emotion and decision making. *Annual Review of Psychology*, 66, 799-823.
- Milli, Smitha, Lieder, Falk, & Griffiths, Thomas L. (2021). A rational reinterpretation of dual-process theories. *Cognition*, 217, 104881.
- Newell, Benjamin R., Lagnado, David A., Shanks, David R. (2023). *Straight Choices. The Psychology of decision making* (3rd Ed.). Psychology Press.
- O'Doherty, John P., Cockburn, Jeffrey, & Pauli, Wolfgang M. (2017). Learning, Reward, and Decision Making. *Annual Review of Psychology*, 68, 73-100.
- Osman, Magda (2004). An evaluation of dual-process theories of reasoning. *Psychonomic Bulletin & Review*, 11(6), 988-1010.

**BIBLIOGRAFÍA COMPLEMENTARIA**

- Berridge, Kent C., & Robinson, Terry E. (2016). Liking, wanting, and the incentive-sensitization theory of addiction. *American Psychologist*, 71(8), 670-679.
- De Neys, Win (2021). On dual- and single-process models of thinking. *Perspectives on Psychological Science*, 16(6), 1412-1427.
- Fischhoff, Baruch y Kadavy, John (2011). *Risk: a very short introduction*. New York: Oxford University Press.
- Holyoak, Keith, & Cheng, Patricia W. (2011). Causal learning and inference as a rational process: The new synthesis. *Annual Review of Psychology*, 62, 135-163.
- Hursh, Steven R., & Roma, Peter G. (2016). Behavioral economics and the analysis of consumption and choice. *Managerial and Decision Economics*, 37(4-5), 224.
- Imaizumi, Yuri, Tymula, Agnieszka, Tsubo, Yasuhiro, Matsumoto, Masayuki, & Yamada, Hiroshi (2022). A neuronal prospect theory model in the brain reward circuitry. *Nature Communications*, 13(1), 5855.



- Keren, Gideon, & Wu, George (Eds.). (2015). The Wiley-Blackwell handbook of judgment and decision making. Wiley-Blackwell.
- Loewenstein, George (2007). Exotic preferences: Behavioral economics and human motivation. Oxford University Press.
- Perales, José C., King, Daniel L., Navas, Juan F., Schimmenti, Adrianno., Sescousse, Guillaume., Starcevic, Vladan, van Holst, Ruth, & Billieux, Joël (2020). Learning to lose control: A process-based account of behavioral addiction. Neuroscience & Biobehavioral Reviews, 108, 771-780

## ENLACES RECOMENDADOS

- <http://journal.sjdm.org/>
- <http://www.sjdm.org/links.html>

## EVALUACIÓN (instrumentos de evaluación, criterios de evaluación y porcentaje sobre la calificación final)

### EVALUACIÓN ORDINARIA

- Participation, monitoring of in-class activities, and in-class assesment questionnaires (40%)
- Oral presentation (25%) and writing (20%) of an individual essay (mini-review) (Total 45%)
- Final written exam (15%)

This final written exam will consist of two parts, assessing the contents of the two blocks in an approximately balanced way. The percentage of the mark relative to attendance is independent of the fact that an 80% total attendance is mandatory, according to current regulations, and lack of attendance must be justified. The exam will consist of multiple choice and/or short answer questions.

[Article 18 of the UGR Assessment Policy and Regulations establishes that the ordinary assessment session (convocatoria ordinaria) will preferably be based on the continuous assessment of students, except for those who have been granted the right to a single final assessment (evaluación única final), which is an assessment method that only takes a final exam into account].

### EVALUACIÓN EXTRAORDINARIA

The student will be offered the possibility to choose between (1) maintaining the qualification of continuous assessment activities, and do the exam again (with the percentages described above), and (2) do an exam for the 100% of her final qualification, disregarding the activities. In the latter option, the exam could include working materials used during the course (e.g. required readings). In any case, the exam will represent the two blocks of the course in a balanced way. The exam will consist of multiple choice and short answer questions.

[Article 19 of the UGR Assessment Policy and Regulations establishes that students who have not passed a course in the ordinary assessment session (convocatoria ordinaria) will have access to an extraordinary assessment session (convocatoria extraordinaria). All students may take part in



this extraordinary assessment session, regardless of whether or not they have followed continuous assessment activities. In this way, students who have not carried out continuous assessment activities will have the opportunity to obtain 100% of their mark by means of an exam and/or assignment].

## EVALUACIÓN ÚNICA FINAL

The totality of the final qualification will depend on a final exam. This exam could include working materials used during the course (e.g. required readings). In any case, the exam will represent the two blocks of the course in a balanced way. The exam will consist of multiple choice and short answer questions.

[Article 8 of the UGR Assessment Policy and Regulations establishes that students who are unable to follow continuous assessment methods due to justifiable reasons shall have recourse to a single final assessment (evaluación única final), which is an assessment method that only takes a final exam into account. In order to opt for a single final assessment (evaluación única final), students must send a request, using the corresponding online procedure, to the coordinator of the master's programme, in the first two weeks of the course or in the two weeks following their enrolment (if the enrolment has taken place after the classes have already begun). The coordinator will communicate this information to the relevant teaching staff members, citing and verifying the reasons why the student is unable to follow the continuous assessment system].

## INFORMACIÓN ADICIONAL

### Teaching methodologies:

- MD01: Professor's lessons
- MD02: Debates and discussion sessions
- MD03: Problem solving and practical cases
- MD05: Seminars
- MD06: Simulations
- MD09: Individual essays
- MD11: Students' oral presentations (monitoring, counseling, and feedback)

### Distribution of students' workload:

#### In-class sessions (36 h)

- Theoretical professor lessons, discussion, problem solving, practical cases, and simulations: 19h
- In-class monitoring and assessment of individual work: 3h
- Final written exam: 4h
- Student oral presentations: 10h

#### Individual work (64 h)

- Supervised elaboration of an individual essay (mini-review): 14h
- Autonomous work (critical reading, study for assessments, and preparation of the oral presentation): 35h
- In person or online counselling and monitoring: 15h



The teaching methodology and assessment will be adapted to students with specific needs (SEN), in accordance with Article 11 of the Regulations on assessment and grading of students at the University of Granada.

This course will follow the recommendations from the UGR Action Plan for Equality regarding the use of nonsexist and inclusive language and visibility of women's and minorities' contributions to the field.

Información de interés para estudiantado con discapacidad y/o Necesidades Específicas de Apoyo Educativo (NEAE): [Gestión de servicios y apoyos](https://ve.ugr.es/servicios/atencion-social/estudiantes-con-discapacidad) (<https://ve.ugr.es/servicios/atencion-social/estudiantes-con-discapacidad>).

