

**Intelligence and Cognitive Processes**

Code: 102597  
ECTS Credits: 6

Degree	Type	Year	Semester
2502443 Psychology	OT	4	2

**Contact**

Name: Antoni Castelló Tarrida  
Email: Toni.Castello@uab.cat

**Use of languages**

Principal working language: english (eng)  
Some groups entirely in English: Yes  
Some groups entirely in Catalan: No  
Some groups entirely in Spanish: No

**Prerequisites**

No requirements.

**Objectives and Contextualisation**

Knowledge about the way people create and operate with representations is the basis for explaining human mental activity. A number of large processes (such as learning, comprehension, reasoning or decision making) sustain on representations and operations involving representations. Hence the goals of this course are related with the understanding of human cognitive system, which supports representations managing as well as the ways the cognitive system operates. The goals include a description of intelligence's physical bases and their articulation in useful cognitive functions, which integrate brain's resources with cultural instruments. The course contents will permit the analysis and explanation of outstanding human cognitive activities, understanding their general mechanisms and the variety of instances they may display.

**Skills**

- Actively participate in the formulation of social, professional and ethical rules in activities related to the profession.
- Analyse scientific texts written in English.
- Apply knowledge, skills and acquired values critically, reflexively and creatively.
- Define objectives and develop the intervention plan based on the purpose of the (prevention, treatment, rehabilitation, integration, support).
- Distinguish and relate the different focuses and theoretical traditions that have contributed to the historical development of psychology as well as its influence on the production of knowledge and professional practice.
- Evaluate, contrast and take decision on the choice of adequate methods and instruments for each situation and evaluation context.
- Identify and describe the processes and stages in psychological development through the life cycle.
- Maintain a favourable attitude towards the permanent updating through critical evaluation of scientific documentation, taking into account its origin, situating it in an epistemological framework and identifying and contrasting its contributions in relation to the available disciplinary knowledge.
- Recognise the principles and variables involved in educational processes throughout the life cycle.
- Show respect and discretion in communication and the use of the results of psychological assessments and interventions.

- Use adequate tools for communication.
- Use different ICTs for different purposes.
- Work in a team.

## Learning outcomes

1. Actively participate in the formulation of social, professional and ethical rules in activities related to the profession.
2. Analyse scientific texts written in English.
3. Analyse the teachers thinking processes: planning, decision making and dilemmas.
4. Apply knowledge, skills and acquired values critically, reflexively and creatively.
5. Design plans for improving educational practice adapted to the characteristics of both the educational context and students and teachers.
6. Differentiate between the different psychoeducational models for explaining teaching quality and the individual differences in school learning.
7. Distinguish information on the results of the assessment and psychoeducational advice according to whom it is addressed.
8. Effectively communicate the results of counselling and psychological evaluation with all users of the education system: students, teachers, counsellors and parents.
9. Maintain a favourable attitude towards the permanent updating through critical evaluation of scientific documentation, taking into account its origin, situating it in an epistemological framework and identifying and contrasting its contributions in relation to the available disciplinary knowledge.
10. Make proper use of exploratory instruments for analysing educational practice and individual differences of people who participate in it.
11. Planning and evaluating teaching plans in relation to the developmental stages of students.
12. Present and discuss with the educators (students, parents and teachers) a specific plan of psychoeducational intervention.
13. Recognise the principles and variables that influence the teacher thought processes throughout their life cycle.
14. Select and properly use exploratory instruments for the analysis of formal and non-formal education.
15. Select the appropriate exploratory instruments for analysing individual differences in school learning.
16. Select the appropriate exploratory instruments for the analysis of school learning and teaching.
17. Use adequate tools for communication.
18. Use different ICTs for different purposes.
19. Work in a team.

## Content

01. Representations and intelligence
02. Cognitive systems. Physical and functional architectures
03. Biological dimensions of human cognition
04. Cultural dimensions of human cognition
05. Objects representation and cognitive products
06. Distributed cognition
07. Learning and knowledge structures
08. Reasoning, problem solving and contextual interactions
09. Diachronic dimensions: cognition in the life-span
10. Cognitive bases of competences

11. Variability and exceptional cognitive configurations
  - A. Intellectual measurement instruments (I)
  - B. Intellectual measurement instruments (II) and situated measures
  - C. Profile analysis
  - D. Measurement of knowledge structures
  - E. Analysis of competences

Contents numerically indexed correspond to theoretical lectures and encompass the main body of the course. Those indexed with letters refer to practical lessons where applied issues are considered.

## Methodology

Teaching method is based in five general approaches:

- (1) Lessons conducted by the professor, where the main contents are presented and discussed.
- (2) Lessons devoted to case-analysis and applications, where the student has an active role under supervision.
- (3) Sessions addressed to contact instruments and measurement procedures, where students are supervised.
- (4) Sessions of reading, documenting and reflexion, developed by students themselves with ensuing feedback on their work.
- (5) Sessions of individualized advice addressed to follow-up individual tasks and knowledge optimisation.

All programmed activities meet one or more of the described methodological approaches and also include testing procedures which serve as continuous evaluation of the contents taught.

## Activities

Title	Hours	ECTS	Learning outcomes
<b>Type: Directed</b>			
Conducted	36	1.44	3, 2, 4, 11, 8, 5, 6, 7, 9, 1, 12, 13, 16, 15, 14, 19, 10, 18, 17
<b>Type: Supervised</b>			
Supervised	20	0.8	3, 2, 4, 11, 8, 5, 6, 7, 9, 1, 12, 13, 16, 15, 14, 19, 10, 18, 17
<b>Type: Autonomous</b>			
Autonomous	94	3.76	3, 2, 4, 8, 15, 14, 19, 17

## Evaluation

Learning assessment will be made through a set of optional assignments that allow to accumulate points. There will also be an exam including all contents which permits improving the mark.

Specifically, the programmed assignments are:

(A) Week 6: Short exam on class-notes (up to 2.5 points)

(B) Week 9: Conceptual map (up to 2.5 points)

(C) Week 12: Exemples (up to 2.5 points)

(D) Week 15: List-Link (up to 2.5 points)

The summation of the points obtained in these four activities permits achieving a maximum score of 10 points. Then, the final exam (activity E, week 18), which is optional too, may improve the actual accumulated score up to the mark of 10 (if the A+B+C+D assignments accumulated 6 or more points) or up to the mark of 8.5 in any other case.

If less than two assignments has been delivered, activity E will not be available. A recovery exam, like that in activity E, must be attained by those having a final mark lesser than 5with, provided that they have delivered at least three of the four evidences (A, B, C, and D). The recovery exam will have a ceiling of 8.5 points.

General directions about the evaluation norms in Psychology Faculty can be found at:

[http://www.uab.cat/doc/DOC\\_avaluaciotitulacions1819](http://www.uab.cat/doc/DOC_avaluaciotitulacions1819)

## Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Complementary exam (optional)	Up to a mark of 10 or 8.5 depending on previous marks	0	0	3, 2, 4, 11, 8, 5, 6, 7, 9, 1, 12, 13, 16, 15, 14, 19, 10, 18, 17
Conceptual map (optional)	Up to 2,5 points	0	0	3, 2, 4, 11, 8, 5, 6, 7, 9, 1, 12, 13, 16, 15, 14, 19, 10, 18, 17
List-Link (optional)	Up to 2.5 points	0	0	3, 2, 11, 8, 5, 6, 7, 9, 12, 13, 16, 15, 14, 10, 18, 17
Questions on class-notes (optional)	up to 2.5 points	0	0	3, 2, 4, 11, 8, 5, 6, 7, 9, 1, 12, 13, 16, 15, 14, 19, 10, 18, 17
Written examples (optional)	Up to 2.5 points	0	0	3, 2, 4, 11, 8, 5, 6, 7, 9, 1, 12, 13, 16, 15, 14, 19, 10, 18, 17

## Bibliography

SMITH, E.E. y KOSSLYN, S.M. (2007). Cognitive Psychology: mind and brain. London: Pearson Educations, publishing as Prentice Hall.

CASTELLÓ, A. (2001). Inteligencias. Una integraci3n multidisciplinaria. Barcelona: Masson.

CASTELLÓ, A. (2002). La inteligencia en acci3n. Barcelona: Masson.