Information about the subject

Degree: Bachelor of Science Degree in Occupational Therapy

Faculty: Faculty of Psychology

Code: 1120202 **Name:** Ergonomics, accessibility and new technologies

Credits: 6,00 **ECTS Year:** 2 **Semester:** 1

Module: OPTATIVITY

Subject Matter: Therapeutic Applications **Type:** Elective

Field of knowledge: Health Sciences

Department: Occupational Sciences

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

OPT1	Francesc Antoni Bañuls Lapuerta **(Responsible Lecturer)**	francesc.banuls@ucv.es

Module organization

OPTATIVITY

Subject Matter	ECTS	Subject	ECTS	Year/semester
Therapeutic Applications	12,00	Ergonomics, accessibility and new technologies	6,00	2/1
		Orthoprosthetic technical aids	6,00	4/2

Recommended knowledge

There are no prerequisites.

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

R1	T know the principles of accessibility and universal design, as well as the adaptations/modifications of the physical environment to favour the occupational performance of the person with disability.
R2	To know the main resources, technologies and support products to favour the access to the computer and the communication technology.
R3	To know the main techniques and strategies in the field of ergonomics to favour the occupational performance of the person with disability.
R4	To integrate the knowledge of accessibility, ergonomics and new technologies in the development and implementation of an intervention plan in Occupational Therapy aimed at improving the user's occupational performance.

Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

GENERAL		Weighting			
		1	2	3	4
CG4	To recognise one's own limitations and the need to maintain and keep up to date one's professional competence, focusing specially on the importance of autonomous learning of knowledge and techniques and the desire for quality.		x		
CG5	To know, value critically and use the sources of information in order to obtain, organise, interpret and communicate the scientific, sanitary, socio-sanitary and information, preserving the confidentiality of the data.		x		
CG6	To understand the conceptual foundations of the occupational nature of the human being and the carrying out of his occupations throughout the cycle of life.			x	
CG7	To understand and recognise the interrelationship between the concepts of wellbeing, health, significant occupation, dignity and participation.			x	
CG10	To evaluate and adapt the environment to promote participation in meaningful occupations -in the different facets of every day life-, personal autonomy and the quality of life				x
CG11	To understand and develop, with the relevant information, the historical application of Occupational Therapy			x	
CG12	To develop an evaluation of occupational functioning that is adequate for the needs of individuals and populations.			x	
CG13	To determine occupational dysfunctions and needs, to define the planning and to establish Occupational Therapy interventions, using the therapeutic potential of meaningful occupation through the use of activities, with the consent and the participation of individuals and populations.			x	

CG14	To know, select and apply the appropriate theories, the theoretical frameworks for reference, the models and methods of Occupational Therapy practice to choose or re-establish meaningful occupation, according to the health needs of individuals/populations (promotion of health, prevention and treatment).			x	
CG16	To understand the fundamentals of action, indications and efficiency of Occupational Therapy interventions, based on the available scientific evidence				x
CG20	To develop professional practice with respect for other professionals, acquiring group work skills.			x	

SPECIFIC		Weighting			
		1	2	3	4
CE32	To understand the different theories of functioning, personal autonomy, functional adaptation from/to the environment, as well as the intervention models in Occupational Therapy, transferring them to every day professional practice				x
CE33	To promote health and prevent disability, acquire or recover the occupational activity needed in each part of the life cycle in order to achieve independence and autonomy in the areas of occupational activity of those persons who are at risk, those with organ deficiency, activity limitation and participation and/or social exclusion.			x	
CE36	To encourage the participation of the client and family in the recovery process.			x	
CE37	To know, understand and apply the fundamentals of personal autonomy in everyday life activities with and without adaptations and/or technical help in the life cycle.			x	
CE40	To apply significant activity, ergonomic study, new technologies and assisted technology in Occupational Therapy in the cycle of life.				x
CE48	To use ethical and professional reasoning in an efficient way through the process of Occupational Therapy.			x	

Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
	50,00%	Written tests: Summative and final theoretical-practical test (open questions, objective test questions, truncated test, etc.) Preparation of field work memoranda, practical case solutions, single cases.
	30,00%	Presentation of group and individual works.
	20,00%	Individual monitoring of attendance at face-to-face sessions and active participation in theoretical and practical classes, seminars and tutorials.

Observations

Assessment is continuous and evidence of attendance/participation, practical activities, and individual and/or group work will be collected/submitted throughout the semester. All individual and group work must be submitted via the UCV VIRTUAL CAMPUS within the deadlines and in the manner established by the course instructor. Under no circumstances will late submissions be accepted. Any tasks that have not been submitted will be submitted and assessed on the official date of the second exam session.
In addition, a final theoretical-practical exam will be held during the official exam period. The official exam dates will be set by the Faculty Dean's Team in accordance with the periods established in the academic calendar. For CHANGES TO EXAM DATES, please consult the reasons justifying such changes and the procedure in Article 12 of the Examination Regulations.
https://www.ucv.es/Portals/0/documentos/normativa/20170526144309926.pdf
Criteria for awarding honors: demonstrate excellence in all competencies and learning outcomes.
Note: To pass the course, students must separately pass the different assessment systems (attendance and active participation, practical work/assignments, and exam). Failure to comply with the rules and deadlines established for academic activities will invalidate the grade.
Attendance and assessment methods
Students may choose between two assessment methods for the course: continuous assessment and single assessment.
1. Continuous assessment:
A minimum attendance of 75% of face-to-face classes is required to qualify for this method.
2. Single assessment:

This is intended for students who, for justified and documented reasons, are unable to meet the minimum attendance requirement. The request must be made in writing to the professor responsible for the course, who will respond by the same means.
The single assessment does not consist of a single test, but rather a set of tests and/or activities necessary to demonstrate and measure all the learning outcomes defined for the course.
The structure of the single assessment in this course will be as follows:
· **Theoretical exam (40%)**
· Practical exam and additional assignments (60%): this part will include a practical test, which may be oral or written, and, if necessary, extraordinary independent work activities that allow for the demonstration of learning outcomes that cannot be assessed by means of an exam.
In both modalities, students will have to pass all parts in order to pass the course.
Considerations for the use of Artificial Intelligence (AI):- Within the framework of this course, AI may be used for:
- Consulting questions about educational activities.
- Assisted learning (alternative explanations or self-assessment exercises).
- Searching for alternative resources and references for study.
- **Within the framework of this course, AI may NOT be used for:**
- Recording or transcribing, in whole or in part, any activity carried out in the classroom, for the purpose of obtaining summaries or notes made by AI.
- Presenting work generated exclusively by AI as your own.
Students must explicitly declare any use of AI tools in any document submitted (for example, in a footnote or appendix).

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with Distinction) may be awarded.
Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1 ON-CAMPUS CLASS

M2 PRACTICAL CLASSES

M3 SEMINAR

M4 GROUP PRESENTATION OF PAPERS

M5 OFFICE ASSISTANCE

M6 ASSESSMENT

M7 GROUP WORK

M8 INDEPENDENT WORK

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
ON-CAMPUS CLASS: Teacher presentation of contents, analysis of competences, explanation and in-class display of skills, abilities and knowledge. M1	R1, R2, R3	29,00	1,16
PRACTICAL CLASSES: Group work sessions supervised by the professor. Case studies, diagnostic tests, problems, field work, computer room, visits, data search, libraries, on-line, Internet, etc. Meaningful construction of knowledge through interaction and student activity. M2	R1, R2, R3, R4	10,00	0,40
SEMINAR: Supervised monographic sessions with shared participation M3	R1, R2, R3	7,50	0,30
GROUP PRESENTATION OF PAPERS: Application of multidisciplinary knowledge M4	R1, R2, R3, R4	7,50	0,30
OFFICE ASSISTANCE: Personalized and small group attention. Period of instruction and /or orientation carried out by a tutor to review and discuss materials and topics presented in classes, seminars, eadings, papers, etc. M5	R1, R2, R3, R4	3,00	0,12
ASSESSMENT: Set of oral and/or written tests used in initial, formative or additive assessment of the student M6	R1, R2, R3, R4	3,00	0,12
TOTAL		**60,00**	**2,40**

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK: Group preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform (www.plataforma.ucv.es) M7	R1, R2, R3, R4	40,00	1,60
INDEPENDENT WORK: Student study: Group Individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform (www.plataforma.ucv.es) M8	R1, R2, R3, R4	50,00	2,00
TOTAL		**90,00**	**3,60**

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
DIDACTIC UNIT I: ERGONOMICS	1.Activity analysis. Adaptation and graduation of activity as intervention tools in Occupational Therapy. 2. Energy Conservation Programs in Occupational Therapy and applications. 3. Joint Protection Programs in Occupational Therapy and applications. 4. Postural Hygiene Program. Low back pain. 5. Sitting and postural control. Pressure rating, FSA system and devices for the prevention of pressure ulcers in sitting.
DIDACTIC UNIT II: ACCESIBILITY	1.Introduction to the universal accesibility: meaning, principles, legal framework and users. 2. Areas of universal accessibility: public buildings, urban planning and transport in the legal framework. Apartment building: common elements and own home. Accesible tourism. Accesible beaches and parks. 3. Resources, grants, subsidies and praxis in the universal accessibility.
DIDACTIC UNIT III: NEW TECNHOLOGIES	1. Information Society for all. Legislative framework. Concept of Digital Divide Digital Literacy and e-Accessibility 2. ICT for people with disabilities .. 2.1 Solutions and needs for accessibility and usability of ICT. 3. Assistive Technology. ICT for Autonomy and daily life. ICT for dependency status. 4. Augmented reality, virtual reality rehabilitation and training of disabled people. 5. ICT for communication. Augmentative and alternative communication.

Temporary organization of learning:

Block of content	Number of sessions	Hours
DIDACTIC UNIT I: ERGONOMICS	6,00	12,00
DIDACTIC UNIT II: ACCESIBILITY	6,00	12,00
DIDACTIC UNIT III: NEW TECNHOLOGIES	18,00	36,00

References

Asociación Española de Normalización y Certificación. (2017). Productos de apoyo para personas con discapacidad. Clasificación y terminología (UNE EN ISO 9999:2016).
Ballesteros, A., Bordignon, F., Domínguez, D., Fernández, V., García, M., Román, G., Ruiz, F., Sacristán, A., Sala, I., & Santoveña, S. (2018). Sociedad digital, tecnología y educación. Ediciones UNED.
Beukelman, D. R., & Mirenda, P. (2013). Augmentative & Alternative Communication: Supporting Children and Adults with Complex Communication Needs. Paul H. Brookes.
Cañas, J., & Waerns, Y. (2001). Ergonomía Cognitiva. Aspectos psicológicos de la interacción de las personas con la tecnología de la información. Médica Panamericana.
Cuyás, B., & Rovira, E. (2003). Libro blanco de la accesibilidad. Ediciones UPC S.L.
Fernández, J. (2020). TIC y discapacidad: investigación e innovación educativa. Ediciones Octaedro.
Fonoll, J., García, J., García, J., Guerra, A., Gutiérrez, E., Jaúdenes, C., Martínez, Loïc., & Romero, R. (2011). Accesibilidad, TIC y educación. Ministerio de Educación.
García-Margallo, P., San Juan, M., Jorquera, S., & Navas, I. (2005). El análisis y la adaptación de la actividad en Terapia Ocupacional. Aytona Editores.
Greene, D.P., & Roberts, S.L. (2005). Kinesiology. Movement in the context of activity. Elsevier Mosby.
Lidón, L., Muñoz, A., Gallego, L. A., Jordana, J. A., Llop, P., Fernández, J. M., Zanoletty, D., González, L., García, J., Salinas, M., Cuija, J. A., Núñez, M., Sánchez, C., Quincoces, J. L., Pérez-Puig, M. R., & Aparicio, J. (2014). Nuevas tecnologías y personas con discapacidad. Consejo General del Poder Judicial.
Nieto, L. (2012). Aplicación de las tecnologías de la información y las comunicaciones en la vida diaria de las personas con discapacidad. Universidad da Coruña.
Rybski M. (2012). Kinesiology for Occupational Therapy. SLACK Incorporated.
Tortosa, L. (1999). Ergonomía y discapacidad. Instituto de Biomecánica de Valencia.