



Universitat de Lleida

DEGREE CURRICULUM
**WATER IN THE
MEDITERRANEAN**

Coordination: TENA PAGAN, ALVARO JOAQUIN

Academic year 2023-24

Subject's general information

Subject name	WATER IN THE MEDITERRANEAN			
Code	101164			
Semester	1st Q(SEMESTER) CONTINUED EVALUATION			
Typology	Degree	Course	Character	Modality
	Bachelor's Degree in Geography	4	OPTIONAL	Attendance-based
Course number of credits (ECTS)	6			
Type of activity, credits, and groups	Activity type	PRACAMP	PRAULA	TEORIA
	Number of credits	2	2.5	1.5
	Number of groups	1	1	1
Coordination	TENA PAGAN, ALVARO JOAQUIN			
Department	ENVIRONMENT AND SOIL SCIENCES AND CHEMISTRY			
Teaching load distribution between lectures and independent student work	<p>Lectures and exercises: 60 hours. Here we include lectures (theory), exercises the students will develop with the supervision of the lectures, and invited conferences.</p> <p>Additional work: 90 hours. In these hours the student will have to go beyond the contents that are given in the lectures by reading the basic materials given in class and other complementary readings. In addition, it is during this work when the students will complete the practical exercises that will be developed, mostly, in the classroom with the teachers.</p>			
Important information on data processing	Consult this link for more information.			
Language	Spanish (blocks 1, 2, 3 and 5) and Catalan (block 4), although part of the presentations and readings can be in English.			
Distribution of credits	<ul style="list-style-type: none"> - Theory (classroom or online): 3 - Practical work (classroom and fieldwork): 3 			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
CARRERO CARRALERO, ESTRELLA DEL CARMEN	estrella.carrero@udl.cat	,4	
MASICH POLO, JOSEP MARIA	josepmaria.masich@udl.cat	2	
TENA PAGAN, ALVARO JOAQUIN	alvaro.tena@udl.cat	3,6	

Learning objectives

These are the specific objectives of the subject:

1. Understand the Mediterranean space in relation to water.
2. Introduce the student in the geomorphological and hydrological particularities of the Mediterranean area.
3. Contextualize and understand the water problems suffered by the Mediterranean basin.
4. Deepen the knowledge of some of the main methods of climate and hydrological calculation useful in this context.
5. Introduce to the student methods and field techniques to acquire hydrological information.

Competences

- CG1 Assess the mechanisms of interaction of society with the environment
- CG3 Characterize the spatial diversity of the territories
- CE1 Manage and use the methods and techniques of analysis and interpretation of statistical source
- CE6 Acquire the skills and methodologies of the geographer's fieldwork
- CE11 Acquire the habits of analysis of geographic data to proceed to its orderly and reasoned exposition, either through an oral presentation or through a written report
- CT3 Acquire training in the use of new technologies and information and communication technologies
- CT5 Acquire essential notions of scientific thought

Subject contents

1. The Mediterranean region in its context (0,5 credit)

- a. Mediterranean region definitions
- b. Main characteristics of Mediterranean regions
- c. Environmental problems in the Mediterranean region
- d. Factors of change: past, present, future.

2. Hydrological extremes: Floods and droughts (1,25 credit)

- a. Storms and Floods

- b. Droughts and Heat waves
- c. Strategies to mitigate the Hydro-climatic risks

3. Surface hydrology and fluvial dynamics (1,25 credit)

- a. Surface hydrology
- b. Mediterranean rivers
- c. Changes in channel and catchment Systems

4. Groundwater hydrology (1 credit)

- a. Groundwater in the Mediterranean region
- b. Karst systems in the Mediterranean region
- c. Groundwater exploitation
- d. Groundwater pollution

5. Water Management in the Mediterranean area (1 credit)

- a. River basin management
- b. Water budgets: peculiarities, examples and applicability
- c. Freshwater reserves and resources
- d. The Water Framework Directive

Note 1: in this distribution we have included both all theoretical and practical credits.

Note 2: There may be occasional changes depending on the progress of the group and other aspects not contemplated in the preparation of this sheet.

Methodology

1. Master classes.
2. Problem solving.
3. Class practices.
4. Field practices.
5. Individual or group tutorials
6. Weekly monitoring of the progress of each practice in the classroom (virtual)
7. Use of computer and statistical tools
8. Specific work outside the classroom by the student
5. Resolution of doubts in the classroom (virtual)

Development plan

It is a subject closely related to other subjects of the Geography Degree, in which the weight of previous knowledge and newly acquired in the theoretical part are essential to understand the processes that take place in

Mediterranean environments. This subject will also consist of a practical part, in which the basic concepts acquired will be essential to be able to perform the practical exercises in the classroom autonomously, with the help of the documentation provided and the possibility of solving their doubts with the teacher in the classroom or in specific tutorials. In addition, the subject will consist of two field practices that will help students to assimilate part of the knowledge acquired in the classroom, which will also have to do a job.

Information on data protection in audiovisual recording: in accordance with current regulations on the protection of personal data, we inform you that:

- The person responsible for the recording and use of your image and voice is the University of Lleida - UdL- (contact details of the representative: General Secretariat, Plaza Víctor Siurana, 1, 25003 Lleida; sg@udl.cat; contact details of the data protection delegate: dpd@udl.cat).
- Your recorded image and voice will be used exclusively for the purposes inherent to the teaching of the subject.
- Your recorded image and voice will be kept until the end of the current academic year, and will be destroyed under the terms and conditions provided in the regulations on conservation and elimination of UdL administrative documents, and the documentary evaluation tables approved by the Generalitat of Catalonia (<http://www.udl.cat/ca/serveis/arxiu/>).
- Your voice and image is essential to teach this subject, and teaching is a right and a duty of the teaching staff of the Universities, which must be exercised with academic freedom, as provided for in article 33.2 of Organic Law 6/2001, of December 21, of Universities. For this reason, the UdL does not need your consent to record your voice and image for this exclusive purpose, to teach this subject.
- The UdL will not transfer the data to third parties, except in the cases strictly provided for by law.
- You can access your data; request its rectification, deletion or portability; oppose the treatment and request its limitation, provided that it is compatible with the purposes of teaching, by writing to the address dpd@udl.cat. You can also submit a claim addressed to the Catalan Data Protection Authority, through the Authority's electronic headquarters (<https://seu.apd.cat>) or by non-electronic means.

Evaluation

Practice blocks (50% of the final mark)

- **Practice block #1. Continuous evaluation of the practices** based on the practical exercises given in class following the contents and distribution of credits of the subject (10% of the final mark).
- **Practice block #2. Continuous evaluation of the practices** based on the practical exercises given in class following the contents and distribution of credits of the subject (10% of the final mark).
- **Practice block #3. Continuous evaluation of the practices** based on the practical exercises given in class following the contents and distribution of credits of the subject (10% of the final mark).
- **Practice block #4. Continuous evaluation of the practices** based on the practical exercises given in class following the contents and distribution of credits of the subject (10% of the final mark).
- **Practice block #5. Continuous evaluation of the practices** based on the practical exercises given in class following the contents and distribution of credits of the subject (10% of the final mark).
- Each practice must be passed with a minimum grade of 5 and you must pass **ALL** the practices to pass the subject. All practice blocks are recoverable and the maximum delivery date of the failed practices will be that of the recovery exam (according to the official calendar). In this case, the maximum grade that can be obtained will be 5.
- Delivery of each practice up to a maximum of 15 days after its completion (continuous evaluation)

Fieldwork report (20% of the final mark)

- **Evaluation of the reports made after the field trip.** In the case that the practices are not delivered within the established deadline, they must be delivered during the month of January (on the date of the examination of the 1st call). In this case, the student will have a -30% penalty in this section. The manner and period of presentation of each practice will be communicated in each case in a specific way.

Theoretical block (30% of the final mark)

- **Theoretical block. Final exam.** The exam will be held on the day, time and place set by the faculty. The exam has the right to make up for it, which will take place on the day, time and place set by the faculty. You will need to bring a calculator to the exam.

Other considerations

Attendance in class (theory, practicals and personal work) and tutoring sessions (up to a maximum of 5% of the final grade) will be assessed once the assessment tests (practice blocks and theoretical block) have been passed.

Plagiarism or copying

Law 2/2022 on university coexistence regulates what is considered academic fraud: any premeditated behavior tending to falsify the results of an exam, one's own or someone else's, taken as a requirement to pass a subject or certify academic performance. Offenses can be serious or very serious. You can consult the UdL at:

[https://www.udl.cat/export/sites/universitatlleida/ca/udl/norma/.galleries/docs/Organitzacio_interna/Acord-19-2023-CG-28.2.2023-Normativa-de-Convivencia-Universitaria-UdL .pdf](https://www.udl.cat/export/sites/universitatlleida/ca/udl/norma/.galleries/docs/Organitzacio_interna/Acord-19-2023-CG-28.2.2023-Normativa-de-Convivencia-Universitaria-UdL.pdf)

When copy is detected:

- If you copy or plagiarize with fraudulent means, the assessment activity will be withdrawn (therefore it will be suspended) and a report and the evidence will be sent to the coordination of the degree and the heads of studies to start a disciplinary file. The applicable sanctions include, among others and depending on the seriousness of the fault, the loss of the right to be evaluated for the subject, the loss of enrollment for a semester or a course or expulsion for up to three years.
- If there is spontaneous copying between students (behaviors such as speaking in an exam, looking at a colleague's exam, etc.) measures will be applied that may lead to the withdrawal of the activity (therefore, it is suspended). A report will also be made to the coordination of the degree and to the heads of studies if it is considered appropriate to open a disciplinary file.

Alternative assessment

Students who combine their studies with a full-time job or for reasons of family reconciliation have the right to request an alternative assessment at the beginning of the semester. The student who wants to take part in the alternative assessment must present a work contract or justify, in writing addressed to the dean, the reasons that make it impossible for him to take the continuous assessment within five (5) days from from the beginning of the semester. For more information, send an email to academic@lletres.udl.cat or contact the Secretariat of the Faculty of Letters. The alternative assessment test will consist of a global written test that will account for 100% of the final grade of the subject

Bibliography

Birot, Y., Grace, C. and Palahi, M. (2011) *Water for Forests and People in the Mediterranean Region - A Challenging Balance. What Science Can Tell Us*. European Forest Institute. 175 pp.

Brooks, D.B. (2000): *Water Balances in the Eastern Mediterranean*. International Development Research Center. 160 pp.

Sabater, S., Damià Barceló, D. et al (2012): *Water Scarcity in the Mediterranean: Perspectives Under Global Change*. The Handbook of Environmental Chemistry. 234 pp.

Strahler, A. (2016): *Introducing Physical Geography*. Wiley Indian Pvt. Ltd; 6th Edition. 660 pp.

Tarback, E. J., Lutgens, F.K. (2013): *Earth Sciences: an introduction to physical geology*. Pearson Education. 736 pp.

Thornes, J.B., Wainwright, J. (2003): *Environmental Issues in the Mediterranean: Processes and Perspectives from the Past and Present*. Routledge Studies in Physical Geography and Environment. 560 pp.

Woodward, J. (2009): *The Physical Geography of the Mediterranean* Oxford University Press. 592 pp.

Note: these are general references. The Student will receive further lectures and materials in during the subject (if appropriate).