



Guías docentes UJA

Horarios de tutorías

Llamamientos PEVAU

Syllabus 2023-24 - 75012007 - Edaphology and Agricultural Chemistry (Edafología y química agrícola)

Caption

- Level 1: Tutorial support sessions, materials and exams in this language
- Level 2: Tutorial support sessions, materials, exams and seminars in this language
- Level 3: Tutorial support sessions, materials, exams, seminars and regular lectures in this language

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Full version (Spanish)

English

DEGREE: Máster Univ. en Olivar y aceite de oliva (75012007)
 FACULTY: Centro de Estudios de Postgrado
 DEGREE: Doble Máster en Olivar y aceite de oliva y MFPEs (Profesorado) (78112007)
 FACULTY: Centro de Estudios de Postgrado
 ACADEMIC YEAR: 2023-24
 COURSE: Edaphology and Agricultural Chemistry

SYLLABUS

1. COURSE BASIC INFORMATION

NAME: Edaphology and Agricultural Chemistry
 CODE: 75012007 (*) ACADEMIC YEAR: 2023-24
 LANGUAGE: English LEVEL: 1
 ECTS CREDITS: 3.0 YEAR: 1 SEMESTER: PC

2. LECTURER BASIC INFORMATION

NAME: ARANDA SANJUAN, VICTOR
 DEPARTMENT: U117 - GEOLOGÍA
 FIELD OF STUDY: 240 - EDAFOLOGÍA Y QUÍMICA AGRÍCOLA
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 LANGUAGE: English LEVEL: 1

3. CONTENT DESCRIPTION

CONTENTS OF SOIL SCIENCE

BLOCK 1. INTRODUCTION

- SOIL CONCEPT
- CHARACTERISTICS AND PROPERTIES OF SOILS
- SOIL FUNCTION

BLOCK 2. SOIL EROSION

- INTRODUCTION
- PHASES OF EROSION
- HYDROLOGICAL BASES OF EROSION
- TYPES OF WATER EROSION (SPLASH, LAMINAR FLOW, GROOVES and GULLIES)
- STIMATION OF SOIL LOSS DUE TO EROSION: USLE

DIRECTED ACADEMIC ACTIVITIES:

AAD 1. Soil sampling in the field

AAD 2. Quantitative estimation of water erosion loss of soil material

PRACTICES:

P-1. Determination of Soil Granulometry/Texture

P-2. Determination of pH, Salinity and Presence of Gypsum

P-3. Determination of Soil Organic Matter

CONTENTS OF AGRICULTURAL CHEMISTRY

BLOCK 3. AGRICULTURAL CHEMISTRY

1. SOIL ORGANIC MATTER MANAGEMENT: COVERS AND ORGANIC AMENDMENT
2. MINERAL NUTRITION OF THE OLIVE TREE
3. MANAGEMENT OF THE PHYSICAL PROPERTIES OF THE SOIL. TILLAGE

BLOCK 4 (PRACTICAL)

1. SOIL QUALITY INDEX
2. SOIL ASSESSMENT FOR OLIVE CULTIVATION

Integration of the ODS (Sustainable Development Goals)

The contents of this subject are connected with the goals of ODS 4.7 (promote global education for sustainable development), 12.A (strengthening science and technology for sustainability, within the framework of responsible production and consumption), and 15.1 and 15.3, to ensure the conservation and sustainable use of ecosystems and the fight against desertification, respectively. In short, the objective is the acquisition of transversal skills, on the one hand, in the critical contextualization of knowledge that proposes interrelationships with local and/or global social, economic and environmental problems; and on the other, in the sustainable use of resources and in the prevention of negative impacts on the natural and social environment.

4. COURSE DESCRIPTION AND TEACHING METHODOLOGY

During theory classes the content and scope of the subject will be explained in a reasoned way, exposing real examples of soil management practices in various situations (i.e., conventional and ecological olive groves), as well as the recommended bibliography will be commented critically. In the laboratory classes we will familiarize the students with basic determinations in the field about soil fertility, on material specific of olive grove soils. Work will be carried out in the resolution of exercises and the preparation of works (preferably from individual type) under the premise of teacher-student interactivity.

Students with special educational needs should contact the Student Attention Service (Servicio de Atención y Ayudas al Estudiante) in order to receive the appropriate academic support

5. ASSESSMENT METHODOLOGY

Most of the evaluation will be carried out through a written exam, although the involvement of the student will be very important through questions in class, delivery of solved exercises and elaboration and exhibition of complementary works; In addition to the development of practical laboratory and field contents.

6. BOOKLIST**MAIN BOOKLIST:**

- Fundamentals of soil ecology [Recurso electrónico]. Edition: 3rd ed. Author: Coleman, David C. Publisher: London : Academic Press, 2017 ([Library](#))
- Manual práctico de manejo del suelo y de los fertilizantes. Edition: 1ª ed., 2ª reimp. Author: Fuentes Yagüe, José Luis. Publisher: Madrid: Ministerio de Agricultura, Pesca y Alimentación: Mundi-Prensa, 2002 ([Library](#))
- Tratado de Fitotecnia general. Edition: -. Author: Urbano Terrón, P.. Publisher: Madrid: Mundi-Prensa, 1992 ([Library](#))
- Introducción a la edafología : uso y protección del suelo. Edition: -. Author: Porta Casanellas, Jaume. Publisher: Madrid : Mundi-Prensa, 2008. ([Library](#))
- Introduction to the principles and practice of soil science. Edition: -. Author: White, R. E.. Publisher: Oxford [etc.]: Blackwell Scientific Publications, 1987 ([Library](#))
- Las condiciones del suelo y el desarrollo de las plantas según Russell. Edition: -. Author: -. Publisher: Madrid: Mundi-Prensa, 1992 ([Library](#))
- Química agrícola : química del suelo y de los nutrientes esenciales para las plantas. Edition: 3ª ed. Author: Navarro García, Ginés. Publisher: Madrid : Mundi-Prensa, 2013 ([Library](#))
- The nature and properties of soils. Edition: 14th ed, Pearson new international ed. Author: Brady, Nyle C. Publisher: Harlow : Pearson Education Limited, cop. 2014 ([Library](#))
- Soil and water conservation: productivity and environmental protection. Edition: 4th ed. Author: Troeh, Frederick R.. Publisher: Upper Saddle River: Prentice - Hall, cop. 2004 ([Library](#))
- Soils and soil fertility. Edition: 6th ed. Author: Troeh, Frederick R. Publisher: Ames, Iowa : Blackwell, 2005 ([Library](#))

ADDITIONAL BOOKLIST:

- Fertirrigación: cultivos hortícolas, frutales y ornamentales. Edition: 3a. ed. rev., actualizada y ampl.. Author: -. Publisher: Madrid [etc.] : Mundi-Prensa, 2005. ([Library](#))
- La agricultura biológica: técnicas eficaces y no contaminantes. Edition: -. Author: Silguy, Catherine de. Publisher: Zaragoza: Acribia, D.L. 1998 ([Library](#))
- Manejo del olivar con riego por goteo. Edition: -. Author: -. Publisher: Sevilla: Consejería Agricultura y Pesca, D.L. 1996 ([Library](#))
- Erosión y conservación del suelo. Edition: -. Author: Morgan, R. P. C.. Publisher: Madrid [etc.]: Mundi Prensa, 1997 ([Library](#))
- Nueva olivicultura. Edition: 5ª ed. rev. y amp.. Author: Guerrero Garcia, Andrés. Publisher: Madrid [etc.] : Mundi-Prensa , 2003 ([Library](#))

- El olivar ecológico. Edition: -. Author: -. Publisher: Sevilla : Consejería de Agricultura y Pesca ; Madrid ; México : Mundi Prensa, D.L 2012 ([Library](#))
- Soils and soil fertility. Edition: 6th ed. Author: Troeh, Frederick R. Publisher: Ames, Iowa : Blackwell, 2005 ([Library](#))
- Soil and water conservation: productivity and environmental protection. Edition: 4th ed. Author: Troeh, Frederick R.. Publisher: Upper Saddle River: Prentice - Hall, cop. 2004 ([Library](#))

7. VIRTUAL / CLASSROOM TEACHING SCENARIO

Multimodal or mixed scenario.

1- TEACHING METHODOLOGY AND TRAINING ACTIVITIES

Training Activities	Format	Teaching Description	Methodology,
10 Theory Sessions on Program Contents	No presential	10 sessions of master classes, one hour each to the Great Group, virtualized.	
5 Theory sessions on the contents of the program	Presential*	5 sessions of master classes, one hour each to the Great Group.	
10 Practical sessions in specialized laboratories and Directed Academic Activities	Presential*	Development of 10 practical sessions and AAD, two hours each in laboratory and classroom.	
1 Field practice session	Presential*	1 field practice (5 hours).	
Tutoring	No presential	Tutoring sessions will be held exclusively online.	

*to the extent possible in face-to-face format.

2- EVALUATION SYSTEM

OPTION C. CONTINUOUS EVALUATION AND FINAL EXAM

Continuous evaluation and a presential final examination are combined.

Ordinary call

Evaluation test	Format	Description	Percentage
Assistance and/or participation in presence and/or virtual activities	Presential*/no presential synchronous	Attendance and participation based on teacher annotations is evaluated.	15%
Theoretical concepts of matter	Presential* synchronous written exam	Concepts of the subject matter to be treated, the criterion of which is the mastery of the theoretical contents of the subject.	50%
Taking advantage of practices and seminars (AAD). Carrying out work, case studies or exercises	Presential* synchronous and asynchronous	Continuous evaluation of the development of practices and seminars, with evaluation of assistance and competencies related to manipulative capabilities. Evaluation of the work and exercises carried out by the students.	35%

*presence to the extent that the socio-sanitary situation allows.

Extraordinary call

Evaluation test	Format	Description	Percentage
Written exam	Presential* synchronous	Examination on concepts and theoretical contents of the subject matter to be treated.	50%
Written exam	Presential* synchronous	Review on the practical part and the academic activities directed and review on the specific subject matter subject to written work.	50%

*to the extent possible in face-to-face format.

3. RESOURCES

The resources in the mixed scenario are summarized as follows:

- Virtualized theory classes will be carried out using mini-videos and the necessary tools to broadcast online with Google-Meet. The rest of the Big Group theory classes will be given in an ordinary way in the classroom.
- AADs and laboratory practices, indicate that they will participate in person in the laboratory the number of students that allow the capacity and that the rest will work in a no presence manner.
- Written reports on specific topics will be carried out through the Virtual Training platform.
- Students will be informed in advance of GSuite-Calendar and e-mail from the Virtual Training platform, both in the manner and date of the different tests and exams.
- The tutorials and review of exams will be carried out by telematics at the time indicated in advance, preferably by videoconference (Google Meet), or by e-mail of the Virtual Training platform.

8. VIRTUAL TEACHING SCENARIO

No presence scenario.

1- TEACHING METHODOLOGY AND TRAINING ACTIVITIES

Training Activities	Format	Teaching Description	Methodology,
10 Theory Sessions on Program Contents	No presential	10 sessions of master classes, one hour each to the Great Group, virtualized.	
5 Theory sessions on the contents of the program	No presential	5 participatory master class sessions to the Great Group, lasting one hour each, held by videoconference.	
10 Practical sessions in specialized laboratories and Directed Academic Activities	No presential	Substitution of the 10 practical sessions and AAD with on-line training activities. These activities are replaced by specific video tutorials for each type of practice and AAD.	
1 Field practice session	No presential	1 field practice (5 hours) that will be replaced by an on-line AAD related to soil description, according to FAO guidance, as well as on training factors and soil genetic processes specific to the Mediterranean area.	
Tutoring	No presential	Tutoring sessions will be held exclusively on-line.	

2- EVALUATION SYSTEM

OPTION C. CONTINUOUS EVALUATION AND FINAL ON-LINE EXAM

Continuous evaluation and a no presence final examination are combined.

Ordinary call

Evaluation test	Format	Description	Percentage
Assistance and/or participation in No presence and/or virtual activities	No presential synchronous	Attendance and participation based on teacher annotations is evaluated.	15%
Theoretical concepts of matter	No presential synchronous	Examination on concepts of the subject to be treated, the criterion of which is the mastery of the theoretical contents of the subject.	50%
Taking advantage of practices and seminars (AAD). Carrying out work, case studies or exercises	Asynchronous on-line	Continuous evaluation of the development of practices and seminars, with evaluation of assistance and competencies related to manipulative capabilities. Evaluation of the works and exercises carried out by the students.	35%

Extraordinary call

Evaluation test	Format	Description	Percentage
Written exam	No presential synchronous	Examination on concepts and theoretical contents of the subject matter to be treated.	50%
Written exam	No presential synchronous	Review on the practical part and the academic activities directed. As well as on the specific matter subject to written works.	50%

3. RESOURCES

The no presence scenario resources are summarized as follows:

- Theory classes will be held online using Google-Meet for 100% virtual, in addition to classes subject to virtualization.
- AADs and laboratory and field practices will be done on-line using Google-Meet and different video tutorials present on tv-ujae and on the network (YouTube, Vimeo, etc.).
- Written reports on specific topics will be carried out through the Virtual Training platform.
- Students will be informed in advance of GSuite-Calendar and e-mail from the Virtual Training platform, both in the manner and date of the different tests and exams.
- The tutorials and review of exams will be carried out by telematics at the time indicated in advance, preferably by video-conference (Google Meet), or by e-mail of the Virtual Training platform.
- In general, the resources include the technical means provided by the University of Jaén, as well as other resources such as electronic bibliographic resources that do not require physical presence in the library.

DATA PROTECTION CLAUSE (on line exams)

Institution in charge of data processing: Universidad de Jaén, Campus Las Lagunillas, s/n, 23071 Jaén

Data Protection Delegate: dpo@ujaen.es

Purpose: In accordance with the Universities Law and other national and regional regulations in force, carrying out exams and assessment tests corresponding to the courses students are registered in. In order to avoid frauds while sitting the exam, the exam will be answered using a videoconference system, being able the academic staff of the University of Jaén to compare and contrast the image of the person who is answering the exam with the student's photographic files. Likewise, in order to provide the exam with evidential content for revisions or claims, in accordance with current regulation frameworks, the exam will be recorded and stored.

Legitimacy: compliance with legal obligations (Universities Law) and other national and regional regulations currently in force.

Addressees: service providers who are the owners of the platforms where the exams are carried out and with whom the University of Jaén has signed the corresponding data access contracts.

Storage periods: those established in current in force regulations. In the specific case of exam videoconference recordings, not before the examination records and transcripts are closed or the exam can still be reviewed or challenged.

Rights: you can exercise your right of access, amendment, cancellation, opposition, suppression, limitation and portability by sending a letter to the postal or electronic address indicated above. In the event that you consider that your rights have been violated, you may submit a complaint to the Andalusian Council for Transparency and Data Protection www.ctpdandalucia.es

CLASS RECORDING CLAUSE PERSONAL DATA PROTECTION

Person in charge: Universidad de Jaén, Paraje Las Lagunillas, s/n; Tel.953 212121; www.ujaen.es

Data protection delegate (DPO): TELEFÓNICA, S.A.U. ; Email: dpo@ujaen.es

Procedure aim: To manage proper recordings of teaching sessions with the aim of facilitating learning process under a multimodal and/or online teaching

Period for record storage: Images will be kept during legal term according to regulations in force

Legitimacy: Data will be managed according to legal regulations (Organic Law 6/2001, December 21, on Universities) and given consent provided by selecting corresponding box in legal admission documents

Data recipients (transfers or assignments): Any person allowed to get access to every teaching modality

Rights: You may exercise your rights of access, rectification, cancellation, portability, limitation of processing, deletion or, where appropriate, opposition. To exercise these rights, you must submit a written request to the Information, Registration and Electronic Administration Service of the University of Jaen at the address above, or by e-mail to the address above. You must specify which of these rights you are requesting to be satisfied and, at the same time, you must attach a photocopy of your ID card or equivalent identification document. In case you act through a representative, legal or voluntary, you must also provide a document that proves this representation and identification. Likewise, if you consider that your right to personal data protection has been violated, you may file a complaint with the Andalusian Data Protection and Transparency Council www.ctpdandalucia.es