



Universidad de Jaén

FACULTY OF EXPERIMENTAL SCIENCES

Phytopathology

2024-2025
Grado en Biología



GRATIS



Acceso Mayores 40

Guías docentes UJA

Horarios de tutorías

Llamamientos PEVAU

Movilidad (Coordinador)

P.O.D.

Solicitud bilingüismo

Syllabus 2024-25 - 10213018 - Phytopathology (Fitopatología)

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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DEGREE: Grado en Biología
FACULTY: FACULTY OF EXPERIMENTAL SCIENCES
ACADEMIC YEAR: 2024-25
COURSE: Phytopathology

SYLLABUS

1. COURSE BASIC INFORMATION

NAME: Phytopathology
CODE: 10213018 **ACADEMIC YEAR:** 2024-25
LANGUAGE: English **LEVEL:** 1
ECTS CREDITS: 6.0 **YEAR:** 4 **SEMESTER:** SC

2. LECTURER BASIC INFORMATION

NAME: CORDOVILLA PALOMARES, MARÍA DEL PILAR
DEPARTMENT: U102 - BIOLOGIA ANIMAL, BIOL. VEGETAL Y ECOLOGIA
FIELD OF STUDY: 412 - FISIOLÓGÍA VEGETAL
OFFICE NO.: B3 - 144 **E-MAIL:** mpilar@ujaen.es **P:** 2786
WEBSITE: -
ORCID: <https://orcid.org/0000-0002-4976-3450>
LANGUAGE: English **LEVEL:** 1

3. CONTENT DESCRIPTION

TEORY CLASSES

Part one: General aspects

- Chapter 1. Introduction.
- Chapter 2. Parasitims and disease development.
- Chapter 3. How pathogens attack plants.
- Chapter 4. Effects of pathogens on plant physiological functions.
- Chaper 5. How plants defend themselves against pathogens.
- Chapter 6. Environmental effects on the development of infectious plant disease.
- Chapter 7. Control of plant diseases.

Part two: Specific plant diseases

- Chapter 8. Plant diseases caused by fungi I: fungallike, f ungi true primitive
- Chapter 9. Plant diseases caused by fungi II: Ascomycetes y Deuteromycetes
- Chapter 10. Plant diseases caused by fungi III: Basidiomycetes
- Chapter 11. Plant diseases caused by prokaryotes
- Chapter 12. Plant diseases caused viruses
- Chapter 13. Plant diseases caused by nematodes
- Chapter 14. Plant diseases caused by parasitic higher plants

PRACTICAL CLASSES

P1: Direct and indirect isolation of pathogenic fungi from diseased plant tissue. Signs and symptoms

P2: Identification and characterization of pathogens isolated I

P3: Identification and characterization of pathogens isolated II

P4: Isolation and characterization of phytopathogenic bacteria from diseased plant tissue. Signs and symptoms

P5: Vascular diseases. Major vascular differentiation of pathogenic

P6: Pathogenicity of isolated organisms

P7: Characterization and identification of pathogens biotrophs I. Signs and symptoms

P8: Characterization and identification of pathogens biotrophs II. Signs and symptoms

P9: Postharvest diseases

P10: Extraction, enumeration and identification of nematode plant pathogens. Signs and symptoms

TRAINING ACTIVITIES

AF1: Signs and symptoms of plant diseases

AF2: Exercises for review and questions

AF3: Seminars and presentations / exhibitions

AF4: Seminars and presentations / exhibitions

INTEGRATION OF THE UNITED NATIONS SUSTAINABLE DEVELOPMENT OBJECTIVES (ODS)

The contents of the course are linked to the ODS:

2.3 (Doubling productivity and small-scale incomes) of objective 2 (Zero Hunger).

2.4 (Sustainable and resilient agricultural practices) of objective 2 (Zero Hunger)

2.A (Increased investments in agriculture) of objective 2 (Zero Hunger)

9.5 (Increase scientific research, technological capacity) of objective 9 (Industry, innovation and infrastructure)

12.9 (Ensure education for Sustainable Development) of objective 12 (Responsible Production and Consumption)

12.A (Strengthening science and technology for sustainability) of objective 12 (Responsible Consumption and Production)

15.1 (Ensure conservation and sustainable use of ecosystems) of objective 15 (Terrestrial Life and Ecosystems)

4. COURSE DESCRIPTION AND TEACHING METHODOLOGY

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

Attendance, participation, involvement and interest in the subject is assessed positively (10%), enables the student to the CT1, CE27, CT9, CE35, CE34, CT10 skills.

To pass the course must pass the theory exam.

The aspect "Theoretical concepts of matter" (50%) whose instrument is the "Exam of theory", enables the student to the CE27, CE34, CE35, CT1, CT9, CT10 skills.

The aspect "Making work, cases or exercises" (20%), whose instrument is "Exhibition / presentation of papers", enables the student to the CE27, CE34, CE35, CT1, CT3, CT4, CT5, CT7, CT8, CT10 skills.

The aspect "Laboratory Practices/ computer" (20%) whose instrument is "Assistance, quality grade of achievement and participation and delivery of lab notebook", enables the student to the CE12, CE27, CE34, CE35, CG12, CT2, CT5, CT6, CT8, CT10 skills.

6. BOOKLIST [f5 WVVgg'h Y'VjV'c\[fUd\ mj'b'h Y '@VfUfmiWUJc\] ǫ](#)

MAIN BOOKLIST:

- Essential plant pathology Gail L. Schumann and Cleora J. D'Arcy. Edition: 2nd ed. Author: Schumann, Gail L. Publisher: APS Press ([Library](#))
- Plant pathology : concepts and laboratory exercises edited by Bonnie H. Ownley, Robert N. Trigiano. Edition: 3rd ed. Author: Trigiano, Robert N., ed. lit. Publisher: CRC Press ([Library](#))
- Plant pathology. Edition: 4th ed. Author: Agrios, George N.. Publisher: Academic Press ([Library](#))

ADDITIONAL BOOKLIST:

- Phytopathology (Online). Edition: -. Author: American Phytopathological Society.. Publisher: [American Phytopathological Society] ([Library](#))
- Comparative epidemiology of plant diseases Jürgen Kranz. Edition: -. Author: Kranz, Jürgen. Publisher: Springer ([Library](#))
- Postharvest diseases of fruits and vegetables: development and control Rivka Barkai-Golan. Edition: -. Author: Barkai-Golan, Rivka. Publisher: Elsevier ([Library](#))
- Postharvest pathology Dov Prusky, Maria Lodovica Gullino (eds.). Edition: -. Author: -. Publisher: Springer, ([Library](#))
- Detection and Diagnostics of Plant Pathogens [electronic resource] edited by Maria Lodovica Gullino, Peter J. M. Bonants.. Edition: 1st ed. 2014.. Author: Gullino, Maria Lodovica. editor.. Publisher: Springer Netherlands ([Library](#))
- downy mildews [electronic resource] : genetics, molecular biology and control [edited by] A. Lebeda, P.T.N. Spencer-Philips, B.M. Cooke.. Edition: -. Author: International Downy Mildews Symposium (2nd : 2007 : Olomouc, Czech Republic). Publisher: Springer ([Library](#))

7. SUSTAINABLE DEVELOPMENT GOALS

Educación de calidad

Agua limpia y saneamiento

Trabajo decente y crecimiento económico

Industria, innovación e infraestructura

Producción y consumo responsables

Vida submarina

Vida de ecosistemas terrestres

DETAILED INFORMATION

4.4 By 2030, substantially increase the number of young people and adults who have the necessary skills, including technical and vocational skills, to enter employment, decent work and entrepreneurship.

4.7 By 2030, ensure that all learners acquire the knowledge and skills necessary to promote sustainable development, including through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and the contribution of culture to sustainable development.

6.3 By 2030, improve water quality by reducing pollution, removing dumping and minimising the release of chemicals and hazardous materials, halving the proportion of untreated wastewater and significantly increasing recycling and safe reuse globally.

8.4 Progressively improve the efficient production and consumption of the world's resources by 2030 and aim to decouple economic growth from environmental degradation, in line with the 10-Year Framework for Action. 8.4 Progressively improve global resource efficient production and consumption by 2030 and aim to decouple economic growth from environmental degradation, in line with the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, starting with developed countries.

9.5 Increase scientific research and improve the technological capabilities of industrial sectors in all countries, in particular developing countries, including through fostering innovation and significantly increasing the number of research and development personnel per million inhabitants and public and private sector expenditure on research and development by 2030.

12.2 By 2030, achieve sustainable management and efficient use of natural resources.

12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse effects on human health and the environment.

14.1. By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

15.4 By 2030, ensure the conservation of mountain ecosystems, including their biological diversity, in order to enhance their capacity to provide essential benefits for sustainable development.

8. VIRTUAL / CLASSROOM TEACHING SCENARIO

Attendance, participation (80%), involvement and interest in the subject is assessed positively (10%). They will be face-to-face to the extent that the situation allows.

The aspect "Theoretical concepts of matter" (50%) whose instrument is the "Exam of theory". They will be face-to-face to the extent that the situation allows.

The aspect "Making work, cases or exercises" (20%), whose instrument is "Exhibition / presentation of papers". They will be face-to-face to the extent that the situation allows.

The aspect "Laboratory Practices" (20%) whose instrument is "Assistance, quality grade of achievement and participation and delivery of written practical work". They will be face-to-face to the extent that the situation allows.

On-line teaching will be using the Resources of the University of Jaén, google meet and email.

Face-to-face teaching will be using the means available at the University of Jaén.

9. VIRTUAL TEACHING SCENARIO

Attendance, participation (80%), involvement and interest in the subject is assessed positively (10%). On-line.

The aspect "Theoretical concepts of matter" (50%) whose instrument is the "Exam of theory". On-line.

The aspect "Making work, cases or exercises" (20%), whose instrument is "Exhibition / presentation of papers". On-line.

The aspect "Laboratory Practices" (20%) whose instrument is "Assistance, quality grade of achievement and participation and delivery of written practical work". On-line.

On-line teaching will be using the Resources of the University of Jaén, google meet and email.

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

Campus Las Lagunillas s/n | 23071 - Jaén

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