



Universidad de Jaén

FACULTY OF SOCIAL AND LEGAL SCIENCES

Advanced sampling techniques

2024-2025

Grado en Estadística y empresa

GRUPO



Acceso Mayores 40

Guías docentes UJA

Horarios de tutorías

Llamamientos PAU

Movilidad (Coordinador)

P.O.D.

Solicitud bilingüismo

Syllabus 2024-25 - 11713004 - Advanced Sampling Techniques (Técnicas avanzadas de muestreo)

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 Estadística y empresa

FACULTY:

FACULTY OF LAW AND SOCIAL SCIENCES

ACADEMIC YEAR:

2024-25

COURSE:

Advanced Sampling Techniques

SYLLABUS

1. COURSE BASIC INFORMATION

NAME: Advanced Sampling Techniques

CODE: 11713004

ACADEMIC YEAR: 2024-25

LANGUAGE: English

LEVEL: 1

ECTS CREDITS: 6.0

YEAR: 4

SEMESTER: PC

2. LECTURER BASIC INFORMATION

NAME: ALBA FERNANDEZ, MARIA VIRTUDES

DEPARTMENT: U112 - ESTADISTICA E INVESTIGACIÓN OPERATIVA

FIELD OF STUDY: 265 - ESTADÍSTICA E INVESTIGACIÓN OPERATIVA

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LANGUAGE: -

LEVEL: 1

3. CONTENT DESCRIPTION

- Use of auxiliary information I: difference estimator and ratio type estimator.
 - Design description and estimation of parameters.
 - Estimator of variance.
- Use of auxiliary information II: regression type estimator.
 - Design description and estimation of parameters.
 - Estimator of variance.
- Two-phase sampling.
- Cluster sampling (one and two phases).
 - Design description and estimation of parameters.
 - Estimator of variance.

4. COURSE DESCRIPTION AND TEACHING METHODOLOGY

The global mark is divided into two parts, the first one is an examen with theoretical questions and problems. The second is a presentation of a study case based on the use a programming language.

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

The final mark is obtained from the theoretical exam, 60%, 10% the implementation of an application to real data of one of the designs studied and the practical exam, 30%. The practical exam will be done during the oficial period of classes.

6. BOOKLIST ([Access the bibliography in the Library catalog](#))

MAIN BOOKLIST:

- Model assisted survey sampling. Edition: Corrected 4th printing. Author: Särndal, Carl-Erik. Publisher: Springer ([Library](#))

- introduction to model-based survey sampling with applications. Edition: -. Author: Chambers, R. L. (Ray L.). Publisher: Oxford University Press ([Library](#))

7. SUSTAINABLE DEVELOPMENT GOALS

Educación de calidad

DETAILED INFORMATION

Ensuring inclusive, equitable and high quality education and promoting lifelong learning opportunities for all

8. VIRTUAL / CLASSROOM TEACHING SCENARIO

It is expected the number of students doesn't exceed the allowed capacity of the classroom, so, all classes will be followed normally.

In case that the number of students exceeds the allowed capacity of the classroom, the teaching will be adapted with a degree of presentiality that will range between 50% and 100% with rotation of groups and videoconference broadcast to the rest. If the classroom does not have the technical systems required for the retransmission of classes, they may choose to develop them in online format for all students.

The evaluation system is maintained. In this scenario, exam attendance will be face-to-face (physically in the classroom). It can be virtual (through the appropriate means, with identification of the student through the webcam) if the epidemiological situation requires it.

9. VIRTUAL TEACHING SCENARIO

In this scenario, the theoretical and practical classes will be held via videoconference at Google Meet (or similar) synchronously.

The tutorials are carried out online via videoconference and email.

The evaluation system will be as follows:

1. Examination of theoretical and practical questions through Google Forms (or similar) with equal weight.
2. The practical exam will be carried out synchronously through Google Forms (or similar) with equal weight.

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

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