



Universidad de Jaén

School of Engineering of Jaén

Natural language processing

2024-2025

Grado en Ingeniería Informática (E.P.S. Jaén)



CREA



Acceso Mayores 40

Guías docentes UJA

Horarios de tutorías

Llamamientos PAU

Movilidad (Coordinador)

P.O.D.

Solicitud bilingüismo

Syllabus 2024-25 - 13313010 - Natural Language Processing (Procesamiento del lenguaje natural)

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

[Back](#)[Full version \(Spanish\)](#)[English](#)

DEGREE:

Grado en Ingeniería informática

FACULTY:

SCHOOL OF ENGINEERING OF JAÉN

ACADEMIC YEAR:

2024-25

COURSE:

Natural Language Processing

SYLLABUS

1. COURSE BASIC INFORMATION

NAME: Natural Language Processing

CODE: 13313010

ACADEMIC YEAR: 2024-25

LANGUAGE: English

LEVEL: 2

ECTS CREDITS: 6.0

YEAR: 4

SEMESTER: SC

2. LECTURER BASIC INFORMATION

NAME: UREÑA LÓPEZ, LUIS ALFONSO

DEPARTMENT: U118 - INFORMÁTICA

FIELD OF STUDY: 570 - LENGUAJES Y SISTEMAS INFORMÁTICOS

OFFICE NO.: A3 - A3-129

E-MAIL: laurena@ujaen.es

P: 953212895

WEBSITE: <http://blogs.ujaen.es/laurena>ORCID: <https://orcid.org/0000-0001-7540-4059>

LANGUAGE: English

LEVEL: 2

3. CONTENT DESCRIPTION

Theory

Module 1

Introduction to Natural Language Processing

Content Analysis: Lexical, Syntactic, Semantic

Language Resources: Entities (NER), Ontology

Module 2

Word Sense Disambiguation

Module 3

Analysis of opinions and sentiments

Module 4

Applications of NLP

Practices

Different activities will be conducted in the laboratory of practices in order to clarify, deepen and strengthen the practical content of the course. These contents will be developed both in the sessions of theory and practical sessions in the lab.

Block 1. Introduction to the development environment.

Block 2. Preprocessing

Block 3. Analysis

Block 4. Extraction of entities

Block 5. Application (project)

4. COURSE DESCRIPTION AND TEACHING METHODOLOGY

Competencies for Assessment System:

- S1 (attendance and participation): CC13, CC15
- S2 (theory assessment): CC13, CC15, CB5
- S3 (exercises and work): CB2
- S4 (practice assessment): CB2

Theory sessions

- Lectures
- Exhibition of general theory and examples

Practical sessions

- Laboratory practices
- Resolution of exercises assisted by the teacher

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

Competencies by Assessment System:

S1 (attendance and participation): CC13, CC15
 S2 (theoretical knowledge): CC13, CC15, CB5
 S3 (exercises and works): CB2
 S4 (practical knowledge): CB2
 Detailed description

A global evaluation of the subject will be carried out, according to the provisions of art. 13 of the Regulations for the Academic Regime and Student Assessment of the University of Jaén, for which the following sections will be taken into account:

- Theory (2 points): written exam. It is necessary to obtain at least 1 point to be able to add the rest of the scores obtained and pass the subject.
- Practices (6 points): development of practices in the laboratory. It is necessary to obtain at least 3 points to be able to add the rest of the scores obtained and pass the subject.
- Participation in the resolution of exercises, preparation of works and publication in the platform of the subject: 2 point. It will be necessary to obtain 1 to add to the rest and pass the subject.

The qualification system will be governed by the provisions of RD 1125/2003 of September 5, which establishes the European credit system and the qualification system in official university degrees.

To pass the subject, the final grade will be the sum of the weighted grades according to the criteria included in the evaluation system, as long as the theoretical and practical part of the subject is passed.

To pass the theoretical part, it will be necessary to obtain at least 50% of the weight assigned to its contents.

To pass the practical part, it will be necessary to obtain at least 50% of the weight assigned to its content.

To pass the global subject you must obtain at least 5 points in the sum of the parts.

In accordance with Article 18.4 of the Regulations for the Academic Regime and Student Evaluation of the University of Jaén, the practice block is mandatory in order to pass the subject.

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

MAIN BOOKLIST:

- The Oxford handbook of computational linguistics. Edition: Repr. Author: -. Publisher: New York: Oxford University Press, 2005 [\(Library\)](#)
- Natural language understanding . Edition: -. Author: Allen, James. Publisher: Redwood City, California [etc.] : The Benjamin Commings, cop. 1995 [\(Library\)](#)

ADDITIONAL BOOKLIST:

- Handbook of natural language processing. Edition: 2nd ed.. Author: -. Publisher: Boca Raton : Taylor & Francis, 2010 [\(Library\)](#)

7. SUSTAINABLE DEVELOPMENT GOALS

Reducción de las desigualdades

DETAILED INFORMATION

SDG 10: Reduced Inequalities

Access to Information: NLP can translate vital information into multiple languages, reducing language barriers and improving access to essential services.

Inclusion: Chatbots and virtual assistants can provide support to people with disabilities, improving their access to information and services.

8. VIRTUAL / CLASSROOM TEACHING SCENARIO

The activities that cannot be carried out in person will be developed in blended learning format with rotating attendance, and use of videoconferencing systems, provided that the capacity and infrastructure of the space assigned for the teaching of the subject allow it.

The evaluation system and instruments will be the same as for the face-to-face modality, as long as the capacity and infrastructure of the space assigned for the evaluations of the subject allow it.

The videoconferencing systems available in the spaces provided for teaching will be used, as well as the University's teaching platform. The activities that cannot be carried out face-to-face will be carried out through synchronous and/or asynchronous activities carried out through the virtual teaching platform.

It is expressly forbidden the recording and distribution by any means of face-to-face or synchronous non-face-to-face activities without the express permission of the teacher.

9. VIRTUAL TEACHING SCENARIO

Activities that cannot be carried out in person will be carried out through synchronous and / or asynchronous activities carried out through the virtual teaching platform.

The evaluation system and instruments will be the same as for the face-to-face modality, replacing the face-to-face tests with similar tests developed through the use of the online teaching platform, provided that the identity of the student is guaranteed.

Recording by any means of face-to-face or synchronous face-to-face activities is expressly prohibited.

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
[Soporte de guías docentes](#)
[Accesibilidad](#) | [Aviso legal](#) | [Sugerencias](#)

[Servicios académicos](#) | [Servicios administrativos](#) | [Extensión universitaria](#) | [Información general](#) | [Operaciones](#) |