| Subject name : Computer Architecture | Code : EC-EII05-ARC |
|---|---|
| Number of hours per student : 52 H | ECTS Number : 4 |
| | |
| Reference Teacher: Jean-Gabriel COUSIN | |

# Generalities

***Objectives*** *(2000 characters)*

- Understand how simple programmable computers behave at the microarchitectural level.
- Illustrate the fundamental concepts introduced in the "Combinatory and Sequential Logic" hardware course.
- Relate these concepts to those introduced in the "Programming in C" software course.

Main skills covered :
- Analyse or design a digital system with interconnected hierarchical functions ;
- Complete, synthesise, simulate, or debug digital systems using appropriate industrial EDA tools ;
- Make effective use of available resources (documentation, the Internet, *etc.*) to solve design problems relating to digital systems.

***Description*** *(2000 characters)*

- What is a computer architecture ?
- How can combinatorial and sequential logic functions be adapted to a logic synthesis environment ?
- How are multifunction operators (ALU and AGU), multifunction registers, register files, queues (FIFO and LIFO), and matrix memory described ?
- How is the register transfer level (RTL) architecture of a reduced instruction set computer (RISC) implemented using a simplified subset of basic fixed-format instructions that operate on fixed-format data ? This includes arithmetic and logic instructions, data and control transfer instructions, register-register and load-store architectures, the Harvard memory architecture, a combinatorial control unit or finite-state machines (FSMs), and the von Neumann execution cycle.
- Study a few variable-format instructions operating on variable-format data for an RTL architecture of a complex instruction set computer (CISC) with a von Neumann memory architecture and a hardwired (FSM), µProgrammed, or combined control unit.

EDA tools used:
- Intel Corporation Quartus-Prime logic synthesizer
- Siemens ModelSim-Intel simulator

***Requirements*** *(2000 characters)*

- notions of Combinatory and Sequential Logic (EC-ESM05-LOG)
- elementary notions of Programming in C (EC-EII05-PROGC)

# Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French
(support is mainly in English)

***Teaching methods*** *(500 characters)*

- active pedagogy
- learning by reading documents
- project-based learning
- upstream preparation of tutorials and lab. work

***Number of hours per course type:*** *(2000 characters)*

CM-lectures: 14 H
TD-tutorials: 14 H
TP-lab. work: 12 H
PR-project: 12 H

***Evaluation*** *(200 characters)*

Mainly:
- attendance and participation
- project

## Bibliography

***Bibliography*** *(2000 characters)*


- websites
- Tanenbaum S., "Structured Computer Organization", Prentice Hall
- Hennessy J., Patterson D., "Computer Architecture: A Quantitative Approach", McGraw-Hill
- wikibook "Fonctionnement d'un ordinateur"
- Floyd T.L., "Systèmes numériques", Editions Goulet
- Brie C., "Logique combinatoire et séquentielle : méthodes, outils et réalisations", Editions Ellipses - Technosup


## Contacts

***Contacts*** *(2000 characters)*


Jean-Gabriel COUSIN

## Other information

***Other information***

Target audience: 3EII

| Subject name : Electronics 1 | Code : EC-EII05-ELE |
|---|---|
| Number of hours per student : 80 H | ECTS Number : 6 |
| | |
| Reference Teacher: Laurent BEDAT | |

## Generalities

***Objectives*** *(2000 characters)*

Familiarization with the methods required to analyse the behavior of basic electronic passive and active circuits. Use of these methods to comprehend operational amplifiers circuits. Understanding of analog and mixed circuitry such as those used in microcontroller development platform including sensors and power actuators.

Introduction to bipolar and field effect transistors circuits for amplification and commutation.

Practical application of the theory studied in the courses, manipulation and further study of the circuits using Spice simulation software. Measurement techniques using typical laboratory instrumentation setup.

***Description*** *(2000 characters)*

1. Sources, passives networks, Ohm's law, Kirchhoff's law, Thévenin and Norton theorems. Sinusoidal and Cissoidal analysis, complex Ohm's law.
2. First order systems, Bode plots. Spice simulator introduction, quadripoles, dependent sources
3. Differential amplifiers. Operational amplifier (Opamp) and the ideal Opamp. Basic Opamp circuits. Real Opamps imperfections.
4. Commutation circuits, comparators, diodes, bipolar an MOSFETs used in commutation circuits.
5. Review of bipolar transistors amplifiers. DC biasing. Analysis of the Ebers-Moll model, harmonic distortion rate. Non-linear Spice analysis capability.
6. Practice with measurement instruments and electronics components.
7. Pspice simulation, linear and non-linear analysis.
8. Practical circuits simulation and cabling including passive and active circuits.
9. Design of an electronic project from the specification using data sheets and application notes.

***Requirements*** *(2000 characters)*

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Revision of lecture notes.
Preparation of exercises.
Practical application of the notions seen during lectures.

***Number of hours per course type:*** *(2000 characters)*

*CM : 23 H*
*TD : 20 H*
*TP : 27 H*
*PR : 10 H*
*CONF :*
*Autres :*

***Evaluation*** *(200 characters)*

1h written examination (without documents).
2h written examination (with documents) at the end of the semester.
Project and written report.

## Bibliography

***Bibliography*** *(2000 characters)*

1. BLOT J., "Electronique linéaire - Cours avec exercices et travaux pratiques", Chapitres 1 et 3, Dunod, 1993.
2. BLOT J., "Electronique linéaire - exercices résolus", Dunod, 1994.
3. BLOT J., "Les transistors - éléments d'intégration des circuits analogiques", Chapitres 1 à 3, Dunod, 1995.
4. SEDRA ADEL S. et SMITH KENNETH C., "Microelectronic circuits", Holt, Rinehart, and Winston, 1998.
5. GREBENE A. B., "Bipolar and MOS analog integrated circuit design", n° ISBN 0471085294, 1984.
6. KRASNOPOL E , “Réseaux linéaires : méthodes et applications”, Editions Casteilla, n° ISBN 2-7135-2513-6

## Contacts

***Contacts*** *(2000 characters)*

Laurent BEDAT

## Other information

***Other information***

Target audience : 3EII

| Subject name : Mathematics for EII engineers | Code : EC-EII05-MATH |
|---|---|
| Number of hours per student : 26 H | ECTS Number : 2 |
| | |
| Reference Teacher: Nicolas BEUVE | |

## Generalities

***Objectives*** *(2000 characters)*

The objective of this module is to provide mathematical bases that are required for any Electronics and Computer Engineering engineer. Notions from analysis and algebra fields will be addressed.

Intended skills are:
-> Master the mathematical tools required for computer science
-> Model and formalize a mathematical problem
-> Realize related mathematical calculus

***Description*** *(2000 characters)*

1. Analysis: integrals, multiple integrals, convergence of integrals.
2. Algebra: matrices, determinants, eigenvalues, eigenvectors, inversion, scalar and vector product, diagonalization, resolution of linear systems

***Requirements*** *(2000 characters)*

None

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Revision of lecture notes. Preparation of exercises and practical work.

***Number of hours per course type:*** *(2000 characters)*

*CM :*
*TD : 26 H*
*TP :*
*PR :*
*CONF :*
*Autres :*

***Evaluation*** *(200 characters)*

Continuous control
Algebra → 1h (coef. 1)
Analysis → 1h (coef. 1)

## Bibliography

***Bibliography*** *(2000 characters)*

1. GOURDON X., "Algèbre", Ellipses, 2ème édition
2. GOURDON X., "Analyse", Ellipses, 3ème édition

## Contacts

***Contacts*** *(2000 characters)*

Nicolas BEUVE

## Other information

***Other information***

Intended audience : 3EII

| Subject name : Probabilistic tools for engineers | Code : EC-EII05-PROBA |
|---|---|
| Number of hours per student : 20 H | ECTS Number : 1.5 |
| | |
| Reference Teacher: Jean-Noël PROVOST | |

## Generalities

***Objectives*** *(2000 characters)*

To make students acquainted with two probabilistic tools, the characteristic function and the Gaussian vectors, together with their statistical applications for large samples.

***Description*** *(2000 characters)*

Review of real random variables and vectors, moments, and independence.
Characteristic function of real random vectors.
Relationship between probability and statistics.
Gaussian random vectors.
Chi-squared test.

***Requirements*** *(2000 characters)*

Basics of analysis and linear algebra.
Course "Introduction to probability" (STPI-2nd year).

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Learning the course material.
Preparing for tutorial sessions.
Preparing for laboratory sessions.

***Number of hours per course type:*** *(2000 characters)*

*CM : 9 H*
*TD : 8 H*
*TP : 3 H*
*PR :*
*CONF :*
*Autres :*

***Evaluation*** *(200 characters)*

One written examination (2h, open-book).

## Bibliography

***Bibliography*** *(2000 characters)*

F. Bertrand et M. Maumy-Bertrand. Mathématiques pour les sciences de l'ingénieur. Dunod, 2013.
B. Garel. Modélisation probabiliste et statistique. Cépaduès-Editions, 2002.

## Contacts

***Contacts*** *(2000 characters)*

Jean-Noël PROVOST

## Other information

***Other information***

Intended audience : All students registered in the first semester of the third year in the EII program.

| Subject name : Programming in C | Code : EC-EII05-PROGC |
|---|---|
| Number of hours per student : 55 H | ECTS Number : 4.5 |
| | |
| Reference Teacher: Karol DESNOS | |

# Generalities

***Objectives*** *(2000 characters)*

The course will be articulated in two parts. The first part, shared with the STIC pole, aims at acquiring the basic notions in C language. The pedagogical objectives of this first part are :
-> To discover and appropriate the syntax of the C language
-> Translate simple function specifications into C language
-> Write code using variables, arrays, structures, pointers and functions
-> Manipulate text files with a program written in C language
-> Handling IDE (Integrated Development Environment) and identify the tools and phases of building an executable within this IDE.
-> Use of the debugger for self-correction of code
To do this, there will be 6 practical sessions dedicated to these notions.

The second part will deepen the mastery of the C language and software developement. It will be about using the previous notions in more complex frameworks and to approach new ones in order to allow the student to translate a more complex problem in C language. The pedagogical objectives of this second part are :
-> Discovery, use and implementation of data structures (arrays, lists, trees, graphs) in C
-> Discover and use generic code mechanisms in C: function pointers
-> Write and read data on a binary stream while mastering low-level input-output operations
-> Be aware of the memory mechanisms involved in the execution of a program
-> Test and document a program
-> Write a Makefile
To do this, the student will have to analyze during 10 practical sessions the data structures proposed in different problems to understand their choice and their good use which he/she will apply. Good coding skills will be reinforced..

***Description*** *(2000 characters)*

For the first part, where the documents and courses will be in French, please look at the ECTS sheet of the module EC-ESM05-INFOC

For the second part where the documents will be in English and the courses in French, the following courses will be presented:

1. Understanding the environment of an executable and writing a Makefile
2. Reminders on pointers to variables, pointers to functions and presentation of the ellipse
3. Reading and writing in a text or binary file and directory manipulation
4. Presentation of different data structures

The Makefile and its objectives will be presented and directly applied during an interactive course session..

***Requirements*** *(2000 characters)*

Notion of algorithm

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Lecture revision, preparing exercises and validating the results in labs.

***Number of hours per course type:*** *(2000 characters)*

*CM : 19 H*
*TD : 6 H*
*TP : 30 H*
*PR :*
*CONF :*
*Autres :*

***Evaluation*** *(200 characters)*

The final grade for this module is a weighting of the results of two exams. The first one is a 2-hour written exam with documents at the half of the semester, validating the first part of the module.
The second exam is a 2-hour graded DS on PC with documents at the end of the semester. .

## Bibliography

***Bibliography*** *(2000 characters)*

J.P. BRAQUELAIRE. Méthodologie de la programmation en langage C - Principes et applications. Manuels Informatiques Masson. Masson, 1993.
J.P. BRAQUELAIRE. Méthodologie de la programmation en langage C - Norme C99 - API POSIX. Sciences Sup. Dunod, 2005.
C. DELANOY. Programmer en langage C, avec exercices corrigés. Eyrolles, 1997.
B.W. KERNIGHAN and D.M. RITCHIE. Le langage C. Manuels Informatiques Masson. Masson, 1990.
J.L NEBUT. Le langage C - définition de la norme ANSI. Technical Report Cours C81, IFSIC -Université de Rennes 1, juillet 1989.

## Contacts

***Contacts*** *(2000 characters)*

Karol DESNOS

## Other information

***Other information***

Target audience : 3EII

| Subject name : Signals and Systems II | Code : EC-EII05-SIG2 |
|---|---|
| Number of hours per student : 20 H | ECTS Number : 1.5 |
| | |
| Reference Teacher: Kidiyo KPALMA | |

# Generalities

***Objectives*** *(2000 characters)*

Provide theoretical notions and the practice linked to the response of a linear system to a signal.
Raise issues inherents to signal procesing and the stability of linear systems and propose some solutions. Provide methods for choosing an appropiate solution.

Targeted competences are:
-> Consolidation and application of the concepts learned in EC-ESM05-SIG.
-> Understanding signal theory and its mathematical modeling
-> Assimilation of various techniques to manipulate feedback systems

***Description*** *(2000 characters)*

1. Study of spectral analysis of signals,
2. Representation of linear systems and study of their stability,
3. Study of feedback systems and analysis of their stability.

***Requirements*** *(2000 characters)*

Signals et Systems (EC-ESM05-SIG).

# Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Revision of lecture notes. Preparation of exercises. Active learning: participation in problem solving on the board and work in sub-groups.

***Number of hours per course type:*** *(2000 characters)*

*CM : 5 H*
*TD : 6 H*
*TP : 9 H*
*PR :*
*CONF :*
*Autres :*

***Evaluation*** *(200 characters)*

One-hour written examination, with documents, at the end of the semester.

## Bibliography

***Bibliography*** *(2000 characters)*

1. Égon H., Marie M. et Porée P., "Traitement du signal et automatique : Traitement du signal et asservissements analogiques", Hermann, 2000.
2. Chaparro L.et Akan A., "Signals and Systems using MATLAB", Elsevier, 2018.

## Contacts

***Contacts*** *(2000 characters)*

Kidiyo KPALMA

## Other information

***Other information***

Intended audience : 3EII

| Subject name: Mathematical Analysis for the Engineer | Code EC: DMA05-MEDO |
|---|---|
| Number of hours per student: 20.00 h | ECTS Number: 1.50 credits |
| | |
| Reference Teacher: Olivier LEY | |

## Generalities

***Objectives*** *(2000 characters)*

The objective of this course is to introduce the basic tools in mathematical analysis to start the engineering cycle: Integration, Fourier transform, complex analysis.

***Description*** *(2000 characters)*

- **Integration**: Lebesgue integral, integrable functions, Convergence theorems, Integrals with a parameter, Fubini's Theorem, Convolution.
- **Fourier transform**: Fourier transform of an integrable function, main properties and Inversion Theorem, Fourier transform of a square-integrable function.
- **Introduction to complex analysis**: Holomorphic functions, power series, exponential and logarithmic functions, complex line integral, Cauchy's formula, Residue Theorem, method of contour integration.

***Requirements*** *(2000 characters)*

Mathematical courses from the undergraduate program of INSA (years 1-2) or equivalent skills (calculus, linear algebra).

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

The course is taught in French.

***Teaching methods*** *(500 characters)*

Classic courses and tutorials.

***Number of hours per course type:*** *(2000 characters)*

*CM: 10.00 h*
*TD: 10.00 h*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

1 written exam.

## Bibliography

***Bibliography*** *(2000 characters)*


- M. Bergounioux, Mathématiques pour le traitement du signal, Mathématiques appliquées pour le Master, 2ème édition, Dunod, 2014.
- W. Rudin, Analyse réelle et complexe, Masson, 1995.


## Contacts

***Contacts*** *(2000 characters)*


Olivier Ley


## Other information

***Other information***

| Subject name : Combinatory and Sequential Logic | Code : EC-ESM05-LOG |
|---|---|
| Number of hours per student : 26 H | ECTS Number : 2 |
| | |
| Reference Teacher : Mickaël DARDAILLON | |

## Generalities

***Objectives*** *(2000 characters)*

Introduction to digital circuits. Methods and tools for the design of digital circuit.

***Description*** *(2000 characters)*

Combinatory Logic
Logic basics, logic gates and logic functions. Boole Algebra Logic Simplification/minimisation using Karnaugh.
Design of complex logic systems : multiplexer, decoder, adder

Sequential Logic
Sequential logic basics : synchronous et asynchronous flip-flops Complex systems : counter, register, shifting
Temporal analysis
Complex Systems, state machines (Moore and Mealy). Design process starting from the specifications

***Requirements*** *(2000 characters)*

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

lectures, preparing exercises during TD

***Number of hours per course type:*** *(2000 characters)*

*CM : 14 H*
*TD : 12 H*
*TP :*
*PR :*
*CONF :*
*Autres :*

***Evaluation*** *(200 characters)*

Written examination of 2 hours, course exams.

## Bibliography

***Bibliography*** *(2000 characters)*

TOCCI R. J., "Circuits numériques - Théorie et applications", Dunod, 1992.
NKETSA A., " Circuits logiques", Collection TechnoSup, 2000
BRIE C., "Logique combinatoire et séquentielle : Méthodes, outils et réalisations", Editions Ellipses, collection Technosup, 2002.
Strandh R., " Architecture de l'Ordinateur ", Dunod , 2005

## Contacts

***Contacts*** *(2000 characters)*

Mickaël DARDAILLON

## Other information

***Other information***

Intended audience : 3rd year

| Subject name : Signals and Systems | Code : EC-ESM05-SIG |
|---|---|
| Number of hours per student : 28 H | ECTS Number : 2 |
| | |
| Reference Teacher : Kidiyo KPALMA | |

## Generalities

***Objectives*** *(2000 characters)*

Introduction and application of all the necessary mathematical tools to better understand electronics, control and signal processing. The applications are illustrated with simple examples taken from those disciplines.

Targeted competences are:
-> Understand the concept of a signal and know how to modelize it,
-> Understand what is a system and predict its behaviour face to an input signal,
-> Understand mathematical tools needed to electronics, control and signal processing

***Description*** *(2000 characters)*

1. Overview of signals: signals described by functions and signals described by distributions. Deterministic and random signals. Classification of deterministic signals depending on their time variation (discrete or continuous), test signals (pulse, step, sinusoid, etc.)

2. Overview of systems: definition, system response and convolution. Linear system response to a sinusoidal input or to a non-sinusoidal periodic input (Fourier series).

3. Fourier series, Fourier and Laplace transforms - Definitions, spectral representation of a signal, properties of transformations, transforms of some usual signals. Notions of power spectral density (psd) and energy spectral density (esd). Wiener–Khinchin theorem.

4. Response of a linear system to any input. Application of the Laplace transform to the study of the response of a linear system subject to any input. Isomorph transfert function and spectral representation. Study of the stability (definition, the stability and poles location, stability of looped systems)

***Requirements*** *(2000 characters)*

None

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Revision of lecture notes. Review of basic mathematics. Preparation of exercises. Active learning: participation in problem solving on the board.

***Number of hours per course type:*** *(2000 characters)*

*CM : 14 H*
*TD : 14 H*
*TP :*
*PR :*
*CONF :*
*Autres :*

***Evaluation*** *(200 characters)*

One-hour quizz (on table or under Moodle) in the middle of the semester (without documents) and a two-hour written examination (with documents) at the end of the semester.

## Bibliography

***Bibliography*** *(2000 characters)*

1. BLOT J., "Electronique linéaire - cours", Chapitre 2, Dunod Université, 1993.
2. Chaparro L.et Akan A., "Signals and Systems using MATLAB", Elsevier, 2018.
3. BORNE P., DAUPHIN-TANGUY G., RICHARD J. P., ROTELLA F., ZAMBETTAKIS I., "Automatique, Analyse et régulation des processus industriels", Tome 1, Tecnip.
4. Égon H., Marie M. et Porée P., "Traitement du signal et automatique : Traitement du signal et asservissements analogiques", Hermann, 2000.

## Contacts

***Contacts*** *(2000 characters)*

Kidiyo KPALMA

## Other information

***Other information***

Intended audience : 3EII, 3GPM

| **Nom de la matière : Allemand** | **Code EC: EC-HUMF05-ALL** |
|---|---|
| **Volume horaire total par étudiant: 21heures** | **Nombre crédits ECTS :** |
| | 1,5 ECTS |
| **Responsable(s) : Cecile Hölzner-Jacques** | |

## Généralités

***Objectives, aims*** *(2000 caracters)*

Targeted skills:
Mastering a foreign language
Ability to communicate/progress/work in an international and intercultural context
Cultural openness
Communicating/interacting with others, working in a team
Working autonomously
German Level A1: Acquiring the basics of the German language. Be able to understand and hold a simple conversation about everyday life.
German Level A2-B1: Be able to communicate in German, acquire intercultural skills, demonstrate cultural openness. Work in a group on a project, speak up.
German Level B2/C1: Work in a group on a project, speak up, communicate in German, acquire intercultural skills, acquire basic scientific and technical vocabulary. Ask questions, become a responsible engineer, think about the world of tomorrow in an international context.

***Description*** *(2000 caracters)*

*Practising written and oral comprehension. Developing oral expression through exercises in small groups and whole-class discussions. Acquire everyday German vocabulary for daily life and professional life.*
*German Level A2-B1: Grammar revision, consolidate knowledge. Practise reading and listening comprehension using multimedia resources. Develop oral expression skills through small group exercises, presentations or whole class discussions. Prepare students to progress independently in languages. Preparing mobility.*
*German B2-C1: Practise reading and listening comprehension using multimedia resources. Acquire technical and scientific German vocabulary. Develop oral expression skills through small group exercises, presentations or whole class discussions. Use and improve German language skills in the context of a project. Preparing mobility.*

***Pré-requis*** *(2000 caractères)*

*German Level A1: none*

*German Level A2-B1: mastery of the basics of German (A2), second foreign language at secondary school (B1)*

*German B2-C1: good language skills, first foreign language or bilingual class at secondary school, ABIBAC*

## Modalités du cours et des évaluations

***Langue d'enseignement*** *(2000 caractères)*

Cliquez ou appuyez ici pour entrer du texte.

***Modalités d'enseignement*** *(500 caractères)*

1.5–2 hours of classes per week.
IAutonomous study time: 14-16 hours Total: 35 hours. Students are encouraged to read German newspapers regularly and watch videos, series and films, in addition to the work assigned between sessions.

***Volume horaire par type de cours :*** *(2000 caractères)*

*CM :*
*TD : 19 hours for the first cycle, 21 hours for the second cycle.*
*TP :*
*PR :*
*CONF :*
*Autres :*
*Autonomous study time: 14-16 hours*
*7 hours of optional project work in the second cycle*

***Modalités d'évaluation / coefficient*** *(200 caractères)*

Continuous assessment, oral examination

## Bibliographie

***Bibliographie*** *(2000 caractères)*

MOODLE course page
Deutsch für Ingenieure, Maria Steinmetz/Heiner Dintera, VDI/Springer Vieweg, 2014
Deutsch Perfekt, periodical
online: Deutsche Welle, ARD, Der Spiegel, FAZ, die Zeit, das Handelsblatt, VDI (Verein Deutscher Ingenieure), Nachrichten, ZDF Logo
French-German dictionary le visuel, Editions de la Martinière
Übungsgrammatik für die Mittelstufe Hueber-Verlag
Na also! Waltraud Legros, Ellipses
multimedia resources

## Contacts

***Contacts*** *(2000 caractères)*

Cecile Hölzner-Jacques : cecile.holzner-jacques@insa-rennes.fr

## Autres

***Autres informations***

Cliquez ou appuyez ici pour entrer du texte.

| ENGLISH | Code EC: EC-HUM05-ANGL |
|---|---|
| Total number of hours per student : 28h | ECTS : 2 |
| | |
| Supervisor : Philippe LE VOT | |

## General information

**Objectives and Purposes**

**General Objectives:**

Improve the ability to express oneself, understand, and interact in everyday situations, with a particular emphasis on professional and social life.

**Linguistic Objectives:**

Achieve or strengthen the B2 level (required for the validation of the engineering degree and defined by the CEFR).

Cliquez ou appuyez ici pour entrer du texte.

**Description**

- **Action-oriented approach to language learning:** Learning by doing: speaking and listening, writing documents while mobilizing the ability to solve, construct, demonstrate, and persuade.
- Express oneself with precision through rigorous use of syntax and phonology. Activities involving creativity and responsiveness, such as debates, role-playing, individual oral presentations with PowerPoint or Canva support, and projects, will be based on current, scientific, and societal topics.
- Development of specific skills related to the professional world:
    - Writing emails and abstracts linked to the EPA (Engineering Problem Analysis) course.
    - Notions of interculturality.
    - Sustainable development.

**Prerequisites**

A good mastery of the STPI program is essential: B1/B2 level.

## Course and Evaluation Modalities

**Language of Instruction**

English

**Teaching Methods**

The classes are two hours long and take place in rooms equipped with projectors and sound systems. We also have two multimedia language labs and a Computer Resource Center to provide students with a stimulating teaching environment.

- Educational resources include press articles, audio, and video documents from the web.

- Regular personal work is required. Students are expected to remain curious and continue practicing beyond the classroom.

**Hours by Course Type**

- **Lectures (CM):**
- **Tutorials (TD):** 28 hours (14 sessions of 2 hours each)
- **Practical Work (TP):**
- **Research Projects (PR):**
- **Conferences (CONF):**
- **Others:**

**Evaluation Methods / Coefficient**

1 in-class presentation + 1 continuous assessment grade (average of different graded assignments)

## Bibliography

**Bibliography**

Any English-language materials, whether technical or otherwise.

## Contacts

***Contacts***

plevot@insa-rennes.fr

| **Subject name: CHINESE LV2-LV3** | **Code EC: EC-HUMF05-CHI** |
|---|---|
| **Number of hours per student: 21 hours** | **ECTS Number: 1,5** |
| | |
| **Reference Teacher: Cécile Hölzner-Jacques** | |

## Generalities

***Objectives*** *(2000 characters)*

Targeted skills:

- Mastering a foreign language
- Ability to communicate/develop/work in an international and intercultural context
- Cultural openness
- Communicating/interacting with others, working in a team
- Working independently
- Acquiring the basics of the Chinese language, essential structures and vocabulary
- Comprehension, expression, pronunciation
- Using the language in everyday contexts.

***Description*** *(2000 characters)*

Oral skills:
Corrective phonetics (pinyin system),
Listening to and analysing simple texts and complex sentences,
Oral exercises (learners with each other / learners with teacher)
Learning new characters (pronunciation and tone accentuation).

Written skills:
Theme/version
Written production of simple texts and complex sentences,
Learning and reinforcement of grammatical mechanisms and vocabulary for oral and written production,
Learning new characters (stroke order, keys),
Reading and analysis of texts, commentary on texts.

***Requirements*** *(2000 characters)*

Chinese 1: None
Chinese 2: Completion of Chinese 1
Chinese 3: Completion of Chinese 2

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

***Teaching methods*** *(500 characters)*

Reading lesson texts (in characters), rewriting new characters, exercises applying grammar points, lexical and morphological points, theme and version exercises...

***Number of hours per course type:*** *(2000 characters)*

*CM:*
*TD: 1h30*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

S1: Final mark
S2: Oral examination

## Bibliography

***Bibliography*** *(2000 characters)*

1. Chinese as spoken in China, Bernard Allanic, Presses Universitaires de Rennes, 2009
2. Contemporary Chinese, WU Zhongwei, Sinolingua, 2010
3. Experiencing Chinese, ZHANG Rumei, AI Xin, Higher Education Press, 2006
Chinese Language Method (Second Level), Zhitang Yang-Drocourt - Liu Hong – Fan Jianmin
Short Stories for Learning Mandarin Chinese, Zhang Xiaoli, 2025
Standard Course HSK Workbook, Jiang Liping
Other tools will complement these basic textbooks to provide students with a wide range of practical exercises.

## Contacts

***Contacts*** *(2000 characters)*

## Other information

***Other information***

Learning Chinese isn't just about tones and characters. It's about connection — to a culture, to people, and to the stories that make language come alive.

| **Subject name: PHYSICAL EDUCATION (EPS) SEMESTER 5** | **Code EC: EC-HUM05-EPS** |
|---|---|
| **Number of hours per student: 24H** | **ECTS Number: 1** |
| | |
| **Reference Teacher: Gérard VAILLANT Yvan HINAULT Maïté LOSCHETTER** | |

# Generalities

***Objectives*** *(2000 characters)*

**Aims**
The program aims to contribute, through the practice of Physical, Sports, and Artistic Activities, to the education and development of future citizens. It seeks to foster individuals who are capable of managing their present and future health, communicating effectively, participating actively in group dynamics, demonstrating innovation, and showing adaptability in various contexts.
**Learning Objectives**
Upon completion, learners should be able to:

1. Manage their own learning and training processes in a structured and reflective manner.
2. Engage in and take responsibility for the organization and management of a group, a structure, or a collective project.
3. Take charge of their physical, mental, and social health as an ongoing process of well-being and self-regulation.

***Description*** *(2000 characters)*

This course aims to develop students' motor, personal, social, and methodological competencies through the practice of physical, sports, and artistic activities. It fosters autonomy, adaptability, creativity, and responsibility in both individual and collective contexts.
**Motor and Cultural Competencies:** Master the technical and tactical fundamentals of the chosen activity. Adapt to varying play conditions, environments, and performance spaces. Develop specific physical qualities (endurance, flexibility, strength, speed) and psychological resources (focus, perseverance, stress management, confidence).
**Personal Competencies:** Take responsibility for one's long-term health and safety. Manage emotions and stress with self-control. Demonstrate innovation and creativity in practice. *Semester 5 focus:* comprehend the physiological principles for maintaining good health (preparation for effort, recovery, and regulation of exertion); manage emotions and stress during opposition, competition, performance, or uncertain situations
**Interpersonal and Social Competencies:** Work effectively in teams—listen, communicate, motivate, and lead. Adopt an eco-citizen approach by respecting others, oneself, the environment, and equipment. *Semester 5 focus:* Train one's peers, demonstrate empathy, altruism, and leadership; Integrate into a team and contribute to its dynamism
**Methodological Competencies:** Manage complex projects by setting objectives, planning, and evaluating outcomes. Make informed decisions through observation, reflection, and feedback. *Semester 5 focus:* Commit to a learning project (evaluate one's initial level, identify areas for progression, gather information, and self-assess). Plan practice to achieve realistic goals

***Requirements*** *(2000 characters)*

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## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Through original and varied situations, this course engages all of the student's resources — motor, cognitive, relational, emotional, and informational.
Through action and experience, students are confronted with complex problem-solving and decision-making processes.
This practice encourages students to take autonomous responsibility for their own health, understood as a state of well-being requiring continuous regulation. It also contributes to preventing risky behaviors, reducing sedentary lifestyles, and promoting social integration.
Enjoyment serves as a key source of motivation, ensuring sustained engagement in both practice and learning

***Number of hours per course type:*** *(2000 characters)*

*CM:*
*TD: 20*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

**Assessment**
Students are evaluated on their participation, progress, and mastery of the competencies developed throughout the cycle.
**Grading:**

- 10 points for motor and cultural competencies.
- 5 + 5 points for two additional competencies selected by the instructor from personal, interpersonal and social, or methodological competencies.

## Bibliography

***Bibliography*** *(2000 characters)*

Cliquez ou appuyez ici pour entrer du texte.

## Contacts

***Contacts*** *(2000 characters)*

Cliquez ou appuyez ici pour entrer du texte.

## Other information

***Other information***

Cliquez ou appuyez ici pour entrer du texte.

| Nom de la matière : Spanish | Code EC: EC-HUMF05-ESP |
|---|---|
| Volume horaire total par étudiant: 21h | Nombre crédits ECTS : |
| | 1,5 ECTS |
| Responsible(s) : Marine Amargos Guilleray | |

# Généralités

***Objectifs, finalités*** *(2000 caractères)*

**1 – Beginner Level:**
Establish the grammatical and linguistic foundations of the Spanish language. Introduce students to Spanish and Latin American cultures. Be able to produce simple sentences related to everyday topics.

**2 – Intermediate Level:**
Maintain and strengthen linguistic skills, and deepen cultural knowledge (Hispanic culture, Spanish and Latin American civilization, social issues).

- Know how to manage a team around a project.
- Be able to integrate into a multicultural environment.

Be capable of taking into account the social, environmental, technological, and economic

**3 – Advanced Level:**
Consolidation of linguistic skills and deepening of cultural knowledge (Hispanic culture, Spanish and Latin American civilization, social issues).

- Know how to manage a team around a project.
- Be able to integrate into a multicultural environment.
- Be capable of taking into account the social, environmental, technological, and economic challenges of Spanish-speaking countries.

- challenges of Spanish-speaking countries.

***Description***

Speaking and writing skills, listening and reading comprehension.

***Pré-requis*** *(2000 caractères)*

**Spanish A1:** None
**Spanish A2:** Must have A1 level
**Intermediate Spanish:** Must have B1 level
**Advanced Spanish:** Must have B2 level

## Modalités du cours et des évaluations

***Langue d'enseignement*** *(2000 caractères)*

Spanish

***Modalités d'enseignement*** *(500 caractères)*

Face-to-face tutorials

***Volume horaire par type de cours :*** *(2000 caractères)*

*CM :*
*TD :* 21 hours /semester
*TP :*
*PR :*
*CONF :*
*Autres :*

***Modalités d'évaluation / coefficient*** *(200 caractères)*

Continuous assessment- Coefficient 1,5

## Bibliographie

***Bibliographie*** *(2000 caractères)*

"La grammaire active de l'espagnol", le livre de poche. Collection Les langues modernes + "El arte de conjugar en español" -Hatier+ "Passez-moi l'expression en espagnol", Belin + "El español en la prensa", Belin

## Contacts

***Contacts*** *(2000 caractères)*

Marine Amargos Guilleray : marine.amargos@insa-rennes.fr

## Autres

***Autres informations***

Cliquez ou appuyez ici pour entrer du texte.

| **Subject name: French foreign language** | **Code EC: EC-HUMF05-FLE** |
|---|---|
| **Number of hours per student: 21 hours (or 2 x 21 hours for the Exchange programme)** | **ECTS Number: 1,5** |
| | 3 credits for the Exchange |
| **Reference Teacher: FOURE Dominique** | |

# Generalities

***Objectives*** *(2000 characters)*

The various activities in the FLE and FOS (French for Specific Purposes) programme aim to develop optimal language proficiency and the use of language as a cultural and intercultural vehicle, a tool for work and communication adapted to the context. Students will develop their autonomy through group work and individual work.
Targeted skills/humanities (SHS): ▪ Knowing oneself, managing oneself physically and mentally▪ Working, learning and developing independently▪ Interacting with others, working in a team▪ Demonstrating creativity, innovation and initiative▪ Acting responsibly in a complex world▪ Developing in a professional and social environment▪ Working in an international and intercultural
context

***Description*** *(2000 characters)*

Level A1/A2
1- Language, culture and communication: Help learners feel comfortable in all everyday situations. Language learning is organised around observing how the language works, practising a variety of activities in class and carrying out projects in real or simulated contexts to promote autonomy.

2- Scientific and academic French: Facilitate integration into scientific studies, student life and social life.

Level B1/B2
1- Language, culture and communication: Help learners express themselves fluently in writing and orally on a wide range of general and specialised topics.
Key themes: Studying and living in France/ Understanding and exercising critical thinking in various fields: current affairs/history/art/science and technology, urban planning, the environment, etc.
Social sciences and humanities: socio-ecological transition, business and innovation.

2- Preparation for DELFB2 or DALFC1, compulsory French language diploma required to obtain an engineering degree**.**

Level B2/C1
1- Interculturality - Study of European and international current affairs and in-depth exploration of issues related to SHS
- Communicate and interact
- Decode intercultural references in speech, attitudes and behaviour
- Put one's values, beliefs and behaviour into perspective
- Integrate cultural diversity into group work

2- Professional French
- Prepare effectively for finding an internship or job
- Understand complex issues within the company
- Master societal, political, economic, environmental, ethical and philosophical aspects, etc.
- Act responsibly in the professional world

***Requirements*** *(2000 characters)*

None
Courses range from beginner to advanced levels.
Each student will be placed in a group corresponding to their level and needs
- based on a test at the beginning of the year for new entrants
- based on the level acquired and assessed the previous year for existing students

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

Learners are trained and assessed on the five skills recognised by the Common European Framework of Reference for Languages (CEFR).

***Teaching methods*** *(500 characters)*

Language, communication and intercultural skills are tailored to the target level and the needs of the group (indicated in the group code).

***Number of hours per course type:*** *(2000 characters)*

*CM:*
*TD:*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

Continuous assessment in line with the skills to be validated: CE, CO, PE, PO
INSA student programme: 21 hours/semester (1.5 credits)
Exchange programme: Students studying for a semester at INSA Rennes have the opportunity to obtain a total of 4 credits
- 1 Language Project (7 hours/semester) = 1 ECTS
- 2 FLE courses (2X21 hours/semester) e.g. Language, Culture and Communication + Interculturality

## Bibliography

***Bibliography*** *(2000 characters)*

Materials selected by the teacher based on the level and objectives to be achieved

## Contacts

***Contacts*** *(2000 characters)*

Dominique.foure@insa-rennes.fr

## Other information

***Other information***

https://fle.insa-rennes.fr/

| Subject name: Gestion des risques | Code EC: EC-HUM05-RISQ |
|---|---|
| Number of hours per student: 22h | ECTS Number: 1,5 |
| | |
| Reference Teacher: Valérie HARDOUIN DUPARC | |

## Generalities

***Objectives*** *(2000 characters)*

Raising awareness that the environment in which an engineer operates is fraught with uncertainties and dangers. Engineers must nevertheless remain in control of their choices and actions within limits defined by acceptable risk in the current context of sustainable development and ecological transition.

***Description*** *(2000 characters)*

- Sulitest: A Sustainable Development Literacy Test assesses higher education students' level of knowledge regarding the 17 Sustainable Development Goals (SDGs).

- Conference on the Risk Society: Introduction to the concept of risk – evolution of risks and the changing relationship to risk (role of the engineer, procedures/freedoms, human error, controversies, etc.).

- Occupational Health and Safety Conference: Physical and psychological risks.

- INRS Training: Serious game in occupational health and safety (psychosocial risks, workplace accidents, occupational risk assessment, risk prevention, etc.).

***Requirements*** *(2000 characters)*

None

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

French

***Teaching methods*** *(500 characters)*

Hybrid training program alternating between in-person and online learning.
Self-study Sulitest
Introduction to engineers and their relationship to the 17 SDGs: 2 hours of lectures
Course on the social sector: 10 hours
Occupational Health and Safety Conference: 2 hours
Independent INRS training: 8 hours

***Number of hours per course type:*** *(2000 characters)*

*CM: 22h*
*TD:*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

1 score from the Sulitest (1/5 final grade)
1 score from the INRS modules (2/5 final grade)
1 score related to the course on the Risk Society (2/5 final grade)
Final grade

## Bibliography

***Bibliography*** *(2000 characters)*

Cliquez ou appuyez ici pour entrer du texte.

## Contacts

***Contacts*** *(2000 characters)*

valerie.hardouin-duparc@insa-rennes.fr

## Other information

***Other information***

Cliquez ou appuyez ici pour entrer du texte.

| Subject name: ITALIAN LV2-LV3 | Code EC: EC-HUMF05-ITA |
|---|---|
| Number of hours per student: 21h | ECTS Number: 1,5 |
| | |
| Reference Teacher: Cécile HÖLZNER-JACQUES | |

## Generalities

***Objectives*** *(2000 characters)*

Targeted skills:
Mastering a foreign language
Ability to communicate/develop/work in an international and intercultural context
Cultural openness
Communicating/interacting with others, working in a team
Working independently

Level 1 beginner: Introducing Italian language and culture, expressing ideas in writing and orally.
Level 2 advanced beginner: By the end of the course, students should be able to converse and write in Italian.
Level 3 intermediate: Give students the opportunity to explore topics related to art, civilisation, literature and cinema in greater depth.

***Description*** *(2000 characters)*

Oral expression and comprehension: reading the course material with phonetic and grammatical corrections with the teacher, reading the situations found in the text, watching films and reading literary texts and press articles.
Written expression and comprehension: doing the exercises in the text with particular attention to difficulties, summarising the situations without the text available and the films studied.

***Requirements*** *(2000 characters)*

Beginner level: none.
Advanced beginner level A2: must have attended the beginner Italian course.
Intermediate level B1/advanced level B2: must have a good knowledge of the Italian language.

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

Italian language

***Teaching methods*** *(500 characters)*

The course will cover:.
Grammar concepts;.
Exercises to understand basic linguistic mechanisms;.
Building vocabulary using keywords and translations;.
Presentations and discussions on given topics;.
Asking questions and knowing how to respond;.
Creating dialogues, stories, and discussions based on given keywords;
(All of this will be adapted to the average level of the course.)

1.5 hours of face-to-face lessons per week, 21 hours per semester.
Personal work: 14 hours Read the texts provided in the handouts; 7 hours create a dialogue or short story using the keywords provided and express yourself with them.

***Number of hours per course type:*** *(2000 characters)*

*CM:*
*TD: 21h*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

S1: Final mark
S2: Oral examination

## Bibliography

***Bibliography*** *(2000 characters)*

Loesher Archivio di Grammatica, https://italianoperstranieri.loescher.it/archivio-di-grammatica

Harraps, Italian Express Method, Vittoria Bowles and Paul Coggle

Texts taken from Italian novels, poems, essays, daily and weekly newspapers, and films by famous directors

## Contacts

***Contacts*** *(2000 characters)*

Paolo Procesi: Paolo.Procesi@insa-rennes.fr

## Other information

***Other information***

**INSA RENNES : 2025/2026**

| Subject name: Japanese | Code EC: EC-HUMF05-JAP |
|---|---|
| Number of hours per student: | ECTS Number: 1.5 |
| | |
| Reference Teacher: Cécile Hölzner-Jacques | |

## Generalities

***Objectives*** *(2000 characters)*

Targeted skills:

Mastering a foreign language
Ability to communicate/develop/work in an international and intercultural context
Cultural openness
Communicating/interacting with others, working in a team
Working independently

Beginner level (A1):

-Awareness of specific features (phonetics, syntax)
-Discovering Japanese culture, traditions and customs
-Learning two writing systems (Hiragana and Katakana)
-Mastering spoken Japanese in everyday situations.

Intermediate level (A2):

- Introduction to ideograms (30-60 kanji)
- Reading simple texts (using manga, etc. )
- Writing simple texts
- Mastering spoken Japanese in everyday situations.

Advanced level (B1, B2):

- Learning kanji (60-200)
- Acquiring four skills (reading, listening, writing and speaking) for travelling and studying in Japan.

***Description*** *(2000 characters)*

Description (2000 characters)
Level 1 beginner (A1):
- Improvement of Hiragana and Katakana
- Mastery of Japanese in everyday situations (Marugoto A1).
Lesson 3: Me_ Nice to meet you
Lesson 4: Me_ There are three of us in my family
Lesson 5: Food_ What kind of food do you like?
Lesson 6: Food_ Where shall we eat?
Lesson 7: The house_ It's a three-room flat
Lesson 8: The house_ What a beautiful room you have!

Lesson 9: Everyday life_ What time do you get up?
Lesson 10: Everyday life_ When are you available?
Level 2 Intermediate (A2):
- Continuation of the Marugoto textbook (Lessons 11 to 18)
- Learning new basic grammar points (past tense, potential tense, volitional tense, etc.)
- Improving and discovering new particles (で、に、から/まで, etc.)
- Discovering and learning 30-60 kanji
- Reading and writing simple texts
- Learning to communicate in everyday situations.

Intermediate level (B1, B2):

- Reading manga
- Acquiring four skills (reading and listening comprehension, writing and speaking).

***Requirements*** *(2000 characters)*

Beginner level A1: none.
Beginner level A2: completion of beginner level A1.
Intermediate/advanced level: completion of beginner levels A1/A2.

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

***Teaching methods*** *(500 characters)*

Teaching takes the form of tutorials. Each session consists of an explanation of concepts, which are then illustrated with examples and conversation exercises in which the students participate.

***Number of hours per course type:*** *(2000 characters)*

*CM:*
*TD:21h*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

A1
S1 and S2: Final mark

A2 and B1
S1: Final mark
S2: Oral examination

## Bibliography

***Bibliography*** *(2000 characters)*

Level 1 beginner (A1): Margoto A1, Japan Foundation, 2013, Japan.

Level 2 beginner (A2): Margoto A2, Japan Foundation, 2014, Japan.

## Contacts

***Contacts*** *(2000 characters)*

## Other information

***Other information***

| Nom de la matière : Language Project | Code EC: EC-HUMF05-LV2P |
|---|---|
| Volume horaire total par étudiant: 7 hours /semestre | Tous semestres |
| | Nombre crédits ECTS : 0,5 |
| Responsable(s) : C.Hölzner, M.Amargos, D.Fouré | |

## Généralités

*Objectifs, finalités (2000 caractères)*

German Project: Mastering a foreign language Ability to communicate/develop/work in an international and intercultural context Cultural openness Communicating/interacting with others, working in a team Working independently Using and improving German language skills within the framework of a project.
Spanish Project: 1- Prepare for the Spanish language certification: the DELE Spanish Project 2- Facilitate oral expression and build students' confidence before studying abroad in a Spanish-speaking country - Acquire fluency and enjoy expressing oneself in Spanish without being constrained by grammar rules.
French as a Foreign Language (FLE) Project: 'International Student Short Film Festival' in conjunction with the Interculturality course. An educational outing (or field study) is proposed to study an issue in social sciences and/or TSE that interests them. The aim is to produce an audiovisual report that may consist of interviews, particularly with experts and professionals, to address the issue on the programme. These meetings will enable them to exchange views and refine their analysis. Finally, students will be asked to present their findings to the public. The reports will be screened at an International Festival on an intercultural theme studied in class.

*Description (2000 caractères)*

German Project:
- Preparation for the Goethe Institute's 'Zertifikat' exam, level B2 or C1 (external certification)
- Thematic courses: cultural awareness
- Project related to the industrial world: international economics: Germany
- Preparation for mobility
- Preparation: study trip

Spanish Project:
Spanish Project 1
- Written and oral tests
- Written and oral work in preparation for the exam
Spanish Project 2
- Oral expression: debates on current affairs and discussions on the main concerns of students

FLE Project:
- Oral expression, confidence in front of an audience
- Creation of an audiovisual report
- Preparation for oral expression to obtain the DELFB2/DALFC1

***Pré-requis*** *(2000 caractères)*

***German Project: German Level B2***

***Spanish Project: Baccalaureate Level***

***FLE Project: Levels B1 to C1***

## Modalités du cours et des évaluations

***Langue d'enseignement*** *(2000 caractères)*

Cliquez ou appuyez ici pour entrer du texte.

***Modalités d'enseignement*** *(500 caractères)*

German Project: 7 hours/semester in class  10 hours of independent and group work Class hours are intended to review students' independent work and project progress. Most of the work is done outside of class, preferably in groups of 2 or 3 students (exception: 'Zertifikat' project with methodological assistance during class).
Spanish Project: Regular training with DELE workbook

***Volume horaire par type de cours :*** *(2000 caractères)*

German Project: 7 hours of tutorials per semester
Spanish Project: 7 hours of tutorials per semester
FLE Project: 7 hours of tutorials per semester

**Modalités d'évaluation :**

German Project: Semester 1: Final Mark - Semester 2: Final Mark

Spanish Project: Written

FLE Project: Oral/Public presentation as part of an international short film festival

Coefficient: 0.5 (1 for Erasmus exchange students)

## Bibliographie

***Bibliographie*** *(2000 caractères)*

German Project: Zertifikat Project: Goethe-Institut exam papers (B2 and C1) in the INSA library
Spanish Project: Books related to the DELE

## Contacts

***Contacts*** *(2000 caractères)*

Cliquez ou appuyez ici pour entrer du texte.

## Autres

***Autres informations***

Cliquez ou appuyez ici pour entrer du texte.

| **Subject name: Intercultural Modul** | **Code EC: EC-HUMF05-LV2-OI** |
|---|---|
| **Number of hours per student: 21h par semestre** | **ECTS Number: 1.5** |
| | |
| **Reference Teacher: Cécile Hölzner-Jacques** | |

## Generalities

***Objectives*** *(2000 characters)*

The course aims to develop students' fluency in both written and spoken communication while fostering philosophical reflection. It not only enhances reading, listening, and expressive skills but also cultivates critical thinking and confident public speaking. Particular emphasis is placed on rigorous reasoning, clear argumentation, and the ability to connect philosophical inquiry with linguistic precision.

***Description*** *(2000 characters)*

Each semester is devoted to a specific philosophical concept. For the first semester of 2025, the theme is *violence*.
The course is divided into two distinct parts. The first part focuses on language development. Each session begins with a warm-up activity designed to encourage oral participation and group interaction. Students engage in creative writing exercises — such as recounting a memory or imagining a story — to stimulate imagination and improve expressive skills. Regular reading of newspaper articles helps strengthen reading comprehension, pronunciation, and vocabulary.
The second part of the course is dedicated to project work, which constitutes the final graded assignment. Through these projects, students synthesize language practice and philosophical reflection, applying both to a concrete and personally meaningful topic.

***Requirements*** *(2000 characters)*

Students should be able to express themselves in English with a reasonable degree of confidence. Mistakes in grammar or pronunciation are not a problem, but a solid foundation in vocabulary and basic grammar is necessary to follow the course. The class usually includes both bilingual students and others with more limited proficiency, so the activities are designed to allow everyone to participate meaningfully and progress at their own pace.

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

The course is conducted primarily in English, although French may occasionally be used for clarification or discussion when necessary.

***Teaching methods*** *(500 characters)*

This is not a traditional lecture-based course but an interactive class built around students 'interests. It is designed as a space for expression and reflection. Written and video materials are regularly used, and students are encouraged to take an active role through role-playing activities and short theatrical performances.

***Number of hours per course type:*** *(2000 characters)*

*CM:*
*TD: 20 h par semestre*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

Assessment is based on attendance and participation, but mainly on a creative end-of-term project demonstrating linguistic skills and critical thinking, completed individually or in groups

## Bibliography

***Bibliography*** *(2000 characters)*


**Books**

Camus, Albert. *The Stranger*. Translated by Stuart Gilbert. New York: Vintage Books, 1942.
Dostoevsky, Fyodor. *Crime and Punishment*. Translated by Constance Garnett. New York: Modern Library, 1866.
Flock, Elizabeth. *The Furies: Women, Vengeance, and Justice*. New York: Harper, 2024.
Malm, Andreas. *How to Blow Up a Pipeline: Learning to Fight in a World on Fire*. London: Verso Books, 2021.
Manne, Kate. *Down Girl: The Logic of Misogyny*. Oxford: Oxford University Press, 2017.
Motz, Anna. *If Love Could Kill: The Myths and Truths of the Women Who Commit Violence*. New York: Knopf, 2024.
Thoreau, Henry David. *Civil Disobedience*. Boston: David R. Godine, 1849.
Zinn, Howard. *A People's History of the United States*. New York: Harper & Row, 1980.

**Articles and Essays**

King, Martin Luther, Jr. "Letter from Birmingham Jail." April 16, 1963.
Schwartz, Alexandra. "When Women Commit Violence." *The New Yorker*, 2024.
Zinn, Howard. "The Problem is Civil Obedience." Speech delivered at Johns Hopkins University, Baltimore, November 1970.

**Films and Television**

Bong Joon-ho, dir. *Parasite*. Seoul: Barunson E&A, 2019.
Coen, Joel, and Ethan Coen, dirs. *Fargo*. Los Angeles: PolyGram Filmed Entertainment, 1996.
Coen, Joel, and Ethan Coen, dirs. *No Country for Old Men*. Los Angeles: Miramax Films, 2007.
Demme, Jonathan, dir. *The Silence of the Lambs*. Los Angeles: Orion Pictures, 1991.
Fincher, David, dir. *Gone Girl*. Los Angeles: 20th Century Fox, 2014.
Fincher, David, dir. *The Girl with the Dragon Tattoo*. Culver City: Columbia Pictures, 2011.
Fincher, David, dir. *Zodiac*. Los Angeles: Paramount Pictures, 2007.
Gilligan, Vince, creator. *Breaking Bad*. Los Angeles: AMC, 2008–2013.
Kelly, Richard, dir. *Donnie Darko*. Los Angeles: Newmarket Films, 2001.
Lanthimos, Yorgos, dir. *The Killing of a Sacred Deer*. London: A24, 2017.
Lynch, David, and Mark Frost, creators. *Twin Peaks*. Los Angeles: CBS Television Distribution, 1990–1991, 2017.
Martin, Steve, and John Hoffman, creators. *Only Murders in the Building*. Los Angeles: Hulu, 2021–.
Miller, George, dir. *Furiosa: A Mad Max Saga*. Burbank: Warner Bros., 2024.
Miller, George, dir. *Mad Max: Fury Road*. Burbank: Warner Bros., 2015.
Penhall, Joe, creator. *Mindhunter*. Los Gatos: Netflix, 2017–2019.
Pizzolatto, Nic, creator. *True Detective*. Los Angeles: HBO, 2014.
Tarantino, Quentin, dir. *Kill Bill: Vol. 1* and *Kill Bill: Vol. 2*. Los Angeles: Miramax Films, 2003–2004.
Wan, James, dir. *Saw*. Santa Monica: Lions Gate Films, 2004

## Contacts

***Contacts*** *(2000 characters)*

## Other information

***Other information***

| **Subject name: Russian** | **Code EC: EC-HUMF05-RUS** |
|---|---|
| **Number of hours per student: 21h** | **ECTS Number: 1,5** |
| | |
| **Reference Teacher: Cécile HÖLZNER-JACQUES** | |

## Generalities

***Objectives*** *(2000 characters)*

Russian beginner : acquire A1 level
Russian intermediary : acquire A2/B1 level

***Description*** *(2000 characters)*

Acquisition of grammatical basis and commonplace vocabulary.
Training of the 5 skills, oral and written comprehension, oral and written expression, interaction.
The stress is put on written and oral communication, firstly in the frame of daily situations, then with a progressive introduction of other themes and opening on the professional communication.
Training with varied media (written, audio, video)
Individual exercices and works in groups, talks from the intermediate level on.
Grammar program depending on the level.
(Inter) cultural opening

***Requirements*** *(2000 characters)*

## Course requirements and assessments

***Teaching Language*** *(2000 characters)*

***Teaching methods*** *(500 characters)*

***Number of hours per course type:*** *(2000 characters)*

*CM:*
*TD: one hour -and-a-half courses per week in SUPELEc*
*TP:*
*PR:*
*CONF:*
*Autres:*

***Evaluation*** *(200 characters)*

Final grade (overseen by SUPELEC).

## Bibliography

***Bibliography*** *(2000 characters)*

To be seen with the teacher

## Contacts

***Contacts*** *(2000 characters)*

## Other information

***Other information***