Subject name : Conferences	**Code EC : GPM07-CONF**
Number of hours per student : 14h	**ECTS Number : 0.5**
Reference Teacher : LETOUBLON Antoine	

Generalities

Professionals from a wide range of companies hold conferences on the various career options open to students in the GPM department. The guest speakers describe their companies' engineering work and market structure. The aim is to help students in their choice of career.

Description *(2000 characters)*

Career guidance through conferences.

Requirements *(2000 characters)*

Cliquez ou appuyez ici pour entrer du texte.

Course requirements and assessments

Teaching Language *(2000 characters)*

french

Teaching methods *(500 characters)*

Attendance sheets for conferences.

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

CM : 14h
TD :
TP :
PR :
CONF :
Autres :

Evaluation *(200 characters)*

Signed attendance sheets.

Bibliography

Bibliography *(2000 characters)*

Cliquez ou appuyez ici pour entrer du texte.

Contacts

Contacts *(2000 characters)*

LETOUBLON Antoine

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name : Crystallography	**Code EC : GPM07-CRIS**
Number of hours per student : 24h	**ECTS Number : 3**
Reference Teacher : CASTANY Philippe	

Generalities

Objectives *(2000 characters)*

Understanding the concepts of crystallography.

Description *(2000 characters)*

- Reminders of geometric crystallography: direct lattice, motif, reciprocal lattice, Miller indices, close-packed structures and examples of structures.
- Stereographic projection: use in crystallography, representation of directions and planes, Wulff net, operations (angle measurement, rotations).
- Symmetries in crystals: symmetry operations and elements, point groups, crystal classes, crystal systems, Bravais lattices, space groups, international tables of crystallography.

Requirements *(2000 characters)*

General knowledge of the structure of materials (bachelor level).

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

lectures and tutorials

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

CM : 12h
TD : 12h
TP :
PR :
CONF :
Autres :

Evaluation *(200 characters)*

A 2-hour written exam.

Bibliography

Bibliography *(2000 characters)*

- M. De Graef, M.E. McHenry, Structure of materials, Cambridge University Press (2007).
- D. Swarzenbach, G. Chapuis, Cristallographie, Presses Polytechniques et Universitaires Romandes, Lausanne (2006).
- J.J. Rousseau, Cristallographie geòomeòtrique et radiocristallographie, Dunod, Paris (2000).

Contacts

Contacts *(2000 characters)*

CASTANY Philippe

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name : Semiconductors	**Code EC : GPM07-DISP**
Number of hours per student : 32h	**ECTS Number : 3.5**
Reference Teacher : FOLLIOT Hervé	

Generalities

Objectives *(2000 characters)*

Basics of the operational principle of electronic devices.

Description *(2000 characters)*

Lesson 1: Semiconductor physics (Reminder), transport phenomena in semiconductors.
Lesson 2: PN junction diodes.
Lesson 3: the bipolar transistor (NPN, PNP, Ebers-Moll equations, high frequency properties).
Lesson 4: the metal-semiconductor diode (Schottky diode).
Lesson 5: Metal-Insulator-Semiconductor structures, charge transfer devices (CCD).
Lesson 6: MOSFET devices.

Requirements *(2000 characters)*

Basics of semiconductor and junction physics.

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

A homework of one to two hours per lesson hour is requested.

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

CM : 18h
TD : 14h
TP :
PR :
CONF :
Autres :

Evaluation *(200 characters)*

Grading is based on continuous assessment (1/3rd) and final assessment (2h written exam, 2/3rd of the grade). The continuous assessment grade itself is based on a 1h written exam and a personal work in the course of the semester.

Bibliography

Bibliography *(2000 characters)*

- H. Mathieu, Physique des semiconducteurs et des composants électroniques. Masson 1997.
- S.M.Sze, Physics of semiconductor Devices. 2nd Ed. A. Willey. Intersci. Publ. 1981.
- Donald A. Neamen, Semiconductor Physics And Devices, 3rd Ed, Mcgraw Hill 2003.

Contacts

Contacts *(2000 characters)*

FOLLIOT Hervé et PERRIN Mathieu

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Nom de la matière : Structural analyses by X-ray diffraction and scattering	**Code EC: GPM07-DRX**
Volume horaire total par étudiant: 27h	**Nombre crédits ECTS : 3**
Responsable(s) : Amélie FILLON	

Généralités

Objectifs, finalités *(2000 caractères)*

General concepts regarding interferences and diffraction phenomena in crystals.
Introduction to the characterization techniques of X-ray crystallography.
Applications to the characterization of materials (bulk materials and thin films).
Exploration of the capabilities offered by large-scale facilities (synchrotron X-ray radiation).

Description *(2000 caractères)*

Lecture by A. Fillon: Production of X-rays. Interaction of X-rays with matter. Atomic scattering and diffraction by a crystal. Laue method, powder method, and rotating-crystal method. Identification of crystalline structures, determination of lattice parameters, influence of grain size and crystallographic orientations. Diffracted intensity.

Lecture by O. Durand: X-ray diffraction and reflectometry in thin films: thickness measurements, micro-strain analysis, $\sin^2\psi$ method. Applications to concrete cases drawn from experiences acquired in industrial laboratory.

Lecture by D. Thiaudière: Introduction to synchrotron X-ray radiation. Overview of basic and combined characterization techniques and associated technical developments. Applications.

Pré-requis *(2000 caractères)*

Basic concepts of crystal symmetry related to the course entitled "cristallography".

Modalités du cours et des évaluations

Langue d'enseignement *(2000 caractères)*

French

Modalités d'enseignement *(500 caractères)*

Lectures and tutorials

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

CM : 17h lectures
TD : 10h tutorials
TP : (8h practical sessions during semester S8, including in UE TPMA)

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

2h written exam

Bibliographie

Bibliographie *(2000 caractères)*

- C. ESNOUF, Caractérisation microstructurale des matériaux, Presses polytechniques et universitaires romandes
(2011)
- L.V. AZAROF, Elements of X-Ray Crystallography, McGraw-Hill Book Company, New-York, London (1968)
- H.P. KLUG, L.E. ALEXANDER, X-Ray Diffraction Procedures, J. Wiley and Sons Inc., New-York, London (1967,1974), ISBN 0.471.49369.4
- A. TAYLOR, X-Ray Metallography, J. Wiley and Sons Inc., New-York, London (1961)
- A. GUINIER, Théorie et Technique de la Radiocristallographie, Dunod, Paris (1964)
- J.P. EBERHART, Analyse structurale et chimique des matériaux, Dunod, Paris (1997), ISBN 2.10.003367.0
- J. PROTAS, Diffraction des Rayonnements : Introduction aux concepts et méthodes, Dunod, Paris (1999), ISBN 2.10.004144.4
- http://escher.epfl.ch/eCrystallography/

Contacts

Contacts *(2000 caractères)*

Amélie Fillon

Autres

Autres informations

Subject name: Electronic Functions	**Code EC: GPM07-ELEC**
Number of hours per student: 63	**ECTS Number: 4**
Reference Teacher: BOYER Soline	

Generalities

Objectives *(2000 characters)*

From a basic knowledge of the operation of electronic components developed during 3SGM year, the objective of this course is the study of analog electronic functions for measurement and signal transmission.

Description *(2000 characters)*

First part: analog electronic functions for signal generation and transmission: study of oscillators, phase locked loop and classic systems for signal modulation

Second part: Project (group of 4 students, 8 weeks): This project aims at the complete development of an analog electronics setup functions for measurement (Spectrum analyzer, quartz balance, lock-in amplifier) or signal transmission (Frequency synthesizer, amplitude or frequency demodulator).

Requirements *(2000 characters)*

Filtering: passive and active filters with operational amplifiers / Amplification: transistor amplifier circuits (3GPM Electronics) / Concepts of series and Fourier transform (3GPM Signal Processing) / Electrical signal measurement chain (3GPM Instrumentation) / Modeling and characteristics of a control system (3GPM Automation)

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

Theory and exercises during 6 weeks (2 hours per week)
3 hours per week practical work or project

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

CM: 12h
TD: 14h
TP: 12h
PR: 16h
TA : 9h

Evaluation *(200 characters)*

Two-hour written exam.
Mark for Practical Work: one third - continuous appraisal (reports done in pairs); two thirds: project evaluation (demonstration, report, oral defense)

Bibliography

Bibliography *(2000 characters)*

1. Christophe More, Transmission de signaux, Tec & Doc
2. Microelectronic circuits. A.D. SEDRA and K.C. SMITH, Saunders Collège Publishing.
3. Electronic principles, A.P. Malvino, D.J. Bates, Dunod.

Contacts

Contacts *(2000 characters)*

BOYER Soline

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name : Mechanics and forming of materials	Code EC : GPM07-MECA
Number of hours per student : 32h	ECTS Number : 3.5
Reference Teacher : FRANCILLETTE Henri & GORDIN Doïna	

Generalities

Objectives *(2000 characters)*

To understand the mechanical behaviour of metals and their forming from their structural characterization.

Description *(2000 characters)*

Structural defects in metals, mechanisms of deformation, elasticity, plasticity, relationships between structural characterization and mechanical properties, forming processes of metallic materials.

Requirements *(2000 characters)*

Structural metallurgy.

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

Lessons and Exercices

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

CM : 24h
TD : 8h
TP :
PR :
CONF :
Autres :

Evaluation *(200 characters)*

A 1.30-hour written exam and an oral presentation.

Bibliography

Bibliography *(2000 characters)*

J. Philibert, A. Vignes, Y. Combrade, Métallurgie - du minerai au métal, Masson, Paris, 1997, ISBN 2.225.82978.01.

Contacts

Contacts *(2000 characters)*

FRANCILLETTE Henri & GORDIN Doïna

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name : Modelling	Code EC : GPM07-MOD
Number of hours per student : 14h	ECTS Number : 2
Reference Teacher : PEDESSEAU Laurent	

Generalities

Objectives *(2000 characters)*

- The basic pedagogical support is aimed for the understanding of the finite element (FE) method used through different code largely spread in industry such as Comsol, Silvaco and Catia (Cao).
- Assimilate the basic concepts of F.E. to acquire skills on F.E. codes.
- Use the F.E. method to solve different problems in material sciences, solid states, fluid mechanics, quantum mechanics, heat flux, electromagnetic, semiconductor, polymer.

Description *(2000 characters)*

Introduction, Generalities, Variational principle, introduction to nonlinear problem.

Requirements *(2000 characters)*

Algebra, Matrix calculation, numerical analysis, simulation, material sciences, metallurgy, semiconductor, electromagnetism, heat transfer, fluid mechanic, quantum mechanics.

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

30 hours of personal time

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

CM : 2h
TD :
TP : 12h
PR :
CONF :
Autres :

Evaluation *(200 characters)*

Proceeding of the training in S7.

Bibliography

Bibliography *(2000 characters)*

- Zienkiewicz : La Méthode des Eléments Finis. Edisciences.
- Gallagher : Introduction au calcul par Eléments Finis. Editions Pluralis.
- Reddy : An Introduction to finite element method Mac Graw Hill.
- K.J. Bathe : Finite Element Procedures in Engineering Analysis. Prentice et Hall.

Contacts

Contacts *(2000 characters)*

Cliquez ou appuyez ici pour entrer du texte.

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name : Design of experiments	Code EC : GPM07-PLAN
Number of hours per student : 12h	ECTS Number : 1.5
Reference Teacher : LEGUESDRON Patrice	

Generalities

Objectives *(2000 characters)*

The aim of the course is to make students aware of industrial system experimentation problems. The chosen approach is the designing of experiments. We introduce a methodology which permits both conception and analysis of such designs. A design of the experiments proposed, for a particular system, a sequence of trials to study the obtained outputs. This method is based on the use of two complementary tools : an algebriac tool to study factors and their interactions and a statistic tool to take into account the natural variability. The course is illustrated with examples and case studies which mainly come from the industry.

Description *(2000 characters)*

- Introduction to design of experiments;
- Design of experiments modeling : algebraic and statistic tool presentation;
- Making use of the design of experiments : from conception to the result analysis;
- Case studies.

Requirements *(2000 characters)*

Mathematical backgrounds of undergraduate studies and statistic inference.

Course requirements and assessments

Teaching Language *(2000 characters)*

french

Teaching methods *(500 characters)*

Teaching is organized in the form of lectures/tutorials.

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

CM :
TD : 12h
TP :
PR :
CONF :
Autres :

Evaluation *(200 characters)*

A 1-hour test is scheduled at the end of the semester.

Bibliography

Bibliography *(2000 characters)*

- Stephen R. Schmidt, Robert G. Launsby. Understanding Industrial Designed Experiments. Air Academy Press, 1992.
- J.-J Droesbeke, J. Fine, G. Saporta. Plans d'expériences : Applications à l'entreprise. Editions Technip, 1997.

Contacts

Contacts *(2000 characters)*

LEGUESDRON Patrice

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name : Laboratory : materials 2	Code EC : GPM07-TPMA
Number of hours per student : 32h	ECTS Number : 1.5
Reference Teacher : THIBON Isabelle	

Generalities

Objectives *(2000 characters)*

Acquisition of basic concepts in the physical and chemical properties of materials and structural metallurgy.
Experimental practice in heat treatment techniques and materials characterization.
The module includes 4 practical sessions of 8 hours each dealing with metal alloys, through their processing and characterization.

Description *(2000 characters)*

1. Hardenability of steels: Jominy end quench test on 3 different steels (hardness measurement and observation of hardening microstructures).
2. Gas-solid diffusion: Oxidation of zirconium. Study of oxidation kinetics and observation of microstructures. Calculation of diffusion coefficients
3. Crystallography: Laüe methods (indexing and drawing of the stereographic projection)
4. Crystallography: Structures and calculation of diffraction intensities

Requirements *(2000 characters)*

Knowledge of phase diagrams, thermodynamics applied to the study of materials, crystallography and X-ray diffraction

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

Practical Work - Session Report

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

CM :
TD :
TP : 32h
PR :
CONF :
Autres :

Evaluation *(200 characters)*

Practical Work - Session Report

Bibliography

Bibliography *(2000 characters)*

- A. DE SY, J. VIDTS, Traité de métallurgie structurale théorique et appliquée, Dunod, Paris (1968). - L. HABRAKEN, J.L. DE BROUWER, De Ferri Metallographia I, Fundamentals of Metallography, Presses Académiques Européennes, Bruxelles (1968) _- A. SCHRADER, A. ROSE, De Ferri Metallographia II, Structures of Steels, Verlag Stahleisen m.b.H., Düsseldorf (1966) _- R.F. MEHL, Atlas of Microstructures of Industrial Alloys, Metals Handbook, vol.7, A.S.M. (1972)_- J. PHILIBERT, A. VIGNES, Y. BRECHET, P. COMBRADE, Métallurgie du minerai au matériau, Masson, Paris (1997) ISBN 2.225.82978.0 _- A. TAYLOR, X-Ray Metallography, J. Wiley and Sons Inc., New-York, London (1961)

Contacts

Contacts *(2000 characters)*

THIBON Isabelle

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name : Electronic and Opto. Properties of Solid	Code EC : GPM07-TPPED
Number of hours per student : 32h	ECTS Number : 1.5
Reference Teacher : BERTRU Nicolas & PARANTHOEN Cyril	

Generalities

Objectives *(2000 characters)*

During several long practical sessions (8 hours), place students in laboratory conditions: conducting experiments on a given topic, acquiring measurements, processing and analysing results, and writing a summary report.

Description *(2000 characters)*

There are 4 different lab works of 8 hours each:
- Haynes Shockley experiment and Ferromagnetic Resonance.
- Ferroelectric behaviour.
- Metal-Semiconductor Heterojunctions.
- Optical absorption of Quantum Wells.

Requirements *(2000 characters)*

Solid-state physics.
Basic physics of semiconductors and junctions.
Quantum Mechanics.
Organisation

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

Preparation before each session: 1 to 2 hours.

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

CM :
TD :
TP : 32h
PR :
CONF :
Autres :

Evaluation *(200 characters)*

Single final mark based on the work completed, the interest and personal initiative shown by the student, and the quality of the oral presentations and reports provided for each practical session.

Bibliography

Bibliography *(2000 characters)*

- Polycopié de TP PEOS/DEOS (2ème semestre) - E.H. NICOLLIAN and J.R. BREWS, MOS Physics and Technology, Wiley - Interscience (2002) - H. MATHIEU, Physique des semiconducteurs et des composants électroniques, Masson (2007)- S.M. SZE, Physics of Semiconductor Devices, Wiley - Interscience (2006)-E. ROSENCHER et J. VINTER, Optoélectronique : cours et exercices corrigés, Dunod (2002)-S. M. SZE, Very Large Scale Integration Technology, Mc Graw Hill (1998)

Contacts

Reference Teacher : BERTRU Nicolas & PARANTHOEN Cyril

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Nom de la matière : Allemand	**Code EC: EC-HUMF07-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-HUM07-ANGL
Total number of hours per student : 28h	ECTS : 2
Supervisor : Philippe LE VOT	

General information

Objectives and Purposes
General Objectives:
Acquisition of the linguistic tools necessary for work in a company. Achieving the required level (B2) for the awarding of the diploma.

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:** Learn by doing: speaking and listening, writing a document while leveraging problem-solving, construction, demonstration, and persuasion skills.
- **Expressing oneself with precision** through rigorous use of syntax and phonology. Activities that call on the creativity and responsiveness of students, such as debates, role-playing, individual oral presentations using PowerPoint or Canva, and projects, will focus on current, scientific, and societal topics.
- Writing letters and CVs.
- Syntax structures specific to scientific English.
- Exploring the professional world in an international context.
- Preparation for the TOEIC (2nd semester: specific course "TOEIC Booster").

Prerequisites:
English courses from the 1st, 2nd, and 3rd years or equivalent.

Course and Evaluation Modalities

Language of Instruction
English

Teaching Methods
The classes are two hours long and are held in rooms that are mostly equipped with projectors and sound systems. We have a multimedia language lab as well as computer rooms to provide students with a setting conducive to stimulating learning.

The educational resources used include press articles, audio and video materials (TV reports, excerpts from films or series), and the Internet is used as a documentary source.

Regular personal work is required. Students are expected to be curious and to 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 (see departments) + 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-HUMF07-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: Entrepreneurship and innovation	**Code EC: EC-HUM07-EI**
Number of hours per student: 48h	**ECTS Number: 3**
Reference Teacher: Fanny GOURRET (STIC), Philippe MENKE (MSN)	

Generalities

Objectives *(2000 characters)*Cliquez ou appuyez ici pour entrer du texte.

The module aims to stimulate the creativity, initiative, and open-mindedness of future engineers through the development of an innovative entrepreneurial project.
This cross-disciplinary module brings together students from various specialties.

Main learning outcomes:

- Demonstrate creativity and initiative,
- Learn to persuade by mastering analytical techniques, logic, and the specific vocabulary of the business world,
- Show critical thinking skills to identify both the key success factors and the potential risks of an innovative project,
- Understand the key players in networks that support business creation and promote technological, economic, or social innovation.

Description *(2000 characters)*

The main topics covered are:

- Creativity techniques;
- The process of an innovative project: defining the need and the innovative offer (state of the art and product positioning), market study and business plan, strategy and operational plan, business model, and economic valuation of projects;
- Legal aspects: issues related to intellectual property (patents, trademarks, designs), company law, and contract law;
- Tax aspects: taxation of innovative companies;
- Financial forecasting: projected income statement and financing plan.

Requirements *(2000 characters)*

CREATIV (S6)

Course requirements and assessments

Teaching Language *(2000 characters)*

french

Teaching methods *(500 characters)*

Cliquez ou appuyez ici pour entrer du texte.

A large part of the module is based on the learning-by-doing approach: students gradually develop a product and/or service development plan (intrapreneurship) or a business creation project (entrepreneurship). Prior to this, they take part in creativity sessions focused on trends or societal challenges previously identified by the teaching team.
Throughout the course, students gather the information and guidance needed to build a business plan through lectures and practical sessions. They are also supported by tutors who encourage them to question the relevance and validity of their work. Student teams are encouraged to take part in innovation and entrepreneurship competitions or challenges.
Groups also benefit from tutorial sessions.

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

CM: 10
TD: 26
TP:
PR:
CONF:
Autres 12:

Evaluation *(200 characters)*

Cliquez ou appuyez ici pour entrer du texte.
Continuous assessment (collective work)
Progress is evaluated through progress reports in the form of oral presentations.

Bibliography

Bibliography *(2000 characters)*

Provided during the course

Contacts

Contacts *(2000 characters)*

Fanny GOURRET, Philippe MENKE

Other information

Other information

Subject name: PHYSICAL EDUCATION (EPS) SEMESTER 7	**Code EC: EC-HUM07-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 7 focus : Understand one's motor preferences and identify the motivations driving one's practice to ensure long-term engagement throughout life;* Recognize one's strengths and weaknesses in order to use them most effectively.
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 7 focus:* Adjust verbal and non-verbal communication to suit the group context. Handle conflicts in a way that leads to constructive and mutually beneficial outcomes.
Methodological Competencies: Manage complex projects by setting objectives, planning, and evaluating outcomes. Make informed decisions through observation, reflection, and feedback. *Semester 7 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)*

Cliquez ou appuyez ici pour entrer du texte.

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-HUMF07-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-HUMF07-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: ITALIAN LV2-LV3	**Code EC: EC-HUMF07-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

Subject name: Japanese	Code EC: EC-HUMF07-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-HUMF07-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)*

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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-HUMF07-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-HUMF07-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