| Course name: Architecture & plan reading | EC Code: GCU05-ARCH |
|---|---|
| Number of hours per student: 36 h | ECTS credits: 1.5 |
| | |
| Reference teacher(s): KEO Pisey | |

## Generalities

***Objectives***

Architecture: Providing historical references on the design and implementation of civil engineering works, allowing students to situate and understand their training and their role as engineers in a long-term evolution. Plan reading: Providing students with the necessary basics to exploit the various plans and written documents concerning a construction project in the construction industry (roads, public buildings, offices, industrial and agricultural buildings, individual houses, public establishments receiving the public, etc.). Exploiting architectural plans (site plan, mass plan, elevations, floor plans, vertical sections, and details). Exploiting engineering design plans (form work plan, reinforcement plan, roof plan, foundation plan, framing plan, road and sanitation network plans, topography plan, plumbing plan, heating and ventilation plan, soil report, electrical plan). Exploiting construction site and implementation plans (site setup plan, installation plan, shoring plan, layout plan). Raising students' awareness of standards, technical specifications, and technical opinions. Raising students' awareness of the choice of materials and construction methods (roofing, framing, flooring, vertical walls, partitions, terraced roofs, insulation (RT 2012)). Acquiring the necessary basics to be able to make modifications to existing plans.

***Description***

Architecture: History of engineers and their training. History of bridges: From ancient bridges to those of Perronet; bridges of the Industrial Revolution; bridges of the 20th century. Calculation methods of engineering in the 19th century. Building against the wind: a brief history of aerodynamics. Military architecture and its urban context. Plan Reading: Graphic representation, various standards and conventions, abbreviations, scales, representation of materials, measurements, estimates, stakeholders in the construction industry, building technology.

***Requirements***

Architecture: None. Plan Reading: Technical drawing rules / Elements of building technology.

## Course and assessment modalities

***Teaching language***

French

***Teaching modalities***

Architecture: Lecture. Plan Reading: 2 sessions of 4 hours each per group of 8-10 students/individual work.

***Hours per course type***

*CM :*
*TD : 18 h*
*TP : 8 h*
*PR :*
*CONF :*
*Autres :*

***Evaluation modalities / coefficient***

Architecture: 5-page mini-thesis on an ancient work of your choice (built structure or book), in pairs. Plan Reading: Exam.

## Bibliographies

***bibliography***

Architecture: [1] BLANCHARD (Anne), Vauban, Fayard, 1996. [2] CARMONA (Michel), Eiffel, Fayard, 2002. [3] COTTE (Michel), Le choix de la révolution industrielle : les entreprises de Marc Seguin et ses frères (1815-1835), Rennes, Presses Universitaires de Rennes, coll. Carnot, 2007. [4] MARTIN (Thierry) dir., VIROL (Michèle) dir., Vauban, architecte de la modernité, actes du colloque du 11&12octobre 2007 à Besançon, Presses Universitaires de Franche Comté, 2009. [5] VACANT (Claude), Jean-Rodolphe Perronet (1708-1794), Paris, Presses de l'ENPC, 2006. [6] PICON (Antoine), L'invention de l'ingénieur moderne : l'École des Ponts et Chaussées 1747-1851, Paris, Presses de l'ENPC, 1992. Articles en ligne : [1] MONTEL (Nathalie) La mise en revue des savoirs de l'ingénieur au XIXe siècle. [2] La création des Annales des ponts et chaussées en 1831, LATTS ENPC. [3] GRELON (André) La naissance de l'enseignement supérieur industriel en France, 1996. [4] HARTER (Hélène), Les échanges techniques au XIXème : l'exemple du génie civil américain, Institut Pierre Renouvin, Bulletin no 4, 21 juillet 2004. Lecture de plan: Dicobat, guides pratique des VRD, précis de chantier, précis du bâtiment, normes, DTU, avis techniques, projets divers de professionnels…

## Contacts

***Contacts***

Cliquez ou appuyez ici pour entrer du texte.

## Others

***Other information***

Cliquez ou appuyez ici pour entrer du texte.

| Subject name: Cementitious Materials | Code EC: GCU05-CIME |
|---|---|
| Number of hours per student: 30 h | ECTS Number: 2,5 |
| | |
| Reference Teacher: HANNAWI-SALMO KINDA | |

## Generalities

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

This course aims to teach students the constituents of concrete, its formulation and its properties in the fresh state

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

Content:

**I- lectures:**

Cement: the main lines of cement manufacturing; the anhydrous constituents of cement; the types, classes and designations of common cements; the main characteristics of cement; special cements; the setting of cement; the cements "Low carbon"; the hydration of cement.
Aggregates: main families of minerals; the main classes of rocks; massive rocks and loose rocks; classification of aggregates.
Standardized additions for concrete and designation symbols: pozolanicity of additions and their role in concrete; concept of equivalent binder; activity index.
Admixtures for concrete and their mechanisms of action.
Methods of concrete formulation: properties of fresh concrete; consistency measuring devices; Short-term resistance (notion of maturometry); characteristic resistance; Ferret formula; Bolomey formula, Absolute volume method
.

**II – Tutorials:**

- General parameters for characterizing of solid materials (Humidity, Apparent and real densities, Porosity, void ratio, water content, saturation rate)
- Granulometric analysis
- Concrete formulation: method of Dreux_Gorisse

**III – Practical Work**

-Measurement of the specific surface area of cement
-Study of the consistency of pure cement pastes
-Study of the plasticity of mortars as a function of particle size, water-to-cement ratio (W/C), and cement concentration

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

Good knowledge in Physics and Chemistry

## Course requirements and assessments

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

French

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

Lectures, tutorials and practical work

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

*CM: 12*
*TD: 6*
*TP: 12*
*PR:*
*CONF:*
*Autres:*

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

written exam

## Bibliography

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

Nouveaux guide du béton et de ses constituants. Georges Dreux, Jean Festa. Edition Eyrolles

## Contacts

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

kinda.hannawi@insa-rennes.fr

## Other information

***Other information***

Cliquez ou appuyez ici pour entrer du texte.

| Materials Science 1A | GCU05-CMM |
|---|---|
| Number of hours : 24.00 h | 2.50 ECTS credit |
| CM : 12.00 h, TD : 12.00 h | |
| Reference Teacher(s) : DARQUENNES Aveline | |

**Objectives :**
Essential links between the intrinsic characteristics of materials, their properties and usage; notably chemical, physical,
thermal, optical and mechanical properties.

**Content :**
Definitions: material, raw material, ore - Various classifications of materials - Life cycle of Materials. Essential differences
between solid, liquid and gas - The origin of cohesion in materials - Atomic architectures in solids (from order to disorder,
from perfect crystal to real crystal) - The fundamental role of chemical bonds and properties of materials - The fundamental
role of crystalline imperfections on the properties of materials - Incidence of microstructure on properties and usage of
materials (fragility, ductility, rigidity, hardness, tenacity, thermal conduction, electric conductivity). - Physico-chemical
methods for the study of materials (X-Ray Diffractometry, thermal analysis, X-Ray fluorescence, microscopy (optical, MEB,
PUTS), spectrophotometric methods. Materials under stress: theoretical resistance and real resistance; defects; stress
concentration coefficient. Elastic limit of ductile materials; Critical shear stress for interfacial slip; role of dislocations;
crystallinity and ductility. Tenacity of fragile materials. Mechanical characteristics.

**Bibliography :**
1. Introduction à la science des matériaux. Wilfried Kurz, Jean Pierre Mercier, Gérard Zambelli, Ecole Polytechnique Fédérale de Lausanne. Matériaux : Propriétés et Applications M.F. Ashby, D.R.H Jones. Edition Dunod, Paris.
Science des Matériaux. Jean Paul Baillon, Jean-Marie Dorlot. Presses internationales polytechnique.

**Requirements :**

**Organisation :**

**Evaluation :**
Written examination.

| Engineering Geology | GCU05-GEOL |
|---|---|
| Number of hours : 36.00 h | 3.00 ECTS credit |
| CM : 12.00 h, TD : 12.00 h, TP : 12.00 h | |
| Reference Teacher(s) : MOLEZ Laurent | |

**Objectives :**
Understanding the structure of the Earth and the movement of the continents. Theoretical and practical study of rocks;
properties and usage.

**Content :**
1. The planet Earth: structure and important geological phenomena.
2. Igneous, metamorphic and sedimentary rock.
3. Physical and mechanical properties of rocks.
4. Exploitation of Quarries, characteristics of aggregates.
5. Identification of rocks: from visual observation to the polarising microscope.
6. X-ray Analysis (clayey rock).

**Bibliography :**
ARQUIE G., TOURENQ C., 1990, ""Granulats"", 717 p., Ed. Presses de l'E.N.P.C. RAUTUREAU, CAILLERE, HENINI,
""Les argiles"", Ed. Septima POMEROL, LAGABRIELLE, RENARD,
""Eléments de géologie"", Ed. Dunod HOMAND,
DUFFAUT, Manuel de Mécanique des Roches, Tome 1, Presses de l'Ecole des Mines de Paris HOMAND, DUFFAUT,
Manuel Mécanique des Roches, Tome 2, Presses de l'Ecole des Mines de Paris

**Requirements :**

**Organisation :**
Revision of lecture notes.
Preparation of the practical work and Tutorials.

**Evaluation :**
Two-hour written examination.
One-hour practical examination "Identification and exploitation of rocks".

| Initiation Matlab | ESM05-MATLAB |
|---|---|
| Number of hours : 12.00 h | 1.00 ECTS credit |
| CM : 2.00 h, TP : 10.00 h | |
| Reference Teacher(s) : PEDESSEAU Laurent | |

**Objectives :**
- Transfer the basic pedagogical support needed for the use of Matlab code.
- Matrix calculation and also the use of Simulink applying to realistic problems
- Assimilate the basic concepts of “script” and “function”
- Be familiar with the method fft and also the “ode” method to solve various problems in materials science, solid state physics, flow mechanics, quantum mechanics, heat flux, electromagnetic, semiconductor.

**Content :**
Introduction, generalities, Matrix calculation, read and write in a file, Basic starting to solve problem with Simulink.

**Bibliography :**
- Kelly Bennett: MATLAB Applications for the Practical Engineer. InTech 2014.
- Wikibooks 2012: MATLAB Programming. http://en.wikibooks.org/wiki/MATLAB_Programming
- Subhas Chakravarty: Technology and Engineering Applications of Simulink. InTech 2012

**Requirements :**
Algebra, Matrix calculation, numerical analysis, simulation.

**Organisation :**
10 h of training + 2h of amphitheater

**Evaluation :**
Exam 1h + proceeding of the training.

| **Subject name:** Fluid Mechanics 1 | **Code EC: GCU05-MFLU1** |
|---|---|
| **Number of hours per student: 24h** | **ECTS Number: 2** |
| | |
| **Reference Teacher: LOMINE FRANCK** | |

# Generalities

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

The objective of this course is to introduce the fundamental concepts of fluid mechanics and to provide students with the essential knowledge required to understand the behavior of fluids at rest and in motion.

At the end of the course, students should be able to:

- identify the key physical quantities describing a flow (velocity, pressure, density, viscosity, etc.);
- distinguish between different flow regimes and modeling assumptions (perfect fluid, viscous fluid, steady/unsteady flow, etc.);
- apply the conservation principles (mass, momentum, energy) to control volumes;
- analyze real flow situations using the fundamental equations of fluid mechanics;
- evaluate the mechanical actions exerted by a moving fluid on walls or objects.

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

- Introduction – Fluid Properties and Flow Models
  - Physical properties of fluids: density, viscosity, compressibility, surface tension.
  - Continuum hypothesis and its limits.
  - Perfect vs. real fluids.
  - Classification of flows: steady/unsteady, laminar/turbulent.
- Fluid Kinematics
  - Description of fluid motion: velocity field and flow patterns.
  - Streamlines, pathlines, and streaklines.
  - Deformation and rotation of a fluid element.
  - Material derivative and velocity gradients.
- Dynamics of Perfect Fluids
  - Fundamental principles of dynamics applied to a perfect fluid.
  - Euler’s equations.
  - Bernoulli’s equation and its energetic interpretation.
  - Applications: flow in converging–diverging ducts, Venturi effect, flow measurement.
- Momentum Theorem and Integral Balances
  - Derivation of the momentum theorem.
  - Application to a control volume.
  - Calculation of the forces exerted by a fluid on fixed or moving boundaries.
  - Examples: jets, bends, nozzles, blades, turbines.

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

- General Mechanics: kinematics and dynamics of a particle and a rigid body.
- Continuum Mechanics: stress, strain, and balance equations.
- Basic knowledge of vector calculus (gradient, divergence, curl).

## Course requirements and assessments

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

French

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

Lectures and preparation of practical work: 2 hours per week

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

**CM : 12 h**
**TD : 12 h**

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

Two-hour written synthesis examination

## Bibliography

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

1.MOREL M.A. et LABORDE J.P., 1992, "Exercices de mécanique des fluides" ( tome 1), Ed. Eyrolles

1. OUZIAUX, 1994, Mécanique des fluides appliquée, Ed. Dunod
2. COMOLET R., 1994, Mécanique des fluides (tome 1), Ed. Masson
3. CHASSAING P., 1997, Mécanique des fluides, Ed. Polytech
4. JOULIE R., 1998, Mécanique des fluides appliquée, Ed. Ellipses
5. NAKAYAMA, Y., 2018, Introduction to fluid mechanics, Ed. Butterworth-Heinemann

## 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:** Reinforced Concrete 1 | **Code EC: GCU05-MSD** |
|---|---|
| **Number of hours per student: 64h** | **ECTS Number: 6** |
| | |
| **Reference Teacher:** Fekri Meftah | |

# Generalities

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

Learn to pose and solve initial-boundary value problems in the context of elastic, viscoelastic or thermos-elastic deformable solids in order to determine displacement, strain and stress fields needed to proceed to the analysis of the deformability and elastic failure of these solids.

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

- Deformation theory
- I.1 Transformation – Deformation – Strain
- I.2 Green-Lagrange strain tensor
- I.3 Small perturbation hypothesis – Linearisation
- I.4 Computation of length / volume / angle variations
- I.5 Compatibility equations – Integration of strains
- I.6 Applications
-
- Stress theory
- II.1 Global equilibrium – Internal efforts
- II.2 Cauchy's postulate – Stress vector – Stress tensor
- II.3 Local equilibrium equations
- II.4 Elementary stress states
- II.5 Stress based failure criteria
- II.6 Applications
-
- Boundary value problem for elasticity
- III.1 Structure of a boundary value problem
- III.2 Constitutive law – Isotropic linear elasticity
- III.3 Navier's equations – Beltrami's Equations
- III.4 Linearity – Superposition principle
- III.5 Plane elasticity – Airy stress function
- III.6 Degenerated formulations: Barre – Bending beam
- III.7 Applications
-
- Boundary value problem for viscoelasticity
- IV.1 One-dimensional non-aging linear viscoelastic behaviour
- Creep / Relaxation – Constant Solicitation and response
- Varying Solicitation – Superposition principle
- Laplace-Carson transform – Correspondence principle

- Rheological models
- IV.2 Three-dimensional non-aging isotropic linear viscoelastic behaviour
- IV.3 Boundary value problem for non-aging linear viscoelasticity
- IV.4 Solution Strategies based on Laplace-Carson transform
- Navier's equations – Beltrami's Equations
- Linearity – Superposition principle
- Plane states – Airy stress function
- Degenerated formulations: Barre – Bending beam
- IV.5 Applications
-
- Initial-Boundary value problems for transient thermo-elasticity
- V.1 thermo-elastic behaviour
- Free thermal strain – Mechanical strain
- One-dimensional constitutive law
- Three-dimensional constitutive law
- V.2 Thermal transfer Initial-Boundary value problem
- V.3 Mechanical boundary value problem – Thermal and mechanical loadings
- V.4 Solution Strategies of the mechanical problem
- Navier's equations – Beltrami's Equations
- Linearity – Superposition principle n
- Plane states – Airy stress function
- Degenerated formulations: Barre – Bending beam
- V.5 Applications

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

Linear algebra (Tensors) – Differential geometry – ODE & PDE – Rational Mechanics – Physical & mechanical behavior of materials.

## Course requirements and assessments

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

French

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

Plenary lectures are dedicated to presenting the theoretical concept of this course. Applications of this concept and worked during tutorial classes. Practical work classes are dedicated experimental approach of deformation, stress, constitutive behavior and failure criteria.

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

*Lectures: 24h,*
*Tutorial classes: 28h,*
*Practical work: 12h*

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

2 hours mid-term and final-term Exams plus an evaluation of the practical work projects.

## Bibliography

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


A. E. H. Love, A treatise on the mathematical theory of elasticity, Dover, 1944 (1906).
J. Mandel, Cours de Mécanique des Milieux Continus, Jacques Gabay, 1994 (1966).
L. Sedov, Mécanique des Milieux Continus, Tome I et Tome II, Editions Mir, 1971.
J. Salençon, Mécanique des Milieux Continus, Tome I : Concepts Généraux, Ecole Polytechnique, 2005.
J. Salençon, Viscoélasticité pour le Calcul des structures, Ecole Polytechnique, 2008.
P. Chadwick, Continuum mechanics: Concise theory and problems, Dover, 1999.
H. Dumontet, F. Léné, P. Muller, N. Turbé, Exercices de Mécanique des Milieux Continus, Masson, 1994
P. Royis, Mécanique des Milieux Continus, Cours, Exercices et problèmes, Pul, 2005.
R. M. Christensen, Theory of viscoelasticity, Dover, 2003.


## Contacts

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

Cliquez ou appuyez ici pour entrer du texte.

## Other information

***Other information***

Cliquez ou appuyez ici pour entrer du texte.

| Structural Analysis I | GCU05-MSTR1 |
|---|---|
| Number of hours : 48.00 h | 2.50 ECTS credit |
| CM : 0.00 h, CM : 24.00 h, TD : 24.00 h | |
| Reference Teacher(s) : HJIAJ Mohammed | |

**Objectives :**
This module, which takes place during the first semester, provides students of Civil Engineering and Urban Planning with the
basics necessary for the calculation and dimensioning of the elements of construction by drawing upon their knowledge of
Solids Mechanics, Continuum Mechanics and the Theory of Elasticity.

**Content :**
1. Introduction to beam theory (hypothesis and conventions, actions and loading, equilibrium of a beam)
2. Calculation of stress due to axial force
3. Calculation of stress due to bending: simple, combined, oblique
4. Calculation of shear stress: thick sections (Jouravski's hypothesis), thin sections (open, closed, partitioned), shear centre
5. Calculation of torsional stress: thick sections (membrane analogy), thin sections: Bredt's formulas , non- uniform torsion
theory of Vlassov

**Bibliography :**
1. FREY F., ""Statique appliquée et Mécanique des structures"", volumes 1 et 2 Presses Polytechniques et Universitaires Romandes
2. ALBIGES M. et COIN A., ""Résistance des matériaux appliquée"", tomes I et II, Ed. Eyrolles, Paris

**Requirements :**
Mathematical basics and General Mechanics acquired during the first two-years of preparation in general engineering studies.
Continuum Mechanics of Solids and Mechanics of Deformable media.

**Organisation :**
21 hours per semester: ninety minutes per week + preparation of practical work.

**Evaluation :**
Three-hour written synthesis examination.

| Probabilistic approach for engineers | GCU05-PROBA |
|---|---|
| Number of hours : 20.00 h | 1.50 ECTS credit |
| CM : 10.00 h, CM : 10.00 h, TD : 10.00 h, TD : 10.00 h | |
| Reference Teacher(s) : SOMJA Hugues | |

**Objectives :**
Structures can be submitted to external forces that are changing over time (wind pressure, snow, humidity, temperature …). There exists also the uncertainties and the high variation in the strength of materials (soil, steel, concrete, composite materials …). These uncertainties must be taken into account in the design of the structures. The objectives of this course are the following:
1. Study the theory of probability,
2. Construct the representation of statistical data,
3. Study the concept of reliability index,
4. Construct probabilistic models based on a mechanical model for evaluating the probability of failure,
5. Understand the semi-probabilistic approaches,
6. Know how to calculate and then interpret the partial coefficients of security.

**Content :**
1. Recall of probability theories: definition, conditional probability, random variables …
2. Concept of statistics,
3. Concept of reliability: probability of failure, reliability index (Cornell, Hasofer-Lind),
4. Semi-probabilistic approaches : representation of forces, representation of resistance, interpretation of safety coefficients.

**Bibliography :**
1. Dimitri P. Bertsekas and John N. Tsitsiklis, Introduction to probability, 2008
2. Jean-Armand Calgaro, Éléments de fiabilité des constructions: Introduction aux eurocodes, Groupe Moniteur, 2016.
3. Jean-Armand Calgaro, Introduction aux eurocodes, Presse de l'ENPC, 1996.

**Requirements :**
1. Concept of strength of material
2. Mathematics

**Organisation :**
Lectures and tutorials

**Evaluation :**
Written final exam

**Target :**
5GCU

| **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).

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**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)*

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-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***