Subject name: Risk Analysis and Scoring	Code EC: DMA07-MSRS
Number of hours per student: 36 hours	ECTS Number: 3,5
Reference Teacher: Jean-François DUPUY	

Generalities

Objectives *(2000 characters)*

The objective of this course is to provide students with statistical modeling tools adapted to response variables of various types (e.g., binary variables, counts), thereby generalizing the approaches covered in the "Linear Regression Model" (3MA) course. The goal is to enable them to solve problems in risk modeling (scoring problems), modeling in epidemiology, biology, economics, insurance, etc.
The prediction of a binary response variable (or more generally, a K-class variable) can be viewed as a classification problem. Therefore, the course will also introduce one of the basic tools of classification: discriminant analysis (LDA, QDA), as well as several tools for comparing the results of different classifiers.

At the end of this course, students will be able to choose and implement in R the regression model(s) best suited to the problem posed, to interpret their outputs (and in particular, to provide a reading accessible to a non-statistics specialist), to use them to make predictions, and to identify their scope of use. They will also be able to implement the basic techniques of classification (binary and K-class): discriminant analysis and logistic regression.

Description *(2000 characters)*

Using concrete examples from various fields (e.g., marine biology, health economics, insurance), this course will introduce the class of generalized linear models (GLMs) and focus on two of the most useful models in this class: the logistic model and the Poisson model. Associated inference methods will be introduced: point estimation (maximum likelihood), construction of asymptotic confidence intervals and asymptotic hypothesis tests. Issues of model selection, overdispersion and/or excess zero (for the Poisson model), and prediction will also be addressed.
The prediction of a K-class variable can be approached from a classification perspective. A method dedicated to classification will therefore be introduced: discriminant analysis. Tools for assessing the quality of a classifier will then be introduced: concepts of sensitivity, specificity, ROC curve, and cross-validation.

Requirements *(2000 characters)*

This course requires the following prerequisites: linear algebra (undergraduate level/STPI), probability calculus (undergraduate level/STPI), inferential statistics tools (point estimation, confidence intervals, hypothesis tests), linear regression model.

Course requirements and assessments

Teaching Language *(2000 characters)*

French (the course may be given in English if the presence of non-French-speaking students requires it).

Teaching methods *(500 characters)*

Each session is structured around a lecture section (introduction to the methodological and/or theoretical concepts that will form the theme of the session), followed by an application in the form of exercises (including exercises in R, a free and open-source software), allowing for the immediate application of the concepts introduced.
A case study on real data, carrying out a statistical analysis from the creation of the database to the expression of the results in business terms, is led by a business statistician.

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

CM : 20
TD :
TP : 16
PR :
CONF:
Autres:

Evaluation *(200 characters)*

Students are assessed using a written examination - WE (to assess their level of understanding of the methodology and tools introduced in the course) and a group project (modeling and forecasting work, conducted on real data). Coefficients: WE (2/3) and group project (1/3).

Bibliography

Bibliography *(2000 characters)*

J.-F. Dupuy. Modèles linéaires généralisés - problèmes de censure, données manquantes, excès de zéros. ISTE Press – Elsevier, London, UK, 2023.

J.M. Hilbe. Logistic regression models. Chapman & Hall, 2009.

G. James, D. Witten, T. Hastie, R. Tibshirani. An introduction to statistical learning – With applications in R. Springer, 2021.

Contacts

Contacts *(2000 characters)*

Jean-François DUPUY, jean-francois.dupuy@insa-rennes.fr

Other information

Other information

5 hours are devoted to the societal aspects of statistical modeling (ethical aspects of processing regression data, bias issues)

Subject name: Stochastic Models of Dynamical Systems	Code EC: DMA07-MSSD
Number of hours per student: 42 h	ECTS Number: 3,5
Reference Teacher: James LEDOUX	

Generalities

Objectives *(2000 characters)*

Objectives of this course are to make students acquainted with stochastic models of dynamical systems together with their simulation and numerical implementation. Students are aware of various application areas through the examples.

Description *(2000 characters)*

Discrete-time martingale. Asymptotic convergence. Applications
Poisson process. Markov jump processes. Applications to stochastic operation research
Standard Gaussian processes.
Brownian motion
Stochastic integration
Introduction to stochastic differential equations (SDE)
Diffusions
Numerical methods for SDE

Practical implementation with R

Requirements *(2000 characters)*

Courses of "Introduction aux probability" (STPI-2nd), "Probability" (DMA05), "Markov models" (DMA06).

Course requirements and assessments

Teaching Language *(2000 characters)*

French with documents in English (specific organisation in english

Teaching methods *(500 characters)*

Cliquez ou appuyez ici pour entrer du texte.

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

CM: 18
TD: 14
TP: 10
PR:
CONF:
Autres:

Evaluation *(200 characters)*

Two written examinations (2/3) and a practical examination and/or project (1/3).

Bibliography

Bibliography *(2000 characters)*

D. Foata and A. Fuchs. Processus stochastique : processus de Poisson, chaînes de Markov et martingales. Dunod, 2002.
F. Comets and T. Meyre. Calcul stochastique et modèles de diffusions. Dunod, 2006.
P. Kloeden, E. Peter, E. Platen and H. Schurz. Numerical Solution of SDE Through Computer Experiments. Springer, 2003.
F. Klebaner. Introduction to stochastic calculus with applications. Imperial College Press, 1998
W. Schwarz. Random Walk and diffusion models : an introduction for life and Behavioral Scientists. Springer, 2022
S. I. Resnick. Adventures in stochastic processes. Birkhäuser, 2002

Contacts

Contacts *(2000 characters)*

Cliquez ou appuyez ici pour entrer du texte.

Other information

Other information

The 10 hours of practical work dedicated to simulation activities provide an opportunity to raise engineering students' awareness of digital efficiency, which aligns with the objectives of developing professional skills. The emphasis placed on the digital efficiency of the code has been strengthened in the assessment

Subject name: Hilbertian Tools and Applications	Code EC: DMA07-OHA
Number of hours per student: 36 h	ECTS Number: 3.5
Reference Teacher: Abdelaziz BELMILOUDI, Simon POSTEC	

Generalities

Objectives *(2000 characters)*

The aim of this course is the study of infinite-dimensional vector spaces and the acquisition of certain notions of functional analysis essential in engineering sciences.

Description *(2000 characters)*

I. $L^p(\mathbb{R}^d)$ Spaces: Definitions and properties
II. Pre-Hilbert Spaces: Definitions and properties
III. Hilbert Spaces
- Definitions and examples
- Orthogonal projection theorem and linear approximation
- Dual of a Hilbert Space
- Riesz representation theorem and Hahn-Banach theorem
- Weak convergence in a Hilbert space
- Linear differential operators
- Approximation of functions in Hilbert spaces
- Hilbert Bases and the Gram-Schmidt orthonormalization process
- Orthogonal polynomials
- Introduction to wavelets

Requirements *(2000 characters)*

This teaching needs the knowledge of the basic mathematics of the Bachelor

Course requirements and assessments

Teaching Language *(2000 characters)*

French/English

Teaching methods *(500 characters)*

The complete lecture course consists of a projected part and a part done with chalk on the blackboard

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

CM: 14h
TD: 16h
TP: 6h
PR:-
CONF:-
Autres:-

Evaluation *(200 characters)*

One written examination (4/5) and one test on tutorial practices or project (1/5).

Bibliography

Bibliography *(2000 characters)*

E. Provenzi. From Euclidean to Hilbert Spaces Introduction to Functional Analysis and its Applications, ISTE, 2021
H. Brezis. Functional Analysis, Sobolev Spaces and Partial Differential Equations. Springer, New York, 2011.
W. Rudin, Real and complex analysis, Third edition, McGraw-Hill Book Co., New York, 1987.

Contacts

Contacts *(2000 characters)*

Aziz.belmiloudi@insa-rennes.fr et simon.postec@insa-rennes.fr

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

INSA RENNES - Applied Mathematics : 2025/2026

Subject name: Interdisciplinary Projects	Code EC: DMA07-PI
Number of hours per student: 36h	ECTS Number: 3.50 credits
Reference Teacher: Othmane JERHAOUI	

Generalities

Objectives

The goal of this course is to familiarize students with their future professional environment. They must apply mathematical modelling within another scientific disciplinary framework. The progress of the project is therefore carried out in collaboration with a teacher from another department (EII, GCU, GMA, INFO, SGM, SRC). Additional learning outcomes include managing a collaborative project and identifying relevant bibliographic resources.

Description

- Students work in groups.
- To each group, a project is assigned. The project is concerned with mathematical modelling in another scientific field.
- An advisor from the mathematics department and an advisor from another department (EII, GCU, GMA, INFO, SGM, SRC) are assigned to each group.
- Regular meetings are scheduled between the advisors and their respective groups.
- Dedicated sessions to work on the project are planned in their schedule throughout the semester.

Requirements

- All courses of S5 and S6 (in the department of applied mathematics).

Course requirements and assessments

Teaching Language

The report can be written in French or English. The presentation is done in English.

Teaching methods

- The students are expected to have a certain degree of autonomy.
- Regular meetings with the advisors are scheduled throughout the semester.

Number of hours per course type

CM:
TD:
TP:
PR:
CONF:
Autres: 36.00h

Evaluation

- A written report (1/2) and an oral presentation (1/2).

Bibliography

Bibliography

- The bibliography depends on the subject and will be given to each group by their advisors.
- The students are expected to look for other bibliographical sources.

Contacts

Contacts *(2000 characters)*

Othmane Jerhaoui.

Other information

Other information

N/A.

Subject name: Research Project	Code EC: DMA07-PIR
Number of hours per student: 36 h	ECTS Number: 3.5
Reference Teacher: Abdelaziz BELMILOUDI	

Generalities

Objectives *(2000 characters)*

The objective is to propose a discovery of the profession of researcher and its professional environment in an academic or industrial context.

Description *(2000 characters)*

A project exploring one of the themes favored by the student will be proposed by a senior researcher from an academic/industrial laboratory in Rennes. It is adapted to the skills acquired until then by the student.
It is requested to conduct an interview with a researcher from at least three different laboratories. The project can be accompanied by any initiative of discovery of the world of research (visit of academic or industrial laboratories, participation in meetings of follow-up of research projects, process of publication of a scientific article ...)

Requirements *(2000 characters)*

Strong academic results.

Course requirements and assessments

Teaching Language *(2000 characters)*

English/ French

Teaching methods *(500 characters)*

36h are reserved in the timetable of the semester. Each session is an opportunity to discuss with his tutor.

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

CM:
TD:
TP:
PR:
CONF:
Autres: 36h

Evaluation *(200 characters)*

A report of not more than 25 pages in English. A 20 minutes defense in English.

Bibliography

Bibliography *(2000 characters)*

Each project is based on a specific bibliographic study

Contacts

Contacts *(2000 characters)*

Aziz.belmiloudi@insa-rennes.fr

Other information

Other information

Target audience:
A maximum of N engineering students with strong academic results, where N = E(20% of the current class).

Subject name: Object Oriented Programming in C++	Code EC: DMA07-POO
Number of hours per student: 30 h	ECTS Number: 2.50
Reference Teacher: Eric ANQUETIL	

Generalities

Objectives *(2000 characters)*

Object-oriented programming is a powerful tool for developing complex software applications.

It enables the stable, reliable and robust development of large-scale software projects, facilitating their evolution and maintenance.

In this module, we will use the C++ programming language to explore the object-oriented paradigm.

C++ is a rich language that emphasises efficiency and performance, and it is widely used by companies.

Mastering object-oriented programming through C++ provides a set of comprehensive, general skills that can be easily transferred to other object-oriented languages, such as Java and C#.

Description *(2000 characters)*

Course outline:

- Object and class concepts in C++: Object construction, Encapsulation
- Basic elements of C++: References, pointers, operators, inner classes and input/output management and streams…
- Memory management: Dynamic allocation, destructors and assignment…
- Object design in C++: Aggregation, inheritance, polymorphism, access control, abstract classes, multiple inheritance, interfaces, inner classes…
- Generic programming: Parameterised classes/templates…
- Standard Template Library (STL)…
- Run-Time Type Identification (RTTI), Functor objects, Lambdas and Smart pointers.
- Exception Handling…

Requirements *(2000 characters)*

Basic knowledge of the C language.

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

The module consists of lectures and practical sessions.

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

Lecture: 16h
Practical: 14h

Evaluation *(200 characters)*

Exam (2 hours): one theoretical part and one practical computer-based part.

Bibliography

Bibliography *(2000 characters)*

B. Stroustrup. *A Tour of C++ (Second edition)*, Addison-Wesley. ISBN 978-0-13-499783-4. July 2018.

Contacts

Contacts *(2000 characters)*

eric.anquetil@insa-rennes.fr

Other information

Other information

Cliquez ou appuyez ici pour entrer du texte.

Subject name: Operational research methods	Code EC: DMA07-RO
Number of hours per student: 36 h	ECTS Number: 3.5
Reference Teacher: Jérémy Omer	

Generalities

Objectives *(2000 characters)*

This course is a general presentation of operational research techniques for the solution of integer linear optimization problems. The main objectives are:
• To understand standard solution methods and complexity issues in integer linear programming.
• To be able to analyze a practical problem, identify its variables, model it as a mathematical program, propose and apply a solution method and discuss the results.
• To know and recognize the most classical problems of operational research.
• To be able to analyze the ethical and societal stakes of using mathematical decision aid tools, in particular those developed with operational research methods.

Description *(2000 characters)*

• Introduction to combinatorial optimization
• Duality in linear programming and geometrical interpretation of the simplex algorithm
• Modeling a practical problem using integer programming
• Solving an integer program with the branch-and-bound algorithm
• Linear and Lagrangian relaxations; duality in integer programming
• Geometrical interpretations and approaches in integer programming
• Application to classical problems of operational research stated as practical cases
• Modeling and solution of problems using the language Julia and its modeling library JuMP to call the optimization codes such as GLPK, Gurobi or Coin CBC.
• Implementation of a branch-and bound algorithm using Julia language.
• Sensitization to the main ethical and societal matters of optimization.

Requirements *(2000 characters)*

First and second year courses of linear algebra, and third years courses “Continuous optimization” and “Discrete optimization”.

Course requirements and assessments

Teaching Language *(2000 characters)*

Classes and exercises lists are in French, lecture notes are in English.

Teaching methods *(500 characters)*

An important focus will be placed on modeling optimisation problems in the form of integer linear programs during tutorials and practical sessions. A project will allow students to put the branch-and-bound method into practice. The section on the societal challenges of operational research will be based on several texts discussed in class with the students. It will be applied by asking students to reflect on the proposed project.

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

CM: 12h
TD: 12h
TP: 6h
PR: 6h

Evaluation *(200 characters)*

One test (40%), one Julia project (45 %) and several CC on ethical matters (15 %)

Bibliography

Bibliography *(2000 characters)*

[1] A. Billionnet, Optimisation discrète : de la modélisation à la résolution par des logiciels de programmation mathématique. 2007.
[2] M. Minoux, Programmation mathématique : théorie et algorithmes, 2e édition. 2008.
[3] G. L. Nemhauser and L. A. Wolsey, “Integer and Combinatorial Optimization,” 1999
[4] R. J. Vanderbei, Linear Programming - Foundations and Extensions, vol. 114. Boston, MA: Springer US, 2008.
[5] L. A. Wolsey, Integer programming. 1998

Contacts

Contacts *(2000 characters)*

jeremy.omer@insa-rennes.fr

Other information

Other information

3 hours ST2 (and 15h of the evaluation)

Subject name: Business seminar	Code EC: DMA07-SE
Number of hours per student: 24 h	ECTS Number: 1.00
Reference Teacher: Jean-François DUPUY, Mounir HADDOU, Olivier LEY	

Generalities

Objectives *(2000 characters)*

This module is an open forum for stakeholders of the business world. It covers all semesters of the engineering curriculum and aims at providing the students a broad-spectrum engineering culture. This module will constitute a unique opportunity for students to discover the different career profiles of mathematical engineering. Through this module, the students will also acquire some useful technical, managerial and juridical skills and a solid operational expertise. Finally, this module will help the students raising their awareness to the challenges of sustainable development and to the societal aspects of their future profession of engineer.

Description *(2000 characters)*

In the 4th year, the module will offer (among others):

- Specific software training ;

- some awareness to specific technical issues related to the profession of mathematical engineer (such as scoring, pricing...).

Requirements *(2000 characters)*

Course requirements and assessments

Teaching Language *(2000 characters)*

French

Teaching methods *(500 characters)*

Different kind of presentations and interventions.

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

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

Evaluation *(200 characters)*

The assessment is based on some report delivery. The obtained mark is independent.

Bibliography

Bibliography *(2000 characters)*

Contacts

Contacts *(2000 characters)*

DUPUY Jean-François, HADDOU Mounir, LEY Olivier

Other information

Other information

Subject name: Time series	Code EC: DMA07-ST
Number of hours per student: 30	ECTS Number: 3
Reference Teacher: Boutheina NEMOUCHI	

Generalities

Objectives *(2000 characters)*

The study of time series involves the statistical analysis of observations collected over time (temperature series recorded at a given point on the globe, series of air passenger numbers, etc.), and therefore exhibiting temporal correlation. The objective of this course is to provide students with the basic tools for modeling and forecasting such series.
At the end of this course, students will be able to build, validate, and implement time series models in R (free and open-source software). They will be able to make predictions based on these models.

Description *(2000 characters)*

The course introduces the basic concepts of time series description: trend and seasonal component, additive and multiplicative decompositions, then it describes the exponential smoothing methods for predicting a series. In a second part, the course introduces the mathematical prerequisites necessary for understanding ARMA models: notions of process, stationarity, autocorrelation and partial autocorrelation functions. The ARMA processes and their ARIMA and SARIMA extensions are introduced, as well as the associated inference tools (estimation, selection of the order of the models, prediction). The course is illustrated with numerous examples on real data.

Requirements *(2000 characters)*

This course requires the following prerequisites: linear algebra (undergraduate level/STPI), probability calculus (undergraduate level/STPI), inferential statistics tools, linear regression model.

Course requirements and assessments

Teaching Language *(2000 characters)*

French (the course may be given in English if the presence of non-French-speaking students requires it).

Teaching methods *(500 characters)*

Each session is structured around a lecture section (introduction to the methodological and/or theoretical concepts that will form the theme of the session) followed by exercises, allowing for the immediate application of the concepts introduced.
The practical work (using R, a free and open-source software) is provided by a lecturer from a company, who offers students the opportunity to work on real data from concrete business problems.

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

CM : 8
TD : 10
TP : 12
PR:
CONF:
Autres:

Evaluation *(200 characters)*

Students are assessed through a group project (modeling and forecasting work, conducted on real data).

Bibliography

Bibliography *(2000 characters)*

P.J. Brockwell, R.A. Davis. Introduction to time series and forecast (2nde éd.). Springer, 2002.

P.S.P Cowpertwait, A.V. Metcallfe. Introductory Time Series with R. Springer, 2009.

C. Gouriéroux. Séries temporelles et modèles dynamiques (2nde éd). Economica, 1995.

J.D. Hamilton. Time series analysis. Princeton University Press, 1994.

Contacts

Contacts *(2000 characters)*

Boutheina NEMOUCHI, boutheina.nemouchi@insa-rennes.fr

Other information

Other information

5 hours are devoted to the societal aspects of statistical modeling (ethical aspects of processing regression data, bias issues).

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).

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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)*

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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