In addition to the general offer of courses taught in English, some Centers offer for incoming students English Friendly Courses (EFC): subjects taught in Spanish or Basque, in which the syllabus summary; lecturer tutoring, examinations and/or papers are available in English.

### English Friendly Courses taught in SPANISH:

**FACULTY OF ECONOMICS AND BUSINESS. GIPUZKOA DEPARTMENT (251)**

<table>
<thead>
<tr>
<th>COURSE</th>
<th>SEMESTER</th>
<th>CREDITS</th>
<th>SCHEDULE¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>25824</td>
<td>Matemáticas I</td>
<td>Sep. 2021- Jan. 2022</td>
<td>6</td>
</tr>
<tr>
<td>26431</td>
<td>Sociología de la empresa II: cambio organizativo e innovación</td>
<td>Sep. 2021- Jan. 2022</td>
<td>5</td>
</tr>
<tr>
<td>26433</td>
<td>Sistemas y Políticas de Innovación</td>
<td>Sep. 2021- Jan. 2022</td>
<td>5</td>
</tr>
<tr>
<td>26421</td>
<td>Finanzas Internacionales</td>
<td>Sep. 2021- Jan. 2022</td>
<td>5</td>
</tr>
<tr>
<td>25829</td>
<td>Matemáticas II</td>
<td>Jan. 2022- May 2022</td>
<td>6</td>
</tr>
<tr>
<td>25838</td>
<td>Estructura Económica</td>
<td>Jan. 2022- May 2022</td>
<td>6</td>
</tr>
<tr>
<td>26419</td>
<td>Sistema Financiero Internacional</td>
<td>Jan. 2022- May 2022</td>
<td>5</td>
</tr>
<tr>
<td>26417</td>
<td>Gestión de entidades financieras</td>
<td>Jan. 2022- May 2022</td>
<td>5</td>
</tr>
<tr>
<td>25847</td>
<td>Consolidación de Estados Contables</td>
<td>Jan. 2022- May 2022</td>
<td>6</td>
</tr>
<tr>
<td>25848</td>
<td>Dirección estratégica: Crecimiento y desarrollo empresarial</td>
<td>Jan. 2022- May 2022</td>
<td>6</td>
</tr>
</tbody>
</table>

¹ SCHEDULE: Morning (M)/ Afternoon (A): begins at 13.30. By clicking the subject’s name, its Syllabus will appear.
English Friendly Courses taught in BASQUE:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>SEMESTER</th>
<th>CREDITS</th>
<th>SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's Degree in Business Management &amp; Administration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25824</td>
<td>Matematika I</td>
<td>Sep. 2021- Jan. 2022</td>
<td>6</td>
</tr>
<tr>
<td>25829</td>
<td>Matematika II</td>
<td>Jan. 2022- May 2022</td>
<td>6</td>
</tr>
</tbody>
</table>
**COURSE GUIDE** 2021/22

<table>
<thead>
<tr>
<th>Faculty</th>
<th>251 - Faculty of Economics and Business. Gipuzkoa Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree</td>
<td>GADEMP20 - Bachelor's Degree in Business Management &amp; Administration</td>
</tr>
<tr>
<td>Cycle</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Year</td>
<td>First year</td>
</tr>
</tbody>
</table>

### COURSE

<table>
<thead>
<tr>
<th>COURSE DESCRIPTION</th>
</tr>
</thead>
</table>

Taking into account the different modes for students to access the Degree in Business Administration and Management, and since in this degree, mathematics have a basic and instrumental function, the first goal of the course is to unify the knowledge that the students have acquired in their previous education. The second goal of the course is to offer students basic tools of differential calculus and linear algebra, in order to ensure that they master the fundamentals and can use them in other subjects.

### COMPETENCIES/LEARNING RESULTS FOR THE SUBJECT

**SPECIFIC COMPETENCES**

* An ability to manage basic concepts and techniques of differential calculus and linear algebra.
* An ability to justify the procedures and the formulation of logical arguments properly using deductive reasoning.
* An ability to formalise quantifiable phenomena related to economic and business science through mathematical models.

**TRANSVERSAL COMPETENCES**

* Develop learning skills to acquire a high degree of autonomy in order to undertake studies later, as well as to improve their own self-training in a context of continuous changes and innovations.
* Know how to search, identify, analyse and synthesize information from various sources, with critical capacity to assess the situation and foreseeable evolution of a company, make reasoned judgments and take decisions.
* Capacity for written and oral communication.
* Ability to work in a team, with responsibility and respect, initiative and leadership.

**KEYWORDS**


**LEARNING OUTCOMES**

* Application of basic concepts and techniques of differential calculus and linear algebra to practical assumptions related to economic and business science.
* Being able to employ deductive reasoning to justify procedures and formulate logical arguments.
* Mathematical formalisation of quantifiable economic phenomena in practical cases.

### CONTENIDOS TEÓRICO-PRÁCTICOS

**Part I: SINGLE-VARIABLE CALCULUS**

**Unit 1. SINGLE-VARIABLE FUNCTIONS**

1.1 Concept of function. Definition domain. Graphic representation.
1.2 Reverse function.
1.3 Most frequent functions.
1.4 Conical.
1.5 Piecewise-defined functions. Absolute value function.
1.6 Composite function.
1.7 Definition domain calculation.

**Unit 2. LIMITS, CONTINUITY AND DERIVATIVES**

2.1 Limit of functions. Lateral limits.
2.2 Limit properties. Indeterminations.
2.3 Bounded function.
2.4 Continuity of a function.
2.5 Derivative function. Geometric meaning.
2.6 Derivative of the composite function (chain rule).
2.7 General derivative rule. Differentiation rules.
2.8 Derivative of the inverse function.
2.9 Successive derivatives.
2.10 Lateral derivatives. Differentiability of a function.
2.11 Continuity and differentiability
2.12 Implicit functions. Differentiation of the implicit function.
2.13 Application of differentiation in economics. Elasticity.

Unit 3. APPLICATIONS OF CONTINUITY AND DIFFERENTIABILITY
3.1 Properties of continuous functions.
3.2 Properties of continuous and differentiable functions.
3.3 Resolving indeterminate forms: L'Hôpital's Rule.
3.4 The differential of a function.
3.5 Polynomial Approximation of Functions: Taylor's formula. Differential and linear approximation.

Unit 4. INTEGRATION
4.1 Primitive of a function. Indefinite integral.
4.2 Immediate integration.
4.3 Integration by parts.
4.4 Integration by change of variable.
4.5 Applications of the indefinite integral.
4.6 Definite integral. Geometric interpretation.
4.7 Mean Value theorem. Average value of a function in a range.
4.8 Fundamental theorem of calculus. Integral function.
4.9 Barrow Rule.
4.10 Application of the definite integral to the areas.
4.11 Improper Integral.

Part II: LINEAR ALGEBRA

Unit 5.- MATRICES AND VECTORS. VECTORIAL SPACE
5.1 Matrices. Operations with matrices.
5.2 Types of matrices.
5.3 Vectors. Operations with vectors. Linear combination of vectors.
5.4 Vector space.
5.5 Euclidean vector space.

Unit 6.- DETERMINANTS AND INVERSE MATRICES
6.1 Determinant of a square matrix.
6.2 Calculation of determinants of order 2 and 3: Sarrus rule.
6.3 Calculation of determinants of order higher than 3: Method of the attachments.
6.4 Properties of the determinants.
6.5 Creating zeros in a determinant.
6.6 Reverse matrix. Invertible and singular matrices.
6.7 Properties of the inverse matrix.
6.8 Calculation of the inverse matrix.

Topic 7.- THEORY OF RANK AND SYSTEMS OF LINEAR EQUATIONS
7.1 Linear independence of vectors.
7.2 Rank of a matrix. Properties
7.3 Calculation of the range.
7.4 Systems of linear equations. Matrix and vector expression.
7.5 Compatible and incompatible systems: Rouché-Frobenius theorem.
7.6 Homogeneous systems.
7.7 Non-matrix systems resolution methods.
7.8 Matrix methods for solving linear systems.
7.9 Systems of linear equations with economic significance.

Unit 8.- DIAGONALIZATION OF MATRICES
8.1 Definition.
8.2 Eigenvalues and eigenvectors of a square matrix: Diagonalizable matrix condition.
8.3 Applications of diagonalization

TEACHING METHODS
Lectures (75%); practical classes (25%).
Practical classes are resolution of exercises workshops.

In the event that the health situation does not allow face-to-face teaching, it will be taught remotely using the tools that
the University makes available to us. In this case, the corresponding adaptation of this teaching guide would be published in egela.

### TYPES OF TEACHING

<table>
<thead>
<tr>
<th>Types of teaching</th>
<th>M</th>
<th>S</th>
<th>GA</th>
<th>GL</th>
<th>GO</th>
<th>GCL</th>
<th>TA</th>
<th>TI</th>
<th>GCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of face-to-face teaching</td>
<td>45</td>
<td>9</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horas de Actividad No Presencial del Alumno/a</td>
<td>67.5</td>
<td>13.5</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- M: Lecture-based
- S: Seminar
- GA: Applied classroom-based groups
- GL: Applied laboratory-based groups
- GO: Applied computer-based groups
- GCL: Applied clinical-based groups
- TA: Workshop
- TI: Industrial workshop
- GCA: Applied fieldwork groups

### Evaluation methods

- Continuous evaluation
- End-of-course evaluation

### Evaluation tools and percentages of final mark

- Written test, open questions: 75%
- Individual assignments: 25%

### ORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

GUIDANCE ON CONTINUOUS EVALUATION
Final written test: up to 7.5 points of the mark.
Individual evaluation of the resolution of exercises workshops: up to 2.5 points of the mark.

WAIVER
Students may waive continuous evaluation during the first 10 weeks of the term. This waiver must be submitted in writing to the course teaching staff.
The students that waive continuous evaluation will get their total mark by means of the final written test.

In the event that the health situation does not allow conducting the tests in person, another alternative procedure will be activated. In this case, the corresponding adaptation of this teaching guide would be published in egela.

### EXTRAORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

The same criteria as in the ordinary evaluation.
However, those students who have been subject to continuous evaluation may waive it and choose to get their total mark by means of a final written test.

### MANDATORY MATERIALS

Available in the virtual learning classroom and at the reprographic service of the Faculty.

### BIBLIOGRAFÍA

**Basic bibliography**

**Detailed bibliography**
Journals

Web sites of interest
https://www.wolframalpha.com/
COURSE GUIDE 2021/22

Faculty 251 - Faculty of Economics and Business. Gipuzkoa Department
Degree GADEMP20 - Bachelor's Degree in Business Management & Administration
Cycle Not Applicable
Year Not Applicable

COURSE

26431 - Sociology of Economic Organizations: Organizational Change and Innovation

Credits, ECTS: 5

COURSE DESCRIPTION

This subject belongs to the subsidiary subject Innovation and persons. The main objective is that students understand the social nature of the company. A second objective is that students understand innovation in the company context: different innovation processes and innovation results, and the relationship between innovation and its social environment. A third objective is familiarising students with the human resources management skills that are useful in relation to innovation and change processes in the company.

COMPETENCIES/LEARNING RESULTS FOR THE SUBJECT

The following learning outcomes are expected from students:
1.- Students understand the company as a social institution and as a complex organization.
2.- Students understand the main dimensions of the current socio-economic context and the challenges and opportunities that it offers to the company.
3.- Students get to know company structure and dynamics, particularly in relation to change and innovation.
4.- Students should be able to apply this knowledge in order to analyze real cases of change and innovation in the company.
5.- Students identify and propose decisions and ways of acting in order to facilitate innovation and change in the company.

CONTENIDOS TEÓRICO-PRÁCTICOS

TOPIC I: The Company as an Open Socio-Economic System
a) The socio-economic context of the company
b) The company as a complex organization

TOPIC II: Innovation Models and Innovation Sectors: Change of Paradigm in Innovation Studies
a) The traditional and dominant paradigm: the STI model
b) Pluralistic models of innovation: The open innovation model
c) Modalities of innovation
d) Innovative companies: typology
e) Effects of innovation

TOPIC III: Social-Structural Resources and Conditioning for Organizational Change and Innovation
a) Territorial basis of the company
b) Economies of scale and agglomeration economies
c) The new global geography of innovation

TOPIC IV: Organizational Change and Innovation Management
a) Human resources and human capital management
b) Knowledge and innovation management
c) Innovation culture in the company
d) Possibilities and limits of organizational change and innovation

TEACHING METHODS

In the class sessions, the lecturer will first present the theoretical bases of the different topics. Practical work will be then carried out based on the analysis of information such as texts, readings, statistical data, and media content. Debates and presentations will also take place in class time.

In addition, students will carry out practical tasks in teams of 4 persons and will analyze practical cases related to the different topics. They will be presented and debated in class time.
### Types of Teaching

<table>
<thead>
<tr>
<th>Types of teaching</th>
<th>M</th>
<th>S</th>
<th>GA</th>
<th>GL</th>
<th>GO</th>
<th>GCL</th>
<th>TA</th>
<th>TI</th>
<th>GCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of face-to-face teaching</td>
<td>35</td>
<td>2.5</td>
<td>7.5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horas de Actividad No Presencial del Alumno/a</td>
<td>52.5</td>
<td>3.75</td>
<td>11.25</td>
<td>7.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- M: Lecture-based
- S: Seminar
- GA: Applied classroom-based groups
- GL: Applied laboratory-based groups
- GO: Applied computer-based groups
- GCL: Applied clinical-based groups
- TA: Workshop
- TI: Industrial workshop
- GCA: Applied fieldwork groups

### Evaluation Methods

- Continuous evaluation
- End-of-course evaluation

### Evaluation Tools and Percentages of Final Mark

- Written test, open questions 50%
- Teamwork assignments (problem solving, Project design) 40%
- Oral presentation of assigned tasks, Reading 10%

### Ordinary Examination Period: Guidelines and Opting Out

Evaluation will be of a continuous nature and will be based on the following items:
- A written exam on the theoretical content of the course (50% of the final mark).
- Practical tasks and practical cases worked on throughout the course by the teams: written reports (40% of the final mark), debates and presentations (10%).

In order to access this evaluation system, students will have to attend at least 80% of the class sessions.

They will have to pass both the written exam and the practical part.

According of the University of the Basque Country regulations for undergraduate studies, students can opt out of the continuous evaluation system. In this case they will have the opportunity to be evaluated on the basis of a final exam. This exam will consist of both theoretical and practical questions and exercises, enabling them to obtain 100% of the mark.

### Extraordinary Examination Period: Guidelines and Opting Out

In the extraordinary evaluation modality, students will be evaluated on the basis of a final exam. This exam will consist of both theoretical and practical questions and exercises, enabling them to obtain 100% of the mark.

### Mandatory Materials

The detailed schedule of the course and the core texts and materials will be available on the university website (eGela).

### Bibliografía

**Basic bibliography**


**Detailed bibliography**

Ashgate.

Journals
Arbor. Ciencia, pensamiento, cultura (CSIC)
Cuadernos de gestión (Instituto de Economía Aplicada a la Empresa de la Universidad del País Vasco)
Ekonomiaz. Revista vasca de economía. (Gobierno Vasco)

Web sites of interest
ADEGI. Asociación de Empresarios de Gipuzkoa: www.adegi.es
COTEC. Fundación Cotec para la Innovación: http://cotec.es/
INNOBASQUE. Agencia Vasca de la Innovación: www.innobasque.com
NESTA: http://www.nesta.org.uk/
The Young Foundation: https://youngfoundation.org/

OBSERVATIONS
If health circumstances require non-contact teaching and evaluation, this evaluation will be adapted so that:

a) Continuous evaluation will be supported by the different theoretical / practical works to be carried out by the students, individually, during the course (100%).

b) Final evaluation will consist of an oral exam (50% of the final grade) and a practical exercise (50% of the final grade).

This subject is included in "English Friendly Course" initiative.
It means that foreign students may follow the main contents of the subject and communicate with the teacher in English. The teacher will provide the course program, core bibliography and complementary materials in English. Tutoring, practical tasks and written exam could be also done in this language.
The detailed schedule of the course and the core texts and materials will be available at university website (eGela).
SUBJECT: INNOVATION POLICIES AND SYSTEMS
Minor: PEOPLE AND INNOVATION
Academic year: First Semester; 2020/2021
Number of Credits: 5

Professor: Amaia Altuzarra
Room: 01A
Class Time: Wednesdays & Thursdays 9-11:00 (weeks 1-5) and 9:30-11:00 (weeks 6-15)

COURSE OVERVIEW
The aim of the course INNOVATION POLICIES AND SYSTEMS is to study a broad range of topics on innovation that includes innovation measurement, determinants and strategies. It also covers the study of characteristics and functions of the innovation systems and how public policy can affect innovation and promote competitiveness.

This course is oriented to those students interested in understanding the role of innovation in the competitiveness of firms, regions and countries. The course provides future graduates with tools to understand the main elements and determinants of innovation activities and innovation systems, issues that can be useful for the decision making process in the professional practice.

COMPETENCIES OF THE COURSE

| Cē1. | Acquire a conceptual and empirical base to understand how innovation affects economies and firms |
| Cē2. | Analyse real cases and discuss the implications for firms and countries. |
| Cē3. | Establish the appropriate connections between actors in the innovation system and the results of innovation |
| Cē4. | Assess the effects that innovation policy may have on firms, regions and countries. |
| Cē5. | Critically analyse, using real data, specific aspects of innovation in firms, sectors, regions and/or countries. |

RESULTS OF THE LEARNING PROCESS

| Rē1. | Classify and relate the different types and indicators of innovation and describe their relevance for firms and the economy |
| Rē2. | Explain the production of innovation according to different approaches |
| Rē3. | Interpret the role of actors of the innovation system to foster competitiveness in firms, sectors, regions and countries. |
| Rē4. | Explain the use of the different sectoral patterns of innovation |
| Rē5. | Classify and relate the main elements that make up the innovation system as well as describe the role that those elements have in the functioning of the system |
| Rē6. | Explain the determinants of innovation and how they relate with innovation |
| Rē7. | Extract relevant information on a real situation or occurrence and produce and interpret in terms of innovation and competitiveness |
### COURSE RULES

| Academic Honesty | This course has a zero tolerance for plagiarism. This includes downloaded material from Internet, copied passages from a book or other sources without proper acknowledgment of the source. In Egela the proper forms of citation will be published. |
| Assignment submission | All assignments (individual and group tasks) are due on the date specified, uploaded in the Egela platform. Late assignment will have 50% penalty. |
| Class Attendance | This course is oriented to encourage discussion and requires a high level of participation. Therefore, regular attendance is expected. |
| Class interruptions | Class participation is relevant for the dynamic of the course and for learning. Electronic devices are allowed to follow the lecture or search information related to the class. Mobiles and other devices should remain silent unless otherwise noted. |
| Gender perspective | This course will ensure a non-sexist behaviour and use of language. |
| Sustainability | In this course we intend to contribute collectively and individually to the objectives of sustainable development |

### TOPICS

#### TOPICS (*)

**Topic 1. Innovation: basic concepts**  
This topic answers basic questions regarding innovation: what is innovation?, how innovation is produced?  
1.1. What is innovation?  
1.2. Types of innovation  
1.3. How innovation is produced?  
1.4. Open innovation

**Topic 2. Measuring innovation**  
This topic studies the measurement of innovation. Traditional and current indicators are discussed.  
2.1 Introduction: Conceptual foundation for measuring innovation  
2.2 Innovation indicators  
2.3 Oslo Manual

**Topic 3. Determinants of innovation**  
This topic addresses the innovation determinants and how they affect different firms

**Topic 4. Innovation in sectors**  
This topic focuses on the differences in innovation across sector. Different seminal works are analysed.  
4.1 Introduction  
4.2 Transit map  
4.3 Sectoral patterns of innovation  
4.4 Technological regimes

**Topic 5. Innovation Systems**  
This topic studies the elements that make up an innovation system, distinguishing the different agents and institutions and the mechanisms of interaction among them  
5.1 Introduction  
5.2 Innovation Systems Approach  
5.3 Components and Functions of Innovation Systems

**Topic 6. Innovation policies**  
This topic addresses the justification of public intervention in the innovation field from different theoretical perspectives. It also revise the scientific, technological and innovation policies.  
6.1 Theoretical justification of public intervention  
6.2 Scientific, technological and innovation policies

(*) Course introducing session (2 hours)
TEACHING AND LEARNING METHODOLOGY

The course has a virtual classroom in Egela where all information related to the course (student guide, weekly planning schedule, calendar, office hours, etc.) and all materials necessary for the development of the course (presentations, class notes, etc.) will be uploaded.

<table>
<thead>
<tr>
<th>TYPE OF LEARNING</th>
<th>TIME DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACE TO FACE LEARNING</td>
<td>Master class (*) 28h.</td>
</tr>
<tr>
<td></td>
<td>Seminars 9h</td>
</tr>
<tr>
<td></td>
<td>Computer practices 13h</td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
</tr>
<tr>
<td></td>
<td>Written essay 2h</td>
</tr>
<tr>
<td>NON-PRESENTIAL ACTIVITY OF THE STUDENT</td>
<td>Personal study 25h</td>
</tr>
<tr>
<td></td>
<td>Preparation of seminars (PBL method.) 46h</td>
</tr>
<tr>
<td></td>
<td>Preparation of written exams 4h</td>
</tr>
<tr>
<td></td>
<td>Total hours 125 hours</td>
</tr>
</tbody>
</table>

(*) Course introducing session is included

WEEKLY PLANNING

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Wednesdays (2 hours)</th>
<th>Wednesdays (2 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introductory session</td>
<td>MC Topic 1. Innovation: basic concepts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 2</th>
<th>MC Topic 1. Innovation: basic concepts</th>
<th>MC Topic 1. Open innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 4</td>
<td>SEM Project: Idea Plan</td>
<td>SEM Project: Idea Plan</td>
</tr>
<tr>
<td>Week 5</td>
<td>SEM Topic 2. Measuring innovation</td>
<td>MC Tema 3: Los factores que influyen en la innovación</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 6</th>
<th>SEM Project: Idea Plan</th>
<th>MC Tema 3: The fishbowl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 7</td>
<td>SEM Basic knowledge test</td>
<td>SEM Project: Idea Plan</td>
</tr>
<tr>
<td>Week 8</td>
<td>SEM Project: Oral presentation</td>
<td>MC Topic 4. Innovation in sectors</td>
</tr>
<tr>
<td>Week 9</td>
<td>MC Topic 4. Innovation in sectors</td>
<td>SEM Project: Innovation Plan</td>
</tr>
<tr>
<td>Week 10</td>
<td>SEM Project: Innovation Plan</td>
<td>MC Topic 5. Innovation Systems</td>
</tr>
<tr>
<td>Week 13</td>
<td>SEM Project: Innovation Plan</td>
<td>SEM Project: Innovation Plan</td>
</tr>
<tr>
<td>Week 14</td>
<td>SEM Basic knowledge test</td>
<td>SEM Project: Innovation Plan</td>
</tr>
<tr>
<td>Week 15</td>
<td>SEM Project: Oral presentation</td>
<td>Project: Oral presentation</td>
</tr>
</tbody>
</table>

MC: Master Class; CP: Computer Practical; SEM: Seminar.

On Thursdays, two students will individually present a piece of news related to innovation (science, technology or innovation) during the first 10 minutes of the class. In addition, they will deliver before December 18, 2020 a written document containing relevant information about the selected innovation. More details about the content of this document will be provided in class. This activity provides 10% of the evaluation.

A collaborative project will be carried out during the term, consisting of two sub-projects: the idea plan and the innovation plan. More details about the content of the Project will be provided in class. This activity provides 60% of the evaluation.

ASSESSMENT SYSTEM

The course assessment consists of two parts. On the one hand, collaborative projects will be assessed, which provides 60% of the grade. In addition, during the academic period, classroom tasks will be carried out, which will contribute 10% of the grade. On the other hand, the theoretical knowledge of the students will be assessed through two written exercises (test type) that will contribute 30% of the final grade. In this test, students must obtain a minimum of 4 points out of 10, in order to add up the scores of the rest of the tasks.
CONTINUOUS ASSESSMENT

FIRST CALL

TOOLS FOR ASSESSMENT

| SEMINARS                              | For the tasks to be assessable, students must have participated in person in the completion of the task………………………………………………………………………….60% |
| CLASSROOM EXERCISES                  | For the tasks to be assessable, students must have participated in person in the completion of the task………………………………………………………………………….10% |
| WRITTEN TEST                         | Written essay : 30% It is necessary to obtain a minimum score of 40% in this part of the assessment |

RESIT

In the extraordinary call, students who have passed the collaborative and individual tasks, but not the written test, may choose between them: (a) take only the written test (30% of the final mark) and (b) take the written test and deliver a significant improvement on one or more projects carried out during the course.

The rest of the students must take the written test and submit all projects completed during the course.

FINAL ASSESSMENT AND CANCELATION

Students may opt out of the continuous assessment system under the terms set out in the UPV/EHU regulations. Students who waive continuous assessment or who are in the justified reasons set out in the Management Regulations for undergraduate, first, and second cycle courses may sit a single final exam that will count for 100% of the assessment and will include the skills developed during the course. This test may require the use of computer resources.

REFERENCES

BASIC REFERENCES

— OECD (2005), Manual de Oslo: Guía para la recogida e interpretación de datos sobre innovación

COMPLEMENTARY REFERENCES


WEP PAGES
Main institutional web pages that provide data on innovation

- Innovation Policy Platform
- Consejería de Industria, innovación, comercio y turismo del Gobierno Vasco
- COTEC: Fundación para la innovación tecnológica
- DRUID resources
- SPRU
- Eurostat
- Instituto Nacional de Estadística
- Política de innovación e investigación en la Unión Europea

Newspapers with national and international information related to economic issues and also to innovation questions.

- Periódico expansión: http://www.expansion.com/
- Periódico 5días: http://cincodias.com/
- CNNenEspañol www.cnnenespañol.com
- Financial Times www.financiaetimes.com

JOURNALS
International journals
- Research Policy
- Economics of Innovation and New Technology
- Journal of Evolutionary Economics
- Small business Economics
- Technovation
- Research-Technology Management
- R&D management
- Journal of Product Innovation Management

National journals
- Cuadernos de Economía y Dirección de la Empresa
- Cuadernos Económicos de ICE
- Información Comercial Española. Revista de Economía
- Papeles de Economía Española
- Revista de Economía Mundial
- Revista Europea de Dirección y Economía de la Empresa

TWITTER AND INNOVATION
INTERNATIONAL FINANCE

DESCRIPTION

The subject de International Finance aims to give the student insights into the currency market. It also sets out to help the student learn about the entities, brokers and other means for the management of operations in the international market. Specifically, the following are analysed:

First, provide information on financial business management in purchase-and-sale operations in the international market.

Second, explain the mechanisms of collection and payment used in international operations, refer to their characteristics, understand their use, study the stakeholders involved in these processes…

Third, go into detail on the currency markets and the business management of exchange rate risk coverage, mainly through exchange rate insurance and currency options.

STRUCTURE:

THEME 1: FINANCIAL BUSINESS MANAGEMENT: INTERNATIONAL PURCHASE-AND-SALE AGREEMENTS

THEME 2: COLLECTION AND PAYMENT MECHANISMS IN FOREIGN TRADE.

THEME 3: EXCHANGE RATE RISK: CURRENCY MARKET AND COVERAGE.

SPECIFIC COMPETENCES

- Skills in the understanding, interpretation and analysis of the data provided by international sources of financial information.

- Mastery of the specific characteristics and operation of the currency market.

- Knowledge of the basic factors that determine exchange rates and their influence on business management.

- Knowledge of the concept of exchange rate risk, its repercussions on business and the methods available for its measurement and coverage.

- Ability to observe, detect and analyse the exchange rate risk of a company or specific organisation, and decide on the management alternatives for that risk, with or without coverage.

OUTCOMES

- Identification of international sources of finance.

- Analysis and solving of problems related to currency markets and exchange rate risk.

- Evaluation and analysis of the reasons that explain exchange rate risk.
- Evaluation of the different methods of management and coverage of exchange rate risk.
- Consultancy reports on the financial situation of a company, drawn up with the appropriate terminology.

**CONTINUOUS ASSESSMENT:**

1) **Final exam.** Assessment will be done through a final exam (70% of the final grade), consisting of a series of questions of a theoretical and practical nature to be answered by the student. This exam will consist of three parts: 1) a test type exam to assess theoretical aspects, in which incorrect answers will be penalised; 2) a series of theoretical-practical questions and 3) an exercise to develop and present conclusions. For this third part to be assessed, the student must pass (4 points out of 10) in the first and second part.

2) **Practical classwork and group work** (30% of the final grade). Up to 1.5 points will be added to the final grade for the preparation and defence of an additional compulsory group project, and a further 1.5 additional points for carrying out activities of compulsory nature in the classroom (presentations, commentaries on articles, participation in debate fora, exercises, etc.) that take place throughout the course. Practial classwork and group work will be provided if the exam note is higher than 4 out of 10.

The points obtained through any of the work/projects proposed (max. 3 points/30% of the final grade) will be considered definitively earned, i.e. they will be valid for the two calls of the following academic year provided a mark of 40% has been achieved in the final exam.
**COURSE GUIDE** 2021/22

**Faculty** 251 - Faculty of Economics and Business. Gipuzkoa Department  
**Cycle** Not Applicable  
**Degree** GADEMP20 - Bachelor's Degree in Business Management & Administration  
**Year** First year

---

### COURSE

- **COURSE**: 25829 - Mathematics II  
- **Credits, ECTS**: 6

---

### COURSE DESCRIPTION

Within the curriculum of the Degree in Business Administration, two mathematics subjects are included: Mathematics I and Mathematics II; both in the first year. The knowledge about univariate calculus acquired in Mathematics I will be basic for the subject Mathematics II, in which the multivariate calculus is studied; these will be fundamental for the analysis and understanding of economic models. The optimization of functions of one and n-variables, with or without constraints, is a very important tool for making decisions in a wide range of economical situations; therefore, we will study some mathematical procedures in order to solve optimization problems. However, we must not forget that the objective of this subject is to provide the students with the quantitative instruments to be able to raise and analyze rigorously economic problems. For that reason, we suggest exercises related to specific economic contexts, from which the students must be able to identify the main components to formulate the corresponding mathematical model to solve it. In addition, we will incorporate the use of the computer to solve problems.

---

### COMPETENCIES/LEARNING RESULTS FOR THE SUBJECT

#### SPECIFIC COMPETENCES

- An ability to manage basic concepts and techniques of multivariate calculus.
- An ability to justify the procedures and the formulation of logical arguments properly using deductive reasoning.
- An ability to formalise quantifiable phenomena related to economic and business science through mathematical models.

#### TRANSVERSAL COMPETENCES

- Develop learning skills to acquire a high degree of autonomy in order to undertake studies later, as well as to improve their own self-training in a context of continuous changes and innovations.
- Know how to search, identify, analyse and synthesize information from various sources, with critical capacity to assess the situation and foreseeable evolution of a company, make reasoned judgments and take decisions.
- Capacity for written and oral communication.
- Ability to work in a team, with responsibility and respect, initiative and leadership.

### KEYWORDS

Calculus for functions of n-variables; Unconstrained and constrained optimization of functions of n-variables; Linear programming; Multiple integral

---

### CONTENIDOS TEÓRICO-PRÁCTICOS

**Unit 1.** Functions of n-variables

- 1.1 Notions of topology.
- 1.2 Functions of two or more variables
- 1.3 Graphic representation. level curves
- 1.4. Continuity of functions of n-variables

**Unit 2.** The Derivative for functions of n-variables

- 2.1 Partial differentiation. Geometrical interpretation
- 2.2 Gradient vector.
- 2.3 Second order partial derivatives. Hessian matrix.
- 2.4 Linear approximation. Plane tangent to a surface
- 2.5 Taylor series expansion.
- 2.6 Derivative of a compound function. Chain rule.
- 2.7 Implicit functions. Derivative.
- 2.8 Homogeneous function. Properties.

**Unit 3.** Optimization of functions of one variable

- 3.1 Previous definitions. Types of optima
- 3.2 Necessary conditions for unconstrained local optimum.
- 3.3 Second order conditions.
- 3.4 Optimization over an interval
- 3.5 Concave and convex functions. Points of inflection.

**Unit 4.** Optimization of functions of n-variables

- 4.3 Types of optima.
4.4 First-order conditions.
4.5 Second-order conditions.
4.6 Concave and convex functions. Sufficient condition of global optimum

Unit 5.- Constrained optimization
5.1 General approach
5.2 Graphic resolution.
5.3 Direct method of resolution by elimination of variables.
5.4 Method of Lagrange multipliers: first-order condition
5.5 Second-order condition.
5.6 Economic interpretation of Lagrange multipliers
5.7 Non-linear optimization with EXCEL SOLVER

Unit 6.- Linear programming
6.1 General approach. Canonical form.
6.2 Geometric representation and graphical resolution of problems with two decision variables. Endpoint Theorem.
6.4 Theorems of duality.
6.5 Linear programming with EXCEL SOLVER.

Unit 7.- Multiple integral
7.1 General approach.
7.2 Double integral over a rectangular region.
7.3 Double integral over a non-rectangular region.
7.4 Average value of a function on a rectangular region

TEACHING METHODS
Lectures (75%); practical classes (25%). Practical classes are teamwork resolution workshops.

- In the event that the health situation, due to the Covid-19, does not allow face-to-face teaching, the teaching would be taught at a distance, using the tools that the University makes available to us.

In the event that the health situation does not allow team activities, these will be carried out individually.

TYPES OF TEACHING

<table>
<thead>
<tr>
<th>Types of teaching</th>
<th>M</th>
<th>S</th>
<th>GA</th>
<th>GL</th>
<th>GO</th>
<th>GCL</th>
<th>TA</th>
<th>TI</th>
<th>GCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horas de Actividad No Presencial del Alumno/a</td>
<td>45</td>
<td>9</td>
<td>6</td>
<td>67,5</td>
<td>13,5</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legend: M: Lecture-based</td>
<td>S: Seminar</td>
<td>GA: Applied classroom-based groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA: Workshop</td>
<td>TI: Industrial workshop</td>
<td>GCA: Applied fieldwork groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Evaluation methods
- Continuous evaluation
- End-of-course evaluation

Evaluation tools and percentages of final mark
- Written test, open questions 75%
- Teamwork assignments (problem solving, Project design) 25%

ORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

GUIDANCE ON CONTINUOUS EVALUATION
- Final written test: up to 7.5 points of the mark.
- Individual evaluation of teamwork (problem solving, project design, Individual work): up to 2.5 points of the mark.

WAIVER
- Students may waive continuous assessment up to 4 weeks before the end of classes
- This waiver must be submitted in writing to the course teaching staff.
- The students that waive continuous evaluation will get their total mark by means of the final written test.
In the event that the health situation does not allow the final test to be carried out in person, the procedure specified in the eGela student guide for such situations would be activated.

EXTRAORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

The same criteria as in the ordinary evaluation. However, those students who have been subject to continuous evaluation may waive it and choose to get their total mark by means of a final written test.

MANDATORY MATERIALS

Available in the virtual learning classroom and at the reprographic service of the Faculty.

BIBLIOGRAFÍA

Basic bibliography


Detailed bibliography


Journals

Web sites of interest

https://www.wolframalpha.com

OBSERVATIONS
SUBJECT: ECONOMIC STRUCTURE
Academic year: Second Semester; 2020/2021
Number of Credits: 6
Professor: Amaia Altuzarra

COURSE OVERVIEW
The course ECONOMIC STRUCTURE aims to analyse the functioning of the world economy, its economic structure and the relationships established between the actors involved in it. The resources of the economy and their distribution, the main economic macro-magnitudes and the main causes of external imbalance are studied. Finally, they study the main current problems that include sectoral, commercial, technological and financial issues, among others. The course is aimed at students who are interested in understanding the functioning of the economic system, the role of the foreign sector in shaping economic growth and the productive structure of countries. The materials provided are in Spanish and English, so a knowledge of English at reading level is recommended.

COMPETENCES OF THE COURSE

<table>
<thead>
<tr>
<th>Ce1.</th>
<th>Analyze an economy in its specific institutional framework, synthesizing the results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ce2.</td>
<td>Apply theoretical knowledge to the identification and interpretation of possible solutions to the specific problems of an economy in general and of the Spanish economy in particular</td>
</tr>
<tr>
<td>Ce3.</td>
<td>Mastering economic concepts, analytical tools and statistical sources for structural economic analysis</td>
</tr>
<tr>
<td>Ce4.</td>
<td>Acquire skills for scientific research, including hypothesis raising, search and treatment of information sources, collaborative work, and build a coherent discourse</td>
</tr>
<tr>
<td>Ce5.</td>
<td>Critically analyze, using real information, specific aspects of innovation in specific companies, sectors, regions and/or countries</td>
</tr>
</tbody>
</table>

RESULTS OF THE LEARNING PROCESS

| Rr1. | Classify and relate the main factors that determine the structure of the national and international economy |
| Rr2. | Explain economic globalization and economic integration and their impact on the international and national economic structure |
| Rr3. | Explain the factors of economic growth in Spain and the structural transformations of the Spanish economy |
| Rr4. | Make critical judgments about the role of financial institutions in defining a country's economic structure |
| Rr5. | Apply the theoretical knowledge acquired to a real situation or event |
| Rr6. | Extract relevant information about a productive sector and produce an economic analysis and interpretation of its evolution |
COURSE RULES

Academic Honesty: This course has a zero tolerance for plagiarism. This includes downloaded material from Internet, copied passages from a book or other sources without proper acknowledgment of the source. In eGela the proper forms of citation will be published.

Assignment submission: All assignments (individual and group tasks) are due on the date specified, uploaded in the eGela platform. Late assignment will have 50% penalty.

Class Attendance: This course is oriented to encourage discussion and requires a high level of participation. Therefore, regular attendance is expected.

Class interruptions: Class participation is relevant for the dynamic of the course and for learning. Electronic devices are allowed to follow the lecture or search information related to the class. Mobiles and other devices should remain silent unless otherwise noted.

Gender perspective: This course will ensure a non-sexist behaviour and use of language.

Sustainability: In this course we intend to contribute collectively and individually to the objectives of sustainable development.

TOPICS

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic 1. Globalization: the players of the world economy</td>
<td>3 hours</td>
</tr>
<tr>
<td>Topic 2. Economic integration: the European integration process</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Topic 3. Economic growth: stages and structural change</td>
<td>6 hours</td>
</tr>
<tr>
<td>Topic 4. Technical change and innovation</td>
<td>3 hours</td>
</tr>
<tr>
<td>Topic 5. Balance of payments</td>
<td>4 hours</td>
</tr>
<tr>
<td>Topic 6. Foreign trade</td>
<td>4 hours</td>
</tr>
<tr>
<td>Topic 7. Population and the labour market</td>
<td>7.5 hours</td>
</tr>
<tr>
<td>Topic 8. The financial system</td>
<td>3 hours</td>
</tr>
<tr>
<td>Topic 9. Public sector institutions</td>
<td>3 hours</td>
</tr>
<tr>
<td>Topic 10. Analysis of the productive sectors</td>
<td>16 hours</td>
</tr>
<tr>
<td>Test of basic knowledge</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

(*) Course introducing session is included

METODOLOGÍA

La asignatura cuenta con un Aula Virtual en eGela en la que se pondrá toda la información de la asignatura (guía docente, planificación semanal, calendario, tutorías) y los materiales necesarios para su desarrollo (presentaciones, notas de clase, colección de problemas, exámenes de años anteriores) utilizados en el aula.
Type of Learning and Time Distribution

<table>
<thead>
<tr>
<th>Type of Learning</th>
<th>Master Class (*)</th>
<th>33h.</th>
<th>Seminars</th>
<th>18h</th>
<th>Computer Practices</th>
<th>6h</th>
<th>Final Exam</th>
<th>3h</th>
<th>Non-Presential Activity of the Student</th>
<th>Personal Study</th>
<th>25h</th>
<th>Preparation of Seminars</th>
<th>46h</th>
<th>Preparation of Exam</th>
<th>4h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total hours</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>60 horas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>90 horas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(57 efectivas)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(*) Incluye la clase inicial de presentación del curso de 2 horas de duración</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment System

The evaluation is mixed: individual and collaborative.

The individual part is evaluated through:

a) Two written tests taken during the school term. Each of them scores 0.5 points. To obtain this score it is necessary to obtain a minimum of 9 points out of 10 in each of the tests.

b) One written test will be held on the official date of the examination and will be marked with 3 points. A minimum of 4.5 out of 10 is required for this test in order to add up the remaining marks.

The collaborative part is evaluated through:

a) Three tasks carried out in seminars in groups of two students. Each of the tasks scores 1 point. Attendance at these seminars is compulsory for both components of the group. Each absence will be penalized by 0.5 points.

b) A collaborative project carried out in seminars and outside the classroom in groups of 4 students. This project scores 3 points. Attendance at these seminars is compulsory for all members of the group. Only two absences will be allowed; above this number, each absence will be penalized by 0.25 points.

Tools for Assessment

| Seminars | Assignments (in pairs)……(3 x 10%)…………………………30%  
Collaborative project…………………………………………30%  
TOTAL SEMINARS:                                        | 60% |
|-----------|---------------------------------------------------------------|
| Written Exam | Written exams (test) during the term……(2 x 0.5%)………………10%  
Final Written exams (test) …………………………………….30%  
A minimum score of 4.5/10 is required.  
TOTAL WRITTEN EXAMS:                                   | 40% |
| Students that do not take the final exam | Those students that have participated in the different tasks during the term but that do not take the final exam will appear as “NO PRESENT” in their final assessment. |
| Resit | In the second call, the final exam is worth 100% of the grade. Students who are exempt from continuous assessment will be evaluated by means of a final exam that comprises 100% of the subject's grade. In addition, they must submit the Collaborative Project individually. |

Students may opt out of the continuous assessment system under the terms set out in the UPV/EHU regulations. In this case, they will be examined by means of a test that will score 100% of the evaluation. This test may be made up of different parts corresponding to the skills worked on during the course.
REFERENCES

BASIC REFERENCES

COMPLEMENTARY REFERENCES
— Banco de España (varios años), Balanza de pagos de España (informe anual).

WEBSITES

Páginas de las principales instituciones que proporcionan fuentes de información para la obtención de datos
— EUSTAT Instituto Vasco de Estadística: www.eustat.es
— Instituto Nacional de Estadística español: http://www.ine.es/
— Banco de España: http://www.bde.es/bde/es/secciones/informes/informes/
— Banco Mundial: http://www.bancomundial.org/
— Eurostat: http://eurostat.eu
— Fondo Monetario Internacional (FMI): http://www.imf.org
— Organización Mundial de Comercio (OMC): http://www.wto.org
— OMC estadísticas de comercio internacional: http://www.wto.org/spanish/res_s/statis_s/statis_s.htm
— Banco Internacional de Pagos de Basilea (BIS): http://www.bis.org/
— Agencia Internacional de la Energía (IEA): http://www.iea.org/
Websites of the main institutions that provide sources of information for data Periódico expansión:

- [http://www.expansion.com/](http://www.expansion.com/)
- Periódico 5días: [http://cincodias.com/](http://cincodias.com/)
- CNNenEspañol [www.cnnenespanol.com](http://www.cnnenespanol.com)
- Financial Times [www.financialtimes.com](http://www.financialtimes.com)

**JOURNAL**

Server for access to Economics and Finance periodicals, accessible through the website of the UPV/EHU Library: [http://www.elsevier.com/wps/find/S04.cws_home/main](http://www.elsevier.com/wps/find/S04.cws_home/main)
COURSE OVERVIEW

The aim of the course INTERNATIONAL FINANCIAL SYSTEM is to study a broad range of topics on the international financial system, financial markets (particularly, the exchange market), monetary policy and central banks. It also covers the study of characteristics of the different generations of financial crisis and special attention is paid to the causes and development of the recent financial crisis.

This course is oriented to those students interested in understanding the functioning of the international financial system and how such functioning can affect business decisions. The course provides future graduates with tools to understand the main elements of the financial system and the way in which international financial institutions may affect its functioning, issues that can be useful for the decision making process in the professional practice.

COMPETENCES OF THE COURSE

CE1. - Acquire a general overview of the international financial systems

CE2. - Analyse real cases related to the international markets and discuss the influence in the financial decisions of firms. For this is required:

- Obtain relevant data from different information sources
- Organize, transform and graphically process data
- Economically interpret results using the theoretical approaches

CE3. - Assess the effects that the exchange rate, expectations and monetary policy can have in the expected returns of financial assets

CE4. - Establish the appropriate connections between financial globalization, capital movements, central banks and the stability of the international financial system

CE5. - Critically analyze, using real data on financial events, the causes and consequences of financial crisis and how crisis are managed by institutions

RESULTS OF THE LEARNING PROCESS

RA1. - Classify and relate the main elements that make up the international financial system (markets, financial intermediaries and institutions) as well as describe the role that those elements have in the functioning of the international financial system

RA2. - Explain how exchange rates are determined according to the Assets Approach Theory, with special attention to expectations.

RA3. - Interpret, in economic terms, the role of central banks in the exchange market and how their interventions may affect exchange rates and financial stability.

RA4. - Make judgements on the role of international financial institutions and regulations over the history of the international financial system
RA5. Apply the knowledge acquired on theories to explain real situations.

RA6. Extract relevant information on a real situation or occurrence and produce and interpretation of a financial event.

COURSE RULES

| Academic Honesty | This course has a zero tolerance for plagiarism. This includes downloaded material from Internet, copied passages from a book or other sources without proper acknowledgment of the source. In Egela the proper forms of citation will be published. |
| Assignment submission | All assignments (individual and group tasks) are due on the date specified, uploaded in the Egela platform. Late assignment will have 50% penalty. |
| Class Attendance | This course is oriented to encourage discussion and requires a high level of participation. Therefore, regular attendance is expected. |
| Class interruptions | Class participation is relevant for the dynamic of the course and for learning. Electronic devices are allowed to follow the lecture or search information related to the class. Mobiles and other devices should remain silent unless otherwise noted. |
| Gender perspective | This course will ensure a non-sexist behaviour and use of language. |

TOPICS

<table>
<thead>
<tr>
<th>TOPICS (*)</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic 1. Overview of the international financial system</strong></td>
<td>6 hours</td>
</tr>
<tr>
<td>This topic presents an overview of the elements (markets and institutions) that make up the financial system.</td>
<td></td>
</tr>
<tr>
<td>1.1. Financial system and international financial system</td>
<td></td>
</tr>
<tr>
<td>1.2. Financial instruments</td>
<td></td>
</tr>
<tr>
<td>1.3. Financial markets</td>
<td></td>
</tr>
<tr>
<td>1.4. Financial institutions</td>
<td></td>
</tr>
<tr>
<td><strong>Topic 2. Current account, external debt and net investment position</strong></td>
<td>10 hours</td>
</tr>
<tr>
<td>This topic studies the main transactions of the balance of payments, with special attention to financial account.</td>
<td></td>
</tr>
<tr>
<td>2.1 Concept and structure of the Balance of Payments</td>
<td></td>
</tr>
<tr>
<td>2.2 Economic interpretation of the main balances of the Balance of Payments</td>
<td></td>
</tr>
<tr>
<td>2.3 Case study: External deficit in Spain</td>
<td></td>
</tr>
<tr>
<td><strong>Topic 3. Exchange market and determination of the exchange rates</strong></td>
<td>10 hours</td>
</tr>
<tr>
<td>This topic addresses the functioning of the exchange market and the determination of the exchange rate. It also explains the relationship between the exchange rate, expectations and monetary policy.</td>
<td></td>
</tr>
<tr>
<td>3.1 What are the exchange rates?</td>
<td></td>
</tr>
<tr>
<td>3.2 Determination of the exchange rate in the short run</td>
<td></td>
</tr>
<tr>
<td>3.3 Exchange rates, interest rates and monetary policy</td>
<td></td>
</tr>
<tr>
<td><strong>Topic 4. Systems of exchange rates, capital flows and globalization</strong></td>
<td>8 hours</td>
</tr>
<tr>
<td>This topic studies how central banks operate in the exchange markets to affect the exchange rates. It studies the fixed and flexible exchange rates systems. It also revises the functioning of the monetary financial system over the history.</td>
<td></td>
</tr>
<tr>
<td>4.1 Introduction: interventions in the exchange markets</td>
<td></td>
</tr>
<tr>
<td>4.2 Central banks</td>
<td></td>
</tr>
<tr>
<td>4.3 Exchange regimes</td>
<td></td>
</tr>
<tr>
<td>4.4 Evolution of the International Financial System</td>
<td></td>
</tr>
<tr>
<td><strong>Topic 5. Innovation Systems</strong></td>
<td>Outside the classroom</td>
</tr>
<tr>
<td>This topic studies the institutions of the international financial system</td>
<td></td>
</tr>
</tbody>
</table>
**Topic 6. Economic and Monetary Union: European Central Bank (ECB)**
This topic studies the role of the European Central Bank in the financial markets and its decision making process.
6.1 Phases of the EMU
6.2 Institutions of the EMU
6.3 The two speed Europe: ERM-II

**6 hours**

**Topic 7. Financial crisis**
This topic studies why crisis occur and why they are so persistent during the last decades. It examines the models of financial crises and explain the causes and development of the recent financial crisis.
7.1 What is a financial crisis?
7.2 Models of financial crisis
7.3 Dynamic of financial crisis in developed and emerging economies
7.4 Case study: the USA financial crisis

**8 hours**

(*) Course introducing session is included

**TEACHING AND LEARNING METHODOLOGY**

The course has a virtual classroom in Egela where all information related to the course (student guide, weekly planning schedule, calendar, office hours, etc.) and all materials necessary for the development of the course (presentations, class notes, etc.) will be uploaded.

<table>
<thead>
<tr>
<th>TYPE OF LEARNING</th>
<th>TIME DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FACE TO FACE LEARNING</strong></td>
<td></td>
</tr>
<tr>
<td>Master class (*)</td>
<td>32h.</td>
</tr>
<tr>
<td>Practical class</td>
<td>4h.</td>
</tr>
<tr>
<td>Seminars</td>
<td>4h</td>
</tr>
<tr>
<td>Computer practices</td>
<td>8h</td>
</tr>
<tr>
<td>Final exam</td>
<td>2h</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NON-PRESENTIAL ACTIVITY</strong> of the student</td>
<td>50 hours</td>
</tr>
<tr>
<td>Personal study</td>
<td>50h</td>
</tr>
<tr>
<td>Preparation of seminars</td>
<td>4h</td>
</tr>
<tr>
<td>Preparation of practical classes</td>
<td>4h</td>
</tr>
<tr>
<td>Preparation of computer practices</td>
<td>8h</td>
</tr>
<tr>
<td>Preparation of exam</td>
<td>9h</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL HOURS</strong></td>
<td>125 hours</td>
</tr>
</tbody>
</table>

(*) Course introducing session is included
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 2</td>
<td>MC</td>
<td>Topic 2. Financial account, external debt and net investment position</td>
<td>PRC</td>
<td>Topic 2. External deficit in Spain</td>
</tr>
<tr>
<td>Week 3</td>
<td>MC</td>
<td>Topic 2. External deficit, financial flows and net investment position</td>
<td>CP 1(2)</td>
<td>Topic 2. External deficit, financial flows and net investment position</td>
</tr>
<tr>
<td>Week 5</td>
<td>MC</td>
<td>Topic 3. Exchange market and determination of exchange rates</td>
<td>MC</td>
<td>Topic 3. Exchange market and determination of exchange rates</td>
</tr>
<tr>
<td>Week 7</td>
<td>MC</td>
<td>Topic 3. Exchange market and determination of exchange rates</td>
<td>SEM 1</td>
<td>Topic 1 – Topic 2- Topic 3</td>
</tr>
<tr>
<td>Week 8</td>
<td>PO 2</td>
<td>Topic 3. Interest rates differentials, expectations and exchange rates</td>
<td>MC</td>
<td>Topic 4. Regimes of Exchange rates, capital flows and globalization</td>
</tr>
<tr>
<td>Week 12</td>
<td>MC</td>
<td>Topic 7. Financial crisis</td>
<td>NO LECTIVO</td>
<td></td>
</tr>
<tr>
<td>Week 13</td>
<td></td>
<td></td>
<td>PRC</td>
<td>Topic 6. Financial crisis in USA</td>
</tr>
</tbody>
</table>

MC: Master Class; PRC: Practical Class; CP: Computer Practical; SEM: Seminar.

**ASSESSMENT SYSTEM**

The assessment system has two parts. First, students have to take a written exam with theoretical and practical short questions. This exam accounts for the 70% of the final grade. Second, group works, computer practices and other tasks will be assessed and account for 30% of the final grade. All tasks and exercises carried out in class are indicative of the questions that will appear in the exams.

<table>
<thead>
<tr>
<th>TOOLS FOR ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEMINARS</strong></td>
</tr>
<tr>
<td><strong>COMPUTER PRACTICALS</strong></td>
</tr>
<tr>
<td><strong>GROUP WORK</strong></td>
</tr>
<tr>
<td><strong>FINAL EXAM</strong></td>
</tr>
<tr>
<td><strong>STUDENTS THAT DO NOT TAKE THE FINAL EXAM</strong></td>
</tr>
<tr>
<td><strong>RESIT</strong></td>
</tr>
</tbody>
</table>

**REFERENCES**

**BASIC REFERENCES**


**COMPLEMENTARY REFERENCES**


Banco de España (2014) Balanza de Pagos y Posición de Inversión Internacional, Banco de España


WEP PAGES

Main institutional web pages that provide data on financial issues

World Bank www.worldbank.org
Bank of International Settlements www.bis.org
International Monetary Fund www.imf.org
European Central Bank www.ecb.int
Spanish Central Bank www.bde.es
Federal Reserve http://www.federalreserve.gov/
General Insurance and Pension Funds Directorate http://www.dgsfp.mineco.es/
National Securities Market Commission www.cnmv.es
Spanish Stock Exchanges and Markets www.bolsasymercados.es
Option and Future Markets www.meff.es
Bond Market www.aiaf.es

Pages with financial data for countries

http://www.finanzas.com
http://es.investing.com
http://es.global-rates.com
http://www.datosmacro.com
http://www.tradingeconomics.com
http://www.bloomberg.com/

Newspapers with national and international information related to economic issues.

Periódico expansión: http://www.expansion.com/
Periódico 5días: http://cincodias.com/
CNN Financial News www.cnfn.com
Financial Times www.financialtimes.com
JOURNALS

International journals

Journal of Banking & Finance
Journal of Financial Economics
Journal of International Economics
Journal of Macroeconomics
Journal of Monetary Economics
Review of Radical Political Economics

National journals

Cuadernos de Economía y Dirección de la Empresa
Cuadernos Económicos de ICE
Información Comercial Española, Revista de Economía
Moneda y Crédito
Papeles de Economía Española
Revista de Economía Financiera
Revista de Economía Mundial
Revista Europea de Dirección y Economía de la Empresa

TWITTER, APPs FOR THE COURSE

TWITTER

@BancoMundial World Bank @federalreserve Federal Reserve
@cincoDiascom Cinco días @IMFNews International Monetary Fund
@DowJones Dow Jones @PrimaRiesgoBot PrimaRiesgoBot
@ebc European Central Bank @WSJecon cs Real Time Economics
@expansioncom Expansión

APPs


Virtual Economy game: Can you control inflation? Have you got what it takes to be among central banking’s best?

Eurorisk: Information on risk Premium, ten-year bond yield, public debt, public deficit, unemployment rate, growth rate, GDP, GDP per capita

Infobolsa: monitor of financial markets, main world indicators, foreign Exchange market, risk Premium, interest rates, etc

This app provides national debt on more than 180 countries.

Renta 4. Allows to know the evolution of financial markets in real time.
Academic Year: 2018/2019
Course: 4th

First course subject of the following degrees: BA in Business Administration and Management; BA in Economics; BA in Finance and Insurance

Department: Financial Economics II
Professors:
Ana Blanco Mendialdua, Ph.D. in Business Administration,
José Manuel Chamorro Gómez, Ph.D. in Business Administration

Course objectives:

The main objective is that students become familiar with banking operations from the point of view of management, taking into account the reality of the financial markets.

The starting point is the definition of the various financial institutions. Later, sources of financing, investment and operations in the financial markets and the proper management of the risks assumed, and final references to the marketing function, are analyzed. It ends giving a global view, studying the different strategic lines followed by credit institutions.

UNITS STRUCTURE:

PART 1. THE BANKING SYSTEM AND ITS ENVIRONMENT
Unit 1. Financial institutions in the current environment

PART 2. BANKING OPERATIVE
Unit 2. Passive Operations
Unit 3. Asset Operations
Subject 4. Nontraditional operations of financial institutions

PART 3. PERFORMANCE AND RISK
Unit 5. Analysis of the financial statements of banks and savings banks
Unit 6. The risk in financial institutions

PART 4. THE ROLE OF MARKETING IN FINANCIAL COMPANIES
Unit 7. The marketing function in financial institutions

Specific competencies of the subject:

1. Outlining the basic concepts of money and financial systems in an economy;
2. Describing the nature of financial instruments, institutions and markets;
3. Describing the role of banks and understand their asset and liability composition
4. Using the methodology applied in making decisions of bank management to achieve efficient use of available resources.
5. To know in depth the banking and financial statements of those entities to optimize their management.
6. Analyze banking risks to learn how to minimize their impact.
7. Applying the knowledge gained to analyze the strategic decisions of financial institutions.

LEARNING OUTCOMES:
- Understanding and managing basic concepts associated with the main perspectives of bank management.
- Acquisition-related knowledge and operational skills in banks.
- Resolution of practical cases related to the subject.

TEACHING METHODOLOGY:
The proposed methodology for the subject is linked to the objectives and competencies of it, and will combine:
- Lectures given by the professor, who will present the basic concepts, tools and techniques that students should know to achieve the proposed knowledge objectives.
- For each of the topics, the students will have a collection of articles and case studies given by the professor. Most of the cases will be solved and discussed by the students working in groups in class hours devoted to workshops and seminars. Students are expected to study each assigned chapter prior to attending those workshops and seminars. Some cases will be worked individually by students outside class hours.

ASSESSMENT SYSTEMS:
The evaluation system is primarily based on a written test. Tests of this course include cases through which it aims to assess the student's ability to apply knowledge acquired during a real or fictional case.

1. Students who choose the continuous assessment system:
First call: The test accounts for 70% of the final grade of the student. 30% of the final grade is based on continuous assessment. The resolution of cases and issues related to the subject in the hours devoted to workshops and seminars will be a 30% of the final grade.
Note: The score on continuous assessment is stored in the two calls for each course. Only during the academic year. If the student fails or does not show the final exam, the mark of continuous assessment is lost.

2. Students who do not benefit from continuous assessment system:
80% of the note using written test, 10% of the mark by a voluntary oral test, and another 10% from a voluntary task. Both first and second call, access to 100% of the grade. The oral test and the voluntary task are only performed once, keeping the note to the two calls for each course. If the student repeats the course, the next course should retake the oral test and the voluntary task.

BASIC TEXTBOOK:

OTHER REFERENCES:
BESSION, JOEL (2010): Risk management in banking; John Wiley and sons ltd.; Chichester, UK.

WEBSITES:
• BANK (WIKIPEDIA): http://en.wikipedia.org/wiki/Bank
• BANK FINANCIAL STATEMENTS: http://www.investopedia.com/articles/stocks/07/bankfinancials.asp
• BANK FOR INTERNATIONAL SETTLEMENTS: http://www.bis.org/
• BASELL COMITEE (BIS): http://www.bis.org/bcbs/
• EUROPEAN BANKING AUTHORITY (EBA): http://www.eba.europa.eu/
• FINANCIAL INTERMEDIARIES: http://www.investopedia.com/articles/stocks/07/bankfinancials.asp
• HOW TO RUN A BANK: http://www.thebanker.com/How-To-Run-A-Bank

JOURNALS:
• International journal of Bank marketing: http://www.emeraldgrouppublishing.com/products/journals/journals.htm?id=ijbm
• International Journal of Central Banking: www.ijcb.org
• Journal of Banking & Finance: www.journals.elsevier.com/journal-of-banking-and-finance
• Journal of Money, Credit and Banking: https://jmcb.osu.edu
• Journal of Money, Investment and Banking:
  www.journalofmoneyinvestmentandbanking.com
CONSOLIDATION OF FINANCIAL STATEMENTS

The subject has two main objectives. On one hand, work on and understand the concept of Group of Companies and the relations between companies that are developed internally. On the other, learn the accounting obligations generated by the existence of a Group of companies, and the different accounting methods required to comply with these obligations.

DESCRIPTORS:
Analysis of the group of companies and the concept and its definition. Consolidation methods Annual consolidated accounts. SDGs. Social and environmental information

CONTENT:
1º) Combinations of businesses: the group of companies.
2º) Consolidation methods: full consolidation and proportional consolidation.
3º) Procedures for participation.
4º) Consolidated annual accounts
5º) Adaptation of the knowledge of business practices to the SDGs of the United Nations.
6º) Social and environmental information of the company.

Cross-cutting skills to be worked on in the subject:
1. The ability to make reasoned opinions, supported by the data obtained
2. The ability to think analytically and reflect critically
3. The ability to acquire the knowledge acquired to work in any field related to business administration and management.

TOPIC 1: CONSOLIDATED FINANCIAL INFORMATION: METHODS OF CONSOLIDATION AND THE EQUITY METHOD.
1. INTRODUCTION: COMBINATION AND RESTRUCTURING OF BUSINESSES.
2. OBJECT OF CONSOLIDATION AND APPLICABLE THEORIES
3. METHODS OF CONSOLIDATION AND THE EQUITY METHOD
4. PROCESS OF PREPARING CONSOLIDATED INFORMATION

TOPIC 2: ADJUSTMENTS AND ELIMINATION IN THE FULL CONSOLIDATION METHOD (1).
ELIMINATION
NET ASSETS INVESTMENT.
1. INTRODUCTION
2. ELIMINATION OF NET ASSET INVESTMENT IN THE FIRST CONSOLIDATION
3. ELIMINATION OF NET ASSET INVESTMENT IN CONSOLIDATIONS AFTER THE FIRST
4. OTHER ELIMINATION OF NET ASSET INVESTMENT

TOPIC 3. ADJUSTMENTS AND ELIMINATION IN THE FULL CONSOLIDATION METHOD (2).
INTERNAL OPERATIONS AND OTHERS.
1. GENERAL PRINCIPLES ON ELIMINATIONS FOR INTERNAL OPERATIONS AND OTHERS
2. ELIMINATION OF RECIPROCAL ITEMS
3. ELIMINATION OF RESULTS FROM OPERATIONS BETWEEN GROUP COMPANIES

TOPIC 4. ADJUSTMENTS AND ELIMINATION IN THE FULL CONSOLIDATION METHOD (3).
ELIMINATION OF NET ASSET INVESTMENT THROUGH VARIATIONS IN PARTICIPATION IN THE SUBSIDIARY COMPANY. INDIRECT PARTICIPATIONS. RECIPROCAL PARTICIPATIONS.
1. INTRODUCTION
3. VARIATIONS IN PARTICIPATION IN THE SUBSIDIARY COMPANY
4. ELIMINATION OF NET ASSET INVESTMENT IN INDIRECT PARTICIPATIONS

TOPIC 5. CONSOLIDATED ANNUAL ACCOUNTS
1. INTRODUCTION
2. CONSOLIDATED BALANCE SHEET
3. CONSOLIDATED PROFIT & LOSS ACCOUNT
4. STATEMENT OF CHANGES IN CONSOLIDATED NET ASSETS
5. STATEMENT OF CONSOLIDATED CASH FLOWS
6. CONSOLIDATED REPORT.

TOPIC 6. COMPULSORY NON-FINANCIAL INFORMATION IN THE ANNUAL ACCOUNTS
7.1. The United Nations Sustainable Development Goals (SDGs)
7.2. Non-financial business information: social and environmental information
7.1. Statement of non-financial information in the consolidated annual accounts
7.3. Other non-compulsory statements: GRI

Lectures: Explanation and analysis of basic concepts and tools and techniques that the student should know to achieve the objectives proposed.
Classroom practical work: Presentation and solving of problems and assumptions to establish the concepts worked on in the lectures.

Written exam, accounting for 70% of the final grade.
Mid-course exams, accounting for 20% plus group work, representing 10% of the final grade.
The written exam must be passed to proceed with the sum of the grade obtained in the practical work. Passing the mid-course exams does not mean non-attendance if not presenting oneself for the final written exam.

Final exam: 100% of the grade. The student will have the opportunity to take the exam without having followed continuous assessment, so he/she may opt for 100% of the grade in the final exam.
Overview

The course Strategic Management: Growth and Development (6 ECTS) is a basic branch subject of the 2nd semester of the 3rd year of the Degree in Business Administration and Management (DBAM).

The general aim of the DBAM (240 ECTS) is to provide the future graduate with both economic and business knowledge as well as the competences and skills necessary to perform a wide range of administrative and management duties. In this respect, the graduate will be able to form part of a company or other organisation by taking up posts that entail high qualifications and major responsibility in any of its functional areas, which will enable them to act professionally both in the private sector (companies, banks, consultancy firms, etc.) and in the public sector (local entities, provincial councils, etc.), in addition to being qualified to set up their own business. They will also be able to take up other professional options such as teaching and research activity.

Learning Objectives: This course is designed to help the student, integrate and apply the earlier functional courses. The course takes the general management point of view, emphasizing the creation, implementation and evaluation of strategy in organizations. In addition to focusing on for-profit businesses, this section includes a module on strategy in non-profits as well. Students will be put in the shoes of top management and make the really important "Big Picture" decisions. Students will develop expertise in the analysis of complex business situations and in clearly presenting their findings both orally and in writing. You will also further develop their ability to work effectively in teams.

Topics

1: GROWTH IN BUSINESS
2: EXTERNAL GROWTH IN BUSINESS
3: STRATEGIC ALLIANCES
4: INTERNATIONALISATION STRATEGY
5: MULTINATIONAL ENTERPRISE

6: INNOVATION ESTRATEGY

Grading Policy

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>35%</td>
</tr>
<tr>
<td>Final Paper</td>
<td>20%</td>
</tr>
<tr>
<td>Presentation</td>
<td>20%</td>
</tr>
<tr>
<td>Participation</td>
<td>20%</td>
</tr>
<tr>
<td><em>5% “floats” to the best of the above</em></td>
<td></td>
</tr>
</tbody>
</table>

Case Discussions/Participation

The case situations the student will be reading about and which the student will be expected to analyze and discuss in class are complex, unstructured and may defy precise treatment. Often, information the student might wish to have will be incomplete or lacking. In addition, students may possess only limited technical or functional expertise. Yet, the students will be expected to commit themselves to a sensible and workable strategic course of action and be able and willing to justify their choice. In that sense, the student will find him-herself in exactly the same situation managers have to face in the "real world". It will be important that the student do quantitative financial analysis as well as qualitative synthesis and analysis of case facts.

Class participation involves summarizing the situation in the case, performing a piece of analysis, asking a helpful question, tying the case together, recommending a solution - in other words, whatever helps the class explore the ramifications of the case effectively. Participation is not just talking for air-time's sake. We are interested in both the quality and quantity of students’s contributions to discussions.

Participation by each student in class discussions, whether in-person or via live chat, is an essential part of this course. Such participation is required because the class discussions are the major vehicle for improving their capabilities in dealing with situations involving the formulation and implementation of strategy. The student should, therefore, prepare the assigned material prior to class, actively participate in class discussions and be ready to defend his/her comments against constructive criticism by other members of the class. As the students mainly will learn from checking their ideas, reasoning, and hunches with those of others, the student does have an obligation to participate. Students own experiences and ideas are an important part of the learning process for all in the class -- while listening is important, so is contributing to the discussion. Attendance by itself does not constitute participation.

Bibliography


Bibliography in Spanish.

Journals

We encourage students to follow stories and reports in business publications like The Wall Street Journal, Bloomberg Business Week, Fortune and The Chronicle of Higher Education and to relate course concepts to day-to-day events in the business world.

Other journals

Ekonomiaz. http://www1.euskadi.net/ekonomiaz
Emprendedores: http://www.emprendedores.es

In the classroom students are expected to act professionally. Therefore, the use of laptops is only permitted for taking notes. Web surfing and other non-class-related activities on laptops are strictly prohibited. Failure to adhere to this policy will jeopardize students participation grade.

More information in class and in the Spanish GUIA https://www.ehu.eus/es/grado-administracion-direccion-empresas-gipuzkoa

Best of luck and hope you enjoy the course!