Universidad de Navarra

Asignatura: **Algebra A (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

Presentación

http://www.unav.edu/asignatura/algebraAeconom/

Algebra A (F. ECONÓMICAS)

El Álgebra potencia la capacidad de análisis y de síntesis. Ayuda a agilizar el razonamiento, estructurar la mente, facilitar el pensamiento abstracto y la capacidad de interrelación.

En cuanto a su inclusión en estudios de Economía/ADE, es esencial para la modelización cuantitativa de la realidad económica, y permite resolver problemas complejos con muchas variables (imposibles de sintetizar de forma intuitiva).

Para alcanzar estos objetivos se estudiarán minuciosamente temas habituales en las matemáticas, tales como programación lineal, matrices y determinantes (operaciones con matrices, transformaciones , etc.), sistemas de ecuaciones lineales, aplicaciones matriciales y de los sistemas de ecuaciones y grafos y redes. Además se incluirán aplicaciones económicas en los distintos temas.

Departamento: Economía.

Facultad: Económicas y Empresariales.

Grados en los que se imparte: Económicas y Administración y Dirección de Empresas**.**

Planes de estudios: ADE, DAE, DEE.

Curso: 1º

Organización: Segundo semestre académico, de enero a mayo.

Tipo de asignatura: Básica.**ECTS**: 6 (150 h)

Idioma en el que se imparte: castellano.

Profesores de teoría y práctica: Jorge Biera Galán, jbiera@unav.es y María Castillo Latorre, mclatorre @unav.es

Horario del curso 2016-17: miércoles de 10:00 a 12:00 horas y viernes de 12:00 a 14:00 horas.

Aula para el curso 2016-17: miécoles: aula 12 y viernes: aula 11.

Competencias

Competencias de la asignatura

Competencias basicas:

CB1) Que los estudiantes hayan demostrado poseer y comprender conocimientos en un área de estudio que parte de la base de la educación secundaria general, y se suele encontrar a un nivel que, si bien se apoya en libros de texto avanzados, incluye también algunos aspectos que implican conocimientos procedentes de la vanguardia de su campo de estudio

CB5) Que los estudiantes hayan desarrollado aquellas habilidades de aprendizaje necesarias para emprender estudios posteriores con un alto grado de autonomía

Competencias generales:

CG3) Dominar herramientas informáticas, matemáticas o técnicas relevantes para la actividad académica y profesional en lo económico y empresarial.

CG5) Razonar de forma autónoma y crítica en temas relevantes para lo económico y empresarial.

Competencias especificas (ECO):

CE10) Aplicar el razonamiento matemático y las herramientas cuantitativas al análisis de la realidad económica.

CE11) Manejar correctamente algunas aplicaciones informáticas en el análisis cuantitativo de las cuestiones económicas.

Competencias especificas (ADE):

CE10) Aplicar el razonamiento matemático y/o las herramientas cuantitativas a la resolución de problemas asociados a la toma de decisiones en la empresa.

Competencias del título

- Desarrollo del razonamiento lógico.

- Capacidad de análisis y síntesis de las problemáticas abordadas.
- Motivación y superación.
- Capacidad de aprendizaje autónomo.
- Sentido de la responsabilidad y del esfuerzo.

Programa

Tema 1: Introducción al Álgebra. Nociones básicas de lógica y conjuntos
Historia del Álgebra. Principios de lógica. Definición de conjunto. Conjuntos numéricos.

Tema 2: Matrices, Determinantes y Sistemas de Ecuaciones Lineales
Definición de matriz. Relación entre aplicaciones lineales y matrices. Operaciones con matrices: suma y producto. Algunas clases de matrices. Definición de determinante. Regla de Sarrus. Propiedades. Cálculo de un determinante. Rango de una matriz. Definición de matriz inversa. Propiedades. Matriz equivalente. Matriz semejante. Definición de un sistema de ecuaciones. Solución de un sistema completo. Solución de un sistema homogéneo. Métodos de resolución. Discusión de sistemas.

Tema 3: Programación Lineal
Problemas de programación lineal. Región factible. Función objetivo. Planteamiento de las restricciones. El modelo matemático. Solución gráfica.

Tema 4: Aplicaciones matriciales y de los sistemas de ecuaciones
Equilibrio de un mercado de bienes. Equilibrio de la renta nacional. Modelo input-output de Leontief. Pronóstico electoral. Condiciones de equilibrio de la migración de la población.

Tema 5: Redes y Grafos
Introducción. Para qué sirven. Definiciones y propiedades: qué son los grafos y redes, tamaño de una red, grado de un nodo y densidad de una red. Accesibilidad, distancias en una red, caminos, ciclos y paseos. Centralidad y poder. Centralidad de grado. Centralidad de cercanía. Centralidad de grado de intermediación. Centralidad de vector propio. Redes económicas.

Actividades formativas

En este apartado se detalla la metodología global de la asignatura y se estiman las horas de carga de trabajo del estudiante.

Existirán actividades presenciales y no presenciales:

1. Actividades presenciales (62 horas totales). En este apartado se engloban las clases teóricas que se darán en grupos grandes, las clases prácticas de problemas, las horas destinadas a la presentación de trabajos, las horas de examen, las horas de pruebas en clase y las horas de práctica de ordenador.

a) Clases teóricas. En 28 clases de 1 hora, se expondrán los puntos más importantes de cada tema de los apuntes de la asignatura dados por el profesor. Se expondrá la teoría de la asignatura acompañada de ejemplos y aplicaciones económicas.

b) Clases prácticas. En 20 clases de 1 hora se resuelven problemas clave y de dificultad avanzada de los distintos temas.

c) Presentaciones de trabajos. (2 horas). A lo largo del curso habrá varios trabajos en grupo consistentes en el estudio de algún caso práctico relacionado con la teoría de la asignatura. Esos trabajos serán presentados al profesor para su evaluación.

d) Exámenes. En total a lo largo del curso, existirán 8 horas de examen escrito.

e) Prácticas de ordenador. Habrá 4 sesiones de prácticas de ordenador de 1 hora de duración cada una de ellas.

2. Actividades no presenciales (88 horas). La principal actividad no presencial será el estudio personal de la asignatura. Además de las horas necesarias para las entregas de los ejercicios pedidos en clase. El número de horas estimadas son 88.

Evaluación

Evaluación estudiantes de Grados

Todos los exámenes descritos en este apartado son obligatorios.

Evaluación ordinaria:

1. Evaluación continua: 30%. Esta evaluación continua consistirá en:

    a) Problemas en cooperación (10%). Está previsto en la semana 5.

    b) Prácticas de ordenador y pruebas en clase (10%)

    c) Videos y presentaciones de trabajos (10%)

2. Examen parcial: 20%. 3 horas de duración. Está previsto en la semana 8.

3. Examen Final: 50%. 3 horas de duración.

Para aprobar la asignatura hay que obtener, por lo menos, un 4 en el examen final.

Evaluación extraordinaria:

En caso de no aprobar la asignatura y utilizar la convocatoria extraordinaria, el alumno/a se examinará de un examen final de valor 70% (3 horas de duración), y el resto de la nota vendrá dada por su puntuación obtenida en la evaluación continua en un 20% (problemas en cooperación 7,5%, prácticas de ordenador y pruebas en clase 5% y videos y presentaciones de trabajos 7,5%) y el examen parcial (10%).

Bibliografía y Recursos

Bibliografía básica

- *Matemáticas para la Economía. Álgebra Lineal y Cálculo Diferencial*. Gloria Jarne, Isabel Pérez-Grasa, Esperanza Minguillón. Ed. McGraw Hill. Localízalo en la Biblioteca
- *Matemáticas para la Economía. Libro de Ejercicios. Álgebra Lineal y Cálculo Diferencial*. Gloria Jarne, Isabel Pérez-Grasa, Esperanza Minguillón. Ed. McGraw Hill. Localízalo en la Biblioteca
- *Matemáticas en los estudios de Economía y Gestión de Empresas: ¿por qué?, ¿para qué?,*

¿cuáles?, ¿son posibles? J. Antomil, M. Arenas, A. Bilbao, P. Gladish, M Rodríguez Uría. Universidad de Oviedo. Localízalo en la Biblioteca

Bilbliografía complementaria

- *Matemáticas para la Economía. Programación Matemática y Sistemas Dinámicos*. Isabel Pérez-Grasa, Esperanza Minguillón, Gloria Jarne. Ed. McGrawHill. Localízalo en la Biblioteca
- *Social and Economic Networks*. Matthew O. Jackson. Princeton University Press. Localízalo en la Biblioteca
- *Graph Theory Applications*. L.R. Foulds. Ed. Springer-Verlag. Localízalo en la Biblioteca
- *Networks, Crowds, and Markets. Reasoning about a Highly Connected World*. D. Easley, J. Kleinberg. Ed. Cambridge University Press.
- *Network Advantage. How to Unlock Value from Your Alliances and Partnerships* . H. Greve, T. Rowley, A. Shipilov. Ed: John Wiley & Sons, Ltd. Localízalo en la Biblioteca

Otros recursos formativos

Ver vídeo

Historia de las matemáticas 1 El lenguaje del univeso 480p
Duración: (44:57)
Usuario: andrestrompa - **Añadida:** 3/05/13

Ver vídeo

La Sabiduría de Oriente - Historia de las Matemáticas - Parte 2/4
Duración: (57:14)
Usuario: Tutorias Personalizadas - **Añadida:** 25/06/15

Ver vídeo

3 La Historia de las Matemáticas Las fronteras del espacio 3 4
Duración: (58:40)
Usuario: Eric Cisneros - **Añadida:** 9/04/14

Ver vídeo

4 La Historia de las Matemáticas Hacia el infinito y más allá 4 4
Duración: (58:11)
Usuario: Eric Cisneros - **Añadida:** 11/04/14

@X@buscador_unika.obtener@X@

Horario de atención

Profesor Jorge Biera Galán: Despacho 2110. Lunes de 16:00 a 17:30 y viernes de 16:00 a 17:30. e-mail: jbiera@unav.es

Profesora María Castillo Latorre: Despacho 2280. Martes de 16:00 a 17:30 y miércoles de 16:00 a 17:30. e-mail: mclatorre@unav.es

Universidad de Navarra

Asignatura: **Antropología B (F. Económicas)**
Guía Docente
Curso académico: 2016-17

Presentación

http://www.unav.edu/asignatura/antropologiaeconomb/

Antropología B (F. Económicas)

Descripción de la asignatura: Mediante la enseñanza de la Antropología se pretende que el estudiante conozca qué y quién es el hombre, desde su origen hasta su muerte, analizando algunas de sus características más importantes, tanto individualmente -su capacidad de conocer y de amar, su libertad y su conciencia-, como en sus relaciones interpersonales -amistad, vida social, trabajo, etc . También se estudia su carácter personal y la trasmisión de la vida.

Nombre de la asignatura: Antropología B (F. Económicas)

Curso: 1º

Duración: Anual

Número de créditos ECTS: 6

Profesores que la imparten:

Primer Semestre: Prof. D. Jon Borobia

Horario: martes 10,00-12,00. **Aula**: 02

Asesoramiento: e-mail jjbor@unav.es

Segundo semestre: Prof. D. Juan Francisco Pozo

Horario: martes 10,00-12,00 **Aula:** 15

Asesoramiento: cita por e-mail (jfpozo@unav.es) o en el despacho

Plan de estudios: 2009.

Tipo de asignatura: Básica.

Competencias

Competencias de la asignatura:

Competencias basicas:

CB1) Que los estudiantes hayan demostrado poseer y comprender conocimientos sobre la naturaleza y dimensiones de la persona, de modo que partiendo de la base de la educación secundaria general, profundice en conocimientos de la vanguardia de su campo de estudio

CB2) Que los estudiantes sepan aplicar sus conocimientos a su trabajo con una presentación adecuada de argumentos y estén en condiciones de resolver los problemas más usuales dentro de su área de estudio

Competencias generales:

CG6) Saber comunicar oralmente o por escrito resultados y análisis de utilidad en todas las facetas de la actividad humana

CG7) Conocer los diferentes entornos en los que desarrolla su trabajo: la coyuntura, los mercados, el contexto histórico, legal o humanístico.

Competencias especificas (ECO):

CE8) Tener conciencia de la dimensión humana de la práctica profesional

Competencias especificas (ADE)

- CE14) Comprender la influencia que el entorno económico tiene en la actividad empresarial.

Competencias del título:

- Desarrollo del razonamiento lógico
- Capacidad de análisis y síntesis de las problemáticas abordadas
- Capacidad crítica y autocrítica
- Fomentar las capacidades de innovación y liderazgo
- Planificación de tareas y gestión del tiempo
- Capacidad de aprendizaje autónomo

- Visión interdisciplinar de las problemáticas económicas

Detalle de las competencias asociadas a la asignatura:

http://www.unav.es/derecho/estudios/grado_derecho_asignaturas.php

Programa

PRIMER SEMESTRE

TEMA I. INDIVIDUO Y CULTURA

1. INTRODUCCION

2. EL ORIGEN DE NUESTRO CONOCIMIENTO. EXPERIENCIA Y CULTURA

   a) El hombre, ser relacional

   b) El hombre, ser social

   c) Influencia de la sociedad en la madurez

   d) Conclusión

3. EL CONTEXTO CULTURAL DEL HOMBRE ACTUAL

   a) La complejidad de la cultura actual. El multiculturalismo

   b) La prevalencia de las concepciones culturales negativas

   c) Los valores positivos de nuestra cultura

TEMA II. EL HOMBRE, SER ORIGINADO

1. INTRODUCCION

2. EL ORIGEN DE LA IDENTIDAD PERSONAL

3. EL ORIGEN DE LOS VALORES

   a) Condiciones ambientales

   b) Definición de cultura y transmisión de los valores

4. CUERPO E INTIMIDAD

5. CUERPO Y TEMPORALIDAD

TEMA III. LA AFECTIVIDAD HUMANA

1. INTRODUCCION

2. LA NATURALEZA DE LOS SENTIMIENTOS

   a) Definición y elementos de los sentimientos

   b) Clasificaciones de los sentimientos

3. ANALISIS DEL SENTIMIENTO DEL AMOR

   a) El origen del amor afectivo

   b) La naturaleza del sentimiento del amor

4. SIGNIFICADOS DE LOS SENTIMIENTOS

   a) El conocimiento resultante de la afectividad

   b) La reflexión sobre los sentimientos

   c) La tendencia afectiva

5. EL EQUILIBRIO AFECTIVO

SEGUNDO SEMESTRE

Contenidos conceptuales

A) Persona y verdad. Perspectivas históricas. La determinación de la identidad personal. Dignidad de la persona

B) Persona y amor. La familia.

C) Antropogía abierta:El discurso sobre Dios

Temas correspondientes de Fundamentos de Antropología, Yepes-Aranguren

Tema7. Las relaciones interpersonales. El amor

Tema 8. La felicidad y el sentido de la vida

Tema 10. Sexualidad. Matrimonio. Familia

Actividades Formativas

PRIMER SEMESTRE

CLASES PRESENCIALES. Exposición de los contenidos del temario de la asignatura, y resolución de dudas, preguntas, posiciones críticas de los alumnos. 24 clases en el primer semestre. Algunas de ellas, alrededor de 5, comprenden la propuesta y entrega de los trabajos de la asignatura, sesiones dedicadas a comentarios sobre el análisis de los textos, ejercicios breves de los alumnos sobre los contenidos teóricos.

ANÁLISIS DE TEXTOS. Los alumnos analizan algunos textos que se relacionan con los temas explicados en clases, y complementan esas explicaciones, de forma que puedan asimilarlos personalmente. Así, incrementan su comprensión lectora, y su capacidad de analizar y sintetizar de forma ordenada las ideas que tales textos ofrecen. Algunas clases y una parte del asesoramiento personal están dedicadas a la resolución de dudas sobre la terminología y argumentos contenidos en ellos. De forma presencial, en clase, los alumnos redactan un ensayo exponiendo algunos de esos temas, de forma que incrementen su capacidad de expresión escrita.

Se enumeran esos textos –seleccionados de YEPES STORK, R. - ARANGUREN ECHEVARRÍA, J., *Fundamentos de Antropología*, Eunsa, Pamplona 1998 (3ª ed. y ss.)- en el apartado de la Bibliografía obligatoria de la asignatura.

TRABAJOS PRÁCTICOS DE LA ASIGNATURA. Los trabajos prácticos de la asignatura se dirigen a relacionar los aspectos teóricos de la materia con sus aplicaciones en ámbitos de la vida real. La primera aplicación de esos aspectos teóricos sería la reflexión sobre sus implicaciones en la vida personal, pero se evita esa línea de trabajo porque implicaría una exposición inconsiderada de la intimidad individual. Es posible, en cambio, establecer la relación entre los aspectos teóricos de la materia y su expresión en obras literarias, cinematográficas, musicales, pictóricas, etc. Encontrar y mostrar esas relaciones significa utilizar la capacidad reflexiva para detectar los fundamentos y dilemas de la antropología que aparecen en las acciones humanas.

Los alumnos realizarán un trabajo a lo largo del semestre en una de esas áreas: artística (pintura y escultura), cinematográfica, literaria. El tema de ese trabajos será cualquiera de los aspectos relacionados con el temario de la asignatura, a elección del alumno. Para respetar el carácter original de cada trabajo, la obra elegida para ser analizada será exclusiva de cada alumno. Se hará pública una lista de alumnos, y obra y autor elegidos de forma que se eviten repeticiones.

PRUEBAS LIBERATORIAS Y EXÁMENES. Prueba escritas que constan de tres o cuatro preguntas de desarrollo, sobre los contenidos explicados en clase.

TRABAJO PERSONAL. Cada alumno estudia los contenidos expuestos en las clases presenciales, y analiza, de forma individual o en grupo, los textos de la bibliografía obligatoria.

ASESORAMIENTO. En el horario de asesoramiento –de lunes a viernes, de 9.00 a 11.00- o en otros momentos, si el alumno tiene dificultades durante ese horario, el alumno puede comentar las dudas, dificultades, ideas personales, etc., que surjan a lo largo de la asignatura.

CRONOGRAMA DE ACTIVIDADES

Septiembre 2016

Martes, 6	Clases: Tema I, e inicio de Tema II
Martes, 13	Propuesta 1º trabajo: antropología e historia del arte
Martes, 20	
Martes, 27	

Octubre 2016

Martes, 4	Clases: Tema II, e inicio de Tema III
Martes, 11	Clases: Resolución de dudas sobre análisis de textos
Martes, 18	

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Martes, 25	Clases: Ensayo presencial sobre análisis de textos

Noviembre 2016

Martes, 8	Clases: Tema III
Martes, 15	Entrega 1º trabajo: antropología e historia del arte
Martes, 22	Examen parcial liberatorio

SEGUNDO SEMESTRE

Trabajo personal autónomo : lectura y comentario de un libro contenido en la relación bibliográfica

Un seminario de debate en grupo reducido

Evaluación

PRIMER SEMESTRE

La evaluación final del primer semestre de la asignatura se realiza a través de

60 % Pruebas liberatorias y exámenes

30 % Análisis de textos

15 % Trabajo de la asignatura

PRUEBAS LIBERATORIAS Y EXÁMENES FINALES

En el periodo anterior a la convocatoria ordinaria de los exámenes finales del primer semestre –en principio, el martes 22 de noviembre, en el horario de clase-, o en las primeras semanas de enero, tiene lugar una prueba liberatoria sobre la materia explicada en las clases, que representa el 60 % de la calificación final, si el alumno obtiene en esa prueba una calificación igual o superior a 5.00 puntos. Si no obtiene esa calificación, el alumno se examina de esa primera parte de la materia en el

examen final –ordinario u extraordinario- de la asignatura.

ANÁLISIS DE TEXTOS

Los alumnos realizarán un ensayos presencial en octubre de 2016, sobre los textos seleccionados de YEPES STORK, R. - ARANGUREN ECHEVARRÍA, J., *Fundamentos de Antropología*, Eunsa, Pamplona 1998 (3ª ed. y ss.), que se relacionan con los temas explicados en las clases. Ese ensayo representa el 25 % de la calificación final del primer semestre.

TRABAJOS

Los alumnos realizarán un trabajo a lo largo del semestre sobre la relación de los temas de la asignatura con la historia del arte, la narrativa cinematográfica y la narrativa literaria. La calificación de ese trabajo representa el 15 % de la calificación final del primer semestre.

SEGUNDO SEMESTRE

Examen escrito: 50 % de la nota final. Esta prueba consistirá en preguntas tipo test opción múltiple y el desarrollo de un tema de teoría

Asistencia y participación en el seminario: 10 % de la nota final.

Trabajo y presentación oral del libro: 15 % de la nota final.

Participación en las clases teóricas: 25 % de la nota final.

PARA SUPERAR LA ASIGNATURA ES IMPRESCINDIBLE APROBAR EL EXAMEN ESCRITO.

NOTA FINAL DE LA ASIGNATURA.

La nota final de la asignatura, si se aprueban los dos semestres, será la nota media de las dos partes de la asignatura, cada una de las cuales contará el 50 %.

Si un alumno aprueba un semestre y suspende el otro, en la convocatoria extraordinaria solo se examinará de la parte suspendida.

Calificación "no presentado".

En el acta de la asignatura aparecerá como "no presentado" el alumno que, por las razones que sean, no realiza el examen escrito, aunque haya cubierto las otras partes de la asignatura, cuya nota se mantendrá para futuras convocatorias.

Bibliografía y Recursos

PRIMER SEMESTRE

Bibliografía obligatoria

Los epígrafes señalados a continuación del manual YEPES STORK, R. - ARANGUREN ECHEVARRÍA, J., *Fundamentos de Antropología*, Eunsa, Pamplona 1998 (3ª ed. y ss.) Localízalo en la Biblioteca

TEMA II

Capítulo 1. La vida sensitiva. 1.8 Apéndice. El origen del hombre

Capítulo 3. La persona. 3.3 La persona en el espacio y en el tiempo. 3.4 La persona como ser capaz de tener

TEMA III

Capítulo 2. Lo intelectual y lo sentimental. 2.4 Emociones y sentimientos. 2.5 Reflexiones sobre los sentimientos. 2.6 Dinámica afectiva y armonía psíquica

Capítulo 7. Relaciones interpersonales. 7.3 Definiciones del amor y sus clases. 7.7 Definición de amistad. Sus grados

Bibliografía complementaria:

Brague,Rémi. *Europa, la vía romana*. Gredos, Madrid 1995. Localízalo en la Biblioteca

Giorgio Paolucci y Camille Eid. *Cien preguntas sobre el Islam: entrevista a Samir Khalil Samir*. Ediciones Encuentro, Madrid 2003.Localízalo en la Biblioteca

Guardini, Romano. *La esencia del cristianismo*. Cristiandad, Madrid, 2002. Localízalo en la Biblioteca

Lewis, Clives Staples. *El problema del dolor*. Rialp. Localízalo en la Biblioteca

Lewis, Clives Staples. *La abolición del hombre*. Ediciones Encuentro. Localízalo en la Biblioteca

Llano, Alejandro. *Humanismo cívico*. Ariel, Barcelona, 1999. Localízalo en la

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Biblioteca

López Moratalla, Natalia. *La dinámica de la evolución humana. Más con menos*. Eunsa, Pamplona 2007. Localízalo en la Biblioteca (versión electrónica) Localízalo en la Biblioteca (versión impresa)

Morales, José. *El valor distinto de las religiones*. Rialp, Madrid, 2004. Localízalo en la Biblioteca

Ratzinger, Joseph. *Fe, verdad y tolerancia*. Sígueme, Salamanca 2005. Localízalo en la Biblioteca

Terrasa, Eduardo. *El viaje hacia la propia identidad*. Eunsa, Pamplona, 2005. Localízalo en la Biblioteca

Von Hildebrand, Dietrich. *El corazón: un análisis de la afectividad humana y divina*. Palabra, Madrid, 1997. Localízalo en la Biblioteca

SEGUNDO SEMESTRE

Manual de R. Yepes- J. Aranguren, *Fundamentos de Antropología***.** Localízalo en la Biblioteca
Existe versión on line en: http://ezproxy.si.unav.es:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,url&db=cat00378a&AN=bnav.b2723125&lang=es&site=eds-live&scope=site

Garcia-Cuadrado, J.A. *Antropología filosófica* (Pamplona, Eunsa, 2010, 5ª ed.)
http://ezproxy.si.unav.es:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,url&db=cat00378a&AN=bnav.b2723125&lang=es&site=eds-live&scope=site

RELACIÓN DE LIBROS POSIBLES PARA EL COMENTARIO DE TEXTO

*Cuando el mundo gira enamorado, Rafael de los Ríos*Localízalo en la Biblioteca*s La muerte de Iván Ilitch, León Tolstoi*Localízalo en la Biblioteca *La ciudad de la alegría, D. Lapierre*Localízalo en la Biblioteca *La rosa blanca, J.M. García Pelegrín*Localízalo en la Biblioteca *La vida es sueño, Calderón de la Barca*Localízalo en la Biblioteca
*La ciudadela, A. Cronin*Localízalo en la Biblioteca *Las confesiones, S. Agustín*Localízalo en la Biblioteca *Crimen y castigo, F..Dostoyevsky.*Localízalo en la Biblioteca

RevistasLocalízalo en la Biblioteca

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Enlaces

Universidad de Navarra

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Horarios de Atención

Juan J. Borobia Laka **E-mail: jjbor@unav.es**

Despacho 2650 en el Edificio antiguo de Bibliotecas (2ª planta)

Lunes a Viernes: 9.00-11.00.

Extensión tlfónica. 802382

D. Juan Francisco Pozo **j**fpozo@unav.es

Capellanía Edificio Amigos

Todos los días por las tardes: 16,30 - 20, (Excepto miércoles: 18,30 - 20,30)

Universidad de Navarra

Asignatura: **Cálculo II A (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

Presentación

http://www.unav.edu/asignatura/calculo2Aeconom/

CÁLCULO II

Descripción de la asignatura: El objetivo de esta asignatura es proporcionar los elementos básicos de ecuaciones en diferencias y optimización, necesarios para el aprendizaje de otras asignaturas de los grados de Economía y Administración y Dirección de Empresas.

Departamento: Economía

Facultad: Ciencias Económicas y Empresariales

Titulaciones para las que se imparte: ADE, doble ECO+Derecho, doble ADE+Derecho

Curso: 1º

Semestre: 2º

Nº de ECTS: 6 (150 horas de trabajo)

Tipo de asignatura: básica

Idioma: castellano

Profesores:

- Pedro Mendi, pmendi@unav.es, despacho 2490 (2ª planta Torre).
- Montserrat Ana Miranda Galcerán, montse@unav.es, despacho 2110 (Hilera).

Horario de clases y aulas:

- Jueves, 12:00-1:30pm, Aula 12.
- Viernes, 10:00-11:30, Aula 12.

Competencias

COMPETENCIAS BÁSICAS Y GENERALES

BASICAS

CB5) Que los estudiantes hayan desarrollado aquellas habilidades de aprendizaje necesarias para emprender estudios posteriores con un alto grado de autonomía

GENERALES

CG3) Dominar herramientas informáticas, matemáticas o técnicas relevantes para la actividad académica y profesional en lo económico y empresarial.

ESPECÍFICAS

Grado de Economía

CE10) Aplicar el razonamiento matemático y las herramientas cuantitativas al análisis de la realidad económica.

Grado de ADE

CE10) Aplicar el razonamiento matemático y/o las herramientas cuantitativas a la resolución de problemas asociados a la toma de decisiones en la empresa.

Competencias de la asignatura

1. Conocimientos

El alumno debe (saber):

Analizar funciones varias variables.

Optimizar funciones con y sin restricciones.

Resolver ecuaciones en diferencias.

Manejar nociones de sucesiones y series.

2. Habilidades y actitudes

El alumno debe ser capaz de:

Plantear y resolver problemas, usando para ello la herramienta matemática disponible más adecuada.

Adquirir un espíritu crítico ante los resultados obtenidos y discernir cuáles son de utilidad en el entorno económico, empresarial y como fundamento para la toma de decisiones.

Utilizar el lenguaje de la Matemática moderna ya que el trabajo en equipos interdisciplinares obliga al entendimiento entre distintos tipos de profesionales, por ejemplo, economistas, matemáticos, informáticos…

Aprender a gestionar trabajos en grupo.

3. Resultados del aprendizaje

Universidad de Navarra

Al finalizar el semestre, el alumno debería haber adquirido una serie de conocimientos, habilidades y actitudes propias de la asignatura. La consecución de estos objetivos quedará reflejada en las diferentes pruebas y exámenes que se realicen y determinarán el resultado de su aprendizaje.

Programa

Un calendario provisional está disponible aquí.

1-. Funciones de varias variables. [Chapter 11 / Capítulo 15]. Funciones de dos variables. Derivadas parciales de dos variables. Representación geométrica. Superficie y distancia. Funciones de varias variables. Derivadas parciales de funciones de varias variables. Elasticidades parciales. Aplicaciones económicas. [1, 5 semanas].

2-. Técnicas de estática comparativa. [Chapter 12 / Capítulo 16]. La regla de la cadena. La regla de la cadena para varias variables. Derivadas de funciones definidas implícitamente. Otros casos. Funciones homogéneas de dos variables. Funciones homogéneas y homotéticas. Aproximaciones lineales. Diferenciales. Aplicaciones económicas [2,5 semanas].

3-. Optimización de variables variables. [Chapter 13 / Capítulo 17]. Dos variables: condiciones necesarias. Dos variables: condiciones suficientes. Puntos óptimos locales. Modelos lineales con objetivos cuadráticos. Teorema de los valores extremos. Tres o más variables. Comparativa estática. Aplicaciones económicas. [2 ,5 semanas].

4-. Optimización restringida. [Chapter 14/ Capítulo 18]. El método de los multiplicadores de Lagrange. Interpretación del multiplicador de Lagrange. Múltiples candidatos a solución. Por qué funciona el método de Lagrange. Condiciones suficientes. Variables adicionales y restricciones. Comparativa estática. Programación no lineal. Restricciones de desigualdad. Restricciones de no negatividad. Aplicaciones económicas. [2,5 semanas].

5-. Ecuaciones en diferencias. [Capítulo 20]. Ecuaciones en diferencias de primer orden. Estados estacionarios y estabilidad. Ecuaciones lineales con coeficientes variables. Ecuaciones de segundo orden. Ecuaciones de segundo orden con coeficientes constantes. Aplicaciones económicas. [2 semanas].

6-. Ecuaciones diferenciales. [Capítulo 21]. Ecuaciones diferenciales de primer orden. Teoría cualitativa de ecuaciones diferenciales. Ecuaciones diferenciales de variables separables. Ecuaciones diferenciales lineales de primer orden. Teoría cualitativa y estabilidad. Ecuaciones diferenciales de segundo orden. Ecuaciones de segundo orden con coeficientes constantes. Aplicaciones económicas. [2 semanas]**.**

Actividades formativas

La asignatura incluirá diferentes actividades presenciales y no presenciales.

Las clases de la asignatura incluirán sesiones teórico prácticas, sesiones de discusión de problemas y seminarios donde se discutirán aplicaciones a la Economía y la Empresa. Se recomienda asistir a todas las clases.

Además de un examen parcial y otro final, se realizarán dos pruebas de seguimiento sorpresa.

La asignatura incluirá diferentes actividades presenciales y no presenciales.

AF1. Clases presenciales (56 horas)

La asignatura se impartirá en **cuatro sesiones o clases presenciales por semana, cada una de ellas con una hora lectiva**. Esas sesiones combinarán las explicaciones teóricas por parte del profesor/a y la resolución de ejercicios teórico-numéricos Se organizará alguna sesión adicional de repaso de la materia antes del examen final.

AF3. Tutorías (4 horas)

El profesorado estará disponible, en el horario de atención indicado, **para resolver dudas y cuestiones** sobre la asignatura, tanto individualmente como en pequeños grupos.

AF4. Estudio personal (86 horas)

Es **fundamental**, para seguir bien las explicaciones de clase, **estudiar regularmente** los temas que se hayan visto, y acompañarlo de la resolución de problemas

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AF5. Evaluación (4 horas)

El progreso de cada estudiante en la adquisición de las competencias de la asignatura se evaluará con los sistemas de evaluación indicados en el apartado Evaluación. En concreto, habrá 5 pruebas escritas de diferente duración: examen parcial; 2 pruebas de seguimiento de la asignatura y examen final.

Evaluación

La nota final de la asignatura será un promedio ponderado con las siguientes ponderaciones:

Convocatoria ordinaria (mayo)

- Examen parcial: 20%
- Examen final: 60%
- Actividades en clase: 20%

Convocatoria extraordinaria (junio)

- Examen parcial: 20%
- Examen final: 60%
- Actividades en clase: 20%

Metodología

La asignatura incluirá diferentes actividades presenciales y no presenciales.

Las clases de la asignatura incluirán sesiones teórico prácticas, donde se discutirán aplicaciones a la Economía y la Empresa. Se recomienda asistir a todas las clases.

Para cada tema, los estudiantes dispondrán de una colección de problemas para resolver y afianzar los conocimientos aprendidos en clase. En clase, se resolverán algunos de ellos y posteriomente se publicará la solución de los mismos.

Además de un examen parcial y otro final, se realizarán unas pruebas de seguimiento de la asignatura avisadas con una semana de antelación. Las fechas para el parcial y el final serán fijadas por la facultad y se publicarán con la debida anticipación.

Bibliografía y recursos

Bibliografía básica:

- **Sydsaeter, K., Hammond, P., Strom, A. (2012). *Essential Mathematics for Economic Analysis*. 4th edition. Pearson. Localízalo en la Biblioteca**

- **Sydsaeter, K., Hammond, P. y Carvajal, A. (2011). *Matemáticas para el análisis económico.* 2ª edición. Pearson. Localízalo en la Biblioteca (ebook) Localízalo en la Biblioteca (versión impresa)**

Bibliografía recomendada:

- Chiang, A. y Wainwright, K. (2006). *Métodos fundamentales de economía matemática* . 4ª edición. McGraw Hill. Localízalo en la Biblioteca

- Larson, R. y Edwards, B.H. (2011). *Cálculo*. 9ª edición. McGraw Hill. Localízalo en la Biblioteca

@X@buscador_unika.obtener@X@

Horarios de atención

- Pedro Mendi, despacho 2490 (2ª planta Torre). Horario de atención de alumnos: Lunes y martes, 3 :00-4:30pm.
- Montserrat Ana Miranda, despacho 2110 o sala de reuniones R5 (Hilera). Tutorias (unidades 5 y 6) los miércoles de 18:00-20:00 (sin petición de cita previa).

Universidad de Navarra

Asignatura: **Calculus I A (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

Introduction

http://www.unav.edu/asignatura/calculus1Aeconom/

CALCULUS I

Course description: The aim of this course is to provide the basic tools of Differential and Integral Calculus which are necessary to succeed in the following courses that are taking part in the degrees of Economics, Management and Business Administration.

Department: Economics

School: Economics and Business

Degrees: ELG, ECOb, ADEb1

Year: 1st

Semester:1st

ECTS credits: 6 (approximately 150 working hours)

Language: English

Type: compulsory

Instructors:

Fernando Pérez de Gracia (fgracia@unav.es)

Elena M. Diaz (ediaza@unav.es)

María Castillo Latorre (mclatorre@unav.es) - Precalculus and Support classes, held in Spanish

Course schedule and rooms:

- Tuesday, 8.00 -10.00 (room 10)
- Wednesday, 10.00-12.00 (room 10)

Competences

Basic Competencies (Management and Economics)

BC1. Students should demonstrate knowledge and understanding of the subject area based on a general secondary school education. They should have a general level that is well supported by advanced texts, but that also encompasses aspects that suggest knowledge of the leading edge of their field of study.

General Competencies (Management and Economics)

GC3. Mastering the digital, mathematical and technical tools necessary for academic and professional activity in economics and business.

Specific Competencies (Economics)

SC10. Using mathematical reasoning and quantitative tools to analyze the economic context.

Specific Competencies (Management)

SC10. Incorporating mathematical reasoning and quantitative tools in a business's decision-making processes.

Program

1-. Introduction. Summation notation. Rules for sums. Double sums. Economic examples and applications.

2-. Functions of one variable. Basic definition. Graphs of functions. Linear functions. Quadratic functions. Polynomials. Power functions. Exponential functions. Logarithmic functions. Economic examples and applications.

3-. Properties of functions. Shifting of functions. New functions from old. Inverse functions. Graphs of equations. General functions. Economic examples and applications.

4-. Differentiation. Slopes of curves. Tangents and derivatives. Increasing and decreasing functions. Rates of change. A dash of limits. Simple rules for differentiation. Sums, products and quotiens. Chain rule. Higher-order derivatives. Exponential functions. Logarithmic functions. Economic examples and applications.

5-. Derivatives in use. Implicit differentiation. Differentiating the inverse. Linear approximations. Polynomial approximations. Taylor´s formula. Continuity. More on limits. Intermediate value theorem. L´Hôpital´s rule. Economic examples and applications.

6-. Integration. Indefinite integrals. Area and definite integrals. Properties of definite integrals. Integration by parts. Integration by substitution. Infinite intervals of integration. Economic examples and applications.

7-. Single-variable optimization. Simple tests for extreme points. The extreme value theorem. Local extreme points. Inflection points. Economic examples and applications.

Educational Activities

Due to the heterogeneity of the students' mathematical levels (either coming from sciences or from humanities) and aiming to ease the learning process of this course, a test will be held **on Tuesday, the 6th of September** to assess the precalculus level of each student. Those students who had not passed this test (marks less than 6) will have to attend compulsorily support classes focused on those topics that had not been properly understood before, either because they had not been studied or because they had not been learned deeply enough. Students that had passed this initial test will have non-compulsory support classes. Nevertheless a bonus of 5% of the final mark will be given to those students attending support classes or to those that had passed the initial test. More information about these support classes will be given further on.

The course includes different face-to-face and non face-to-face activities.

Face-to-face activities:

1. Theoretical/practical classes: 36 hours.
2. Problem solving classes. Each week a problem set will be assigned and some problems will be discussed in class: 20 hours.
3. Seminars (application to Economics and Business): 4 hours.
4. Exams. Midterm and Final exams: 4 hours.

Non face-to-face activities:

1. Personal solving problems:46 hours.
2. Personal study: 40 hours (there will be support groups for 24 out of these 40 hours).

Total face-to-face activities: 64 hours.

Total non face-to-face activities: 86 hours.

Classes of the Calculus I course will include theoretical and practical sessions, problem-solving sessions and seminars where particular applications to Economics and Business will be discussed. Each week students will be given a set of problems to solve and reinforce the topics that have been learned. One class per week will be devoted to discuss these exercises.

Apart from a midterm and a final exam, four tests will be held. Dates for the midterm and final exams will be fixed by the faculty and will be published in due course.

Precalculus and Support classes

- They will consist of two weekly hours (in small groups) where those problems that have been assigned the previous week will be discussed. Sets of problems will be available on the web.
- The distribution of groups will be published at the end of the first week of classes.
- From October onwards, the precalculus classes will be focused on the reinforcement of the units being taught throughout the Calculus I course.
- The first week of October an optional test will be held. Those students that successfully complete this test may stop attending the support classes. However, if they wish they can continue attending these classes in order to foster those notions being learned in classes. We would like to emphasize

that this test is non-compulsory.
- The 5% bonus requires no more than 2 absences to the support classes which must be properly justified (in case of illness a medical certificate must be provided).

Assessment

The final mark of this course will be the average weight of the following:

December exam

- Midterm exam: 20%
- Final exam (13.XII.2016): 60%
- 4 control tests: 20%
- Pre-Calculus (bonus): 5%

June exam

- Midterm exam: 20%
- Final exam (5.VI.2016): 60%
- 4 control tests: 20%
- Pre-Calculus (bonus): 5%

Bibliography and Resources

- Sydsaeter, K., Hammond, P., Strom, A. (2012). *Essential Mathematics for Economic Analysis.* 4th Edition. Pearson. Find it in the Library
- Chiang, A. and Wainwright, K. (2005). *Fundamental methods of Mathematical Economics.* 4th Edition. McGraw Hill. Find it in the Library
- Larson, R. and Edwards, B.H. (2011). *Calculus*. 9th Edition. McGraw Hill. Find it in the Library

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Office hours

Fernando Pérez de Gracia: Monday, 16.00-19.00

Elena M. Diaz: Thursday, 16:00-17:00, Building Amigos Seminar Room 14

María Castillo Latorre: Wednesdays, 18:00-20:00 and Fridays, 11:00-12:00

Universidad de Navarra

Asignatura: **Financial Accounting I A (F.Económicas)**
Guía Docente
Curso académico: 2016-17

Presentación

http://www.unav.edu/asignatura/accountingeconm/

Financial Accounting I A (F.Económicas)

The aim of the Financial Accounting I course is to build a strong foundation for learning about financial reporting and corporate finance. Accounting is the language of business and we will work hard to learn that language, so that students can understand financial documents, stories and presentations. Students will recognise how the language affects our perception of value creation and management performance.

The course covers the key terms and concepts of accounting as defined by the International Financial Reporting Standards, the construction of financial statements, and the methods of recording transactions. Upon completion of the course, students should be able to explain accounting terms, interpret amounts found in financial statements, and predict the effect of various transactions on the financial results and the financial standing of a company.

The detailed goals of the course are:

1. describe the context and purpose of accounting financial reporting,
2. describe the legal framework for accounting and financial reporting,
3. describe the fundamental bases of accounting,
4. describe and use the double-entry accounting system,
5. record various transactions and events associated with day-to-day business,
6. prepare a trial balance, identify and correct accounting errors,
7. prepare simple financial statements for small and medium companies,
8. interpret amounts in the financial statements.

Competencias

Basic Competencies (Management and Economics)

BC1. Students should demonstrate knowledge and understanding of the subject area based on a general secondary school education. They should have a general

level that is well supported by advanced texts, but that also encompasses aspects that suggest knowledge of the leading edge of their field of study.

BC2. Students should be able to apply their knowledge to their job or vocation in a professional way. They should be able to prove their general competencies by developing and defending arguments and solving problems within their subject area.

BC5. Students should have developed the learning skills necessary to undertake higher programs of study with greater independence.

General Competencies (Management and Economics)

GC2. Identifying, incorporating and using acquired knowledge in argument, discussion and problem solving as they apply to economics and business.

Specific Competencies (Economics)

SC14. Understanding the theory and practice of business operations.

Specific Competencies (Management)

SC1. Possessing a thorough knowledge of the General Accounting Plan as well as accounting and finance theory.

SC3. Analyzing a business's real-life accounting and finance situation and making projections about its future.

Programa

Week	Dates	Topic	Readings
1	5-9 Sept.	The language of accounting: users and the regulatory framework	Ch. 1
2	12-16 Sept.	The financial statements	Ch. 2
3	19-23 Sept.	The accounting process	Ch. 3
4	26-30 Sept.	End-of-period adjustments	Ch. 4
5	3-7 Oct.	Accounting for commercial companies	Cases
6	10-14 Oct.	Accounting for manufacturing companies	Cases
7	17-21 Oct.	Practice and MIDTERM EXAM	
8	24-28 Oct.	Accounting regulation	Ch. 5
9	31-4 Nov.	Revenue recognition	Ch. 6
10	7-11 Nov.	Accounting for inventory	Ch. 9
11	14-18 Nov.	Shareholders' equity	Ch. 11

12	21-25 Nov.	Financial statement analysis	Ch. 15
13	28-2 Nov.	Exercises and review	
Session		FINAL EXAM	

Actividades formativas

There is quite a lot of technical material in the course and some of it is tricky. Explanation and illustration of that material using lectures, cases and problem assignments forms the core of the course. The reading and problem assignments for each session will be available in Adi with enough time for preparation.

In order to make the most of this course, I suggest the following routine:

- Before class: Read the relevant chapters in the main textbook.
- In class: Take notes, actively participate in class discussion, take notes, and ask questions.
- After class: Review the topics and work on the practice exercises and homework.

Evaluación

Components of evaluation:

1. Various in-class activities (discussion, tasks, quizzes): 10%
2. Homework assignments (as anounced): 30%
3. Midterm exam (recording transactions and preparing pro forma statements): 20%
4. Final exam (multiple choice and preparing financial statements): 40%

To get a “pass”, students taking the class must a) achieve a grade of 50% or higher in the final exam; and b) achieve a grade of at least 50% in the total course grades.

Homework assignments are the key to passing the course. During the first part of the semester students submit all of their homework. In the second part you select only one major assignment for verification. The homework will be returned to students after verification.

Bibliografía y recursos

The main course-books (You need one only, the one that suits you better):

1. *Financial Accounting and Reporting: A Global Perspective* by H. Stolowy, M.

Lebas and Y. Ding, Cengage Learning, Andover, UK, 4th edition, 2013. There are chapters of the book available online. Find it in the Library
2. Financial Accounting "A Concepts-Based Introduction" by D. Kolitz, Routledge, 2016. Publisher website

Additional reading:

- International Financial Reporting Standards (online from ifrs.org or eurlex, book edition).
- Scholarly articles and media material provided during classes

Important webpages:

- Financial Accounting Standards Board: www.fasb.org/home
- International Accounting Standards Board: www.ifrs.org
- Instituto de Contabilidad y Auditoría de Cuentas (Ministerio de Economía, Gobierno de España): http://www.icac.meh.es/

Horarios de atención

Office hours: Fridays 14.00-17.00, room 4050 in the tower. For questions after the Monday class please contact me by email.

Universidad de Navarra

Asignatura: **Financial Accounting II A (F.Económicas)**
Guía Docente
Curso académico: 2016-17

Presentación

http://www.unav.edu/asignatura/accounting2econom/

Financial Accounting II A (F.Económicas)

Course overview:

The course of Financial Accounting II is an intermediate accounting course which builds on introductory financial accounting, and develops student's critical evaluation of selected financial accounting issues within the international accounting context.

In this course, you will learn the accounting treatment of non-current assets (tangible and intangible), financial assets, liabilities, and leases.

The course is essential for individuals exposed to financial information in the workplace including accountants, auditors, financial analysts, managers, bankers, and accounting regulators. It would also be useful for those not wishing to become accounting practitioners but planning to specialize in areas where accounting knowledge would be an advantage (such as bankers and finance professionals).

Course details:

Degree in Business Administration (*ADE(b)*)

Second Semester - Compulsory course.

Instructor: Diem Nguyen (nguyen@unav.es)

Teaching Assistant: Nicholas Jaeger (nicholas.jaeger@unav.es)

The sessions will be held in **Room 02**, on **Tuesdays (08:00 - 10:00)** and **Wednesdays (12:00 - 14:00)**.

Language: **English**

Competencias

Basic Competencies (Management and Economics)

BC2. Students should be able to apply their knowledge to their job or vocation in a professional way. They should be able to prove their general competencies by developing and defending arguments and solving problems within their subject area.

BC5. Students should have developed the learning skills necessary to undertake higher programs of study with greater independence.

Universidad de Navarra

General Competencies (Management and Economics)

GC2. Identifying, incorporating and using acquired knowledge in argument, discussion and problem solving as they apply to economics and business.

GC5. Developing the capacity for independent critical thought on matters relevant to economics and business.

Specific Competencies (Economics)

SC14. Understanding the theory and practice of business operations.

Specific Competencies (Management)

SC1. Possessing a thorough knowledge of the General Accounting Plan as well as accounting and finance theory.

SC3. Analyzing a business's real-life accounting and finance situation and making projections about its future.

Programa

Course schedule (tentative):

Financial Accounting II (Spring 2017)

Week	Date	Topic	Readings
1	9-13 Jan.	Introduction + Property, Plant and Equipment	Ch. 10
2	16-20 Jan.	Property, Plant and Equipment	
3	23-27 Jan.	Property, Plant and Equipment	Ch. 11
4	30 Jan. - 3 Feb.	Intangible Assets	Ch.12
5	6-10 Feb.	Intangible Assets	
6	13-17 Feb.	Current Liabilities	Ch. 13
7	20-24 Feb.	Current Liabilities	
8	27 Feb. - 3 Mar.	Revision and Midterm Exam	
9	6-10 Mar.	Non-current	Ch. 14

		Liabilities	
10	13-17 Mar.	Non-current Liabilities	
11	20-24 Mar.	Investments	Ch. 17
12	27-31 Mar.	Leases	Ch. 21
13	3-7 Apr.	Leases + Revision	
14	24-28 Apr.	Revision	
	15-May	Final Exam	

Actividades formativas

The course contains a considerable amount of technical material and some can be tricky. The reading and problem assignments for each session will be available on Adi with enough time for prepration.

On the course website on Adi, you will find the course bibliography as well as all course materials, including:

- author presentations of selected book chapters,
- lecture notes (to be posted on Wednesdays and Fridays after class),
- practice exercises,
- assignments.

Do not forget to check the Notice board (*Anuncios*) for the latest updates while the course is running.

In order to make the most of this course, I suggest the following routine:

- Before class: Read the relevant sections/ chapters in the main textbook, or at least go through the chapter presentations which summarize the key contents and problems from the book.
- In class: Pay attention to the lectures, **actively participate** in class discussion, take notes, and ask questions to clarify issues that you find confusing. It is not allowed to use cell phones in class.
- After class: Review the topics and work on the practice exercises.

Evaluación

Your course grades will be based on the following components:

- Class participation and activity: 20%
- Mini-tests: 20%
- Midterm exam: 20%
- Final exam (minimum score required: 40%): 40%

Please note that you must achieve a grade of 40% or higher in the final exam for the final exam results to be included in the course grade.

To get a pass, you must: (a) achieve a grade of at least 40% in the final exam; and (b) achieve a grade of at least 50% in the total course grade.

Bibliografía y recursos

Main textbook:

Kieso, Weygandt, Warfield (2014): Intermediate Accounting (IFRS edition), ed. Wiley & sons, second edition Find it in the Library

Further references:

Books:

Weygandt, Kimmel, Kieso (2011): Financial Accounting (IFRS edition), ed. Wiley & sons Find it in the Library

Stolowy, Lebas and Ding (2013): Financial Accounting and Reporting: A Global Perspective, ed. Cengage Learning, fourth edition. Find it in the Library

Wahlen, Baginski and Bradshaw (2011): Financial Reporting, Financial Statement Analysis, and Valuation, ed. South-Western Cengage Learning, seventh edition Find it in the Library

Important webpages:

Financial Accounting Standards Board: www.fasb.org/home

International Accounting Standards Board: www.ifrs.org/home

Instituto de Contabilidad y Auditoría de Cuentas (Ministerio de Economía, Gobierno de España): http://www.icac.meh.es/

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Horarios de atención

Office hours: Wednesdays, 16.15 - 17.45, Thursday 16.15-17.45

Place: room 2520 (in the Tower)

Universidad de Navarra

Asignatura: **Fundamentals of Finance A (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

1. General info

FUNDAMENTALS OF FINANCE (GROUP A) 2016-17

1. General Information

Professors:	Dr. Ian P.L. Kwan
Office:	4030 (La Torre)
Email:	ikwan@unav.es
Telephone:	948 425 600 ext 802496
Language/in-charge:	English section
Office hours:	Thursdays, 11:00 – 13:00

Remarks:
1. Dr. Kwan will give most of the classes in the English Section.

2. If you write us an email, please state your group and class number (for example, A21 means Group A, Class number 21).

Teaching dates:	1 September to 22 December 2016
School/ Dept:	School of Economics and Business/ Business
Type of course:	Fundamental/ Basic
Course credits:	6 ECTS = 60 hours class time
Semester:	First

Universidad de Navarra

Undergrad degree: First year of:

- International Degree in Management (ADEb) – Groups 1&2
- International Degree in Economics (ECOb)
- Global Management and Law (ADEbD)
- Global Economics and Law (ECObD)

Second year of:

- Economics, Leadership and Governance (ELG)

Other:

- Exchange students taking a first course in Finance
- Liberal arts students taking a first course in Finance

Schedule: Group A: ADEb(1)/ECOb/ELG on

Mondays 12-14h (Aula 01)

Fridays 10-12h (Aula 11)

Group B: ADEb(2)/ADEbD/ECObD on

Mondays 10-12h (Aula 10)

Wednesdays 10-12h (Aula 01)

Subject website: Some materials can be accessed externally via:

http://www.unav.es/asignatura/fundafinanceAeconom/

http://www.unav.es/asignatura/fundafinanceBeconom/

(NOTE: Get full access to all materials through the UNAV ADI system)

Universidad de Navarra

2. Subject Info

2. Subject Information

Subject description:

This course aims to provide the first year students a sound introduction to the use of mathematics in business and personal finance applications.

After attending this course, the student should be able to: (1) Set out and solve problems and real cases involving concepts of simple interest, compound interest and annuities; (2) Know the financial vocabulary.

Taking this course will help students acquire the following competences and skills: (1) Improve logical reasoning; (2) Improve analytical and synthesis skills; (3) Improve autonomous learning skills; (3) Improve work-time organization; (4) Improve work-team abilities.

Emphasized learning outcomes from the study of this module are: (1) Be able to solve problems with the concepts of simple and compound interest and annuities; (2) Be able to apply these concepts to real life situations such as home-loans, bonds and capital budgeting decisions.

2a. Competences

Basic Competencies (Management and Economics)

BC2. Students should be able to apply their knowledge to their job or vocation in a professional way. They should be able to prove their general competencies by developing and defending arguments and solving problems within their subject area.

BC5. Students should have developed the learning skills necessary to undertake higher programs of study with greater independence.

General Competencies (Management and Economics)

GC3. Mastering the digital, mathematical and technical tools necessary for academic and professional activity in economics and business.

GC4. Teamwork.

GC7. Knowing the different settings in which work is done: circumstances and markets, as well as historic, legal and humanistic contexts.

Specific Competencies (Economics)

SC4. Knowing and soundly handling the fundamental concepts of and methods of finance.

Specific Competencies (Management)

SC10. Incorporating mathematical reasoning and quantitative tools in a business's decision-making processes.

3. Subject Outline

Subject Outline

This subject is made up of 60 hours of class time, which is equivalent to 60 ECTS. Students are expected to dedicate the same amount of personal time to study, preparation of the drill and problem sets and case work as the hours of class time. The approximate class time allocation given to the different topics are given below. The personal study time and work in groups and assignments are suggested times. Students should allocate their time according to their personal needs. At the start of the semester, a more detailed outline of what will be taught and when will be provided and students are expected to use this to prepare accordingly before coming to each class.

Topic 1: Introduction to Finance and Time Value of Money

1. Introduction to Finance
2. Concept of Time Value of Money
3. Problem of Finance Jargon
4. Self-learning Microsoft Excel and calculator skills

Theoretical classes	2 hours	Practical classes/ exam	0 hours
Personal study required	1 hours	Assignment/ group work	0 hours

Topic 2: Time value of money: Single cash flows

1. "interest on principal cash flow" perspective
2. "discount on final cash flow" perspective

3. “effective interest” perspective
4. Use of Excel to value single cash flows

Theoretical classes	4 hours	Practical classes/ exam	4 hours
Personal study required	10 hours	Assignment/ group work	0 hours

Topic 3: Time value of Money: Multiple cash flows

1. Valuation of Cash Flows (*a finite number of different* cash flows)
2. Valuation of Annuities (*a finite number of level* cash flows)
3. Valuation of Perpetuities (*aninfinite number of level* cash flows)
4. Use of Excel to value a stream of cash flows

Theoretical classes	5 hours	Practical classes/ exam	3 hours
Personal study required	9 hours	Assignment/ group work	0 hours

Topic 4: Measuring asset performance

1. Types of asset performance measures
2. Rates of Return
3. Dollar Returns (dollar value)
4. Use of Excel to measure asset performance

Theoretical classes	6 hours	Practical classes/ exam	6 hours
Personal study required	10 hours	Assignment/ group work	1 hours

Topic 5: Applications in Finance

1. Stocks
2. Bonds
3. Mortgages
4. Use of Excel to in each of these applications

Theoretical classes	11 hours	Practical classes/ exam	17 hours
Personal study required	20 hours	Assignment/ group work	6 hours

Self-Learning Microsoft Excel

Microsoft Excel is a standard spreadsheet program that is probably the most widely used calculation software in the world of finance, economics, and accounting. You simply cannot do without learning this software! By the time you finish university, you should have reached intermediate to advanced levels of skills in Excel.

However, in this subject, students will not receive specific lessons on Excel apart from a few tips here and there. Like most professionals who learned Excel from learning-by-doing, we will follow this same pattern of learning: students are expected to learn how to use Microsoft Excel themselves by doing the simple exercises that are set for each of the topics. The subject textbook by Biehler will be helpful in your self-learning. The Excel functions required to these exercises may be in your examinations.

It does not matter which version of Excel use as the basic functions used in this subject are available in versions early as Excel 2003. You may learn to use Excel in Spanish or in English, although it is recommendable that you learn the basic functions in both languages. Since Excel is itself a language, it will be helpful when you need to communicate with others in either language.

4. Assessment

4. Assessment / Grading System

Assessment / Grading System

As with all subjects, students will receive a final grade out of 10 that consists of 100% of the assessments. The schedule for Final Exams can be found on the School webpage here.

December Announcement (Total: 100%):

Mini Exam:	5% (Topics 1 & 2)
Mid-term Exam:	20% (Topics 1, 2 & 3)
Final Exam:	30% (All topics)
Class Preparation:	20% (Description below)
Class Participation:	10% (Description below)
Case Group Video:	15% (Description below)

IMPORTANT NOTE: To pass this subject, you must first get a minimum of 4 out of 10 in the Final Exam before any of the other assessments are counted. If you get less than 4 in the Final Exam, then that will be your grade in December and you will have to take the June exam. If you get more than 4 in the Final Exam, your combined grade of the December Exam and other assessments must be at least 5 out of 10 to pass the subject.

Dates of Assessments:

Quiz/Mini Exam:	Monday 26 September 2016, class time
Mid-term Exam:	Monday 17 October 2016, class time
Case Group Videos:	Friday 25 November 2016, 19:00h
Final Exam:	Friday 9 December 2016, 16:00 – 19:00h

June Announcement (Total: 100%):

June Exam:	40% (Friday 9 June 2017, 9:00h-12:00h)
Other assessments:	60%

Like the December announcement, to pass the subject you must first get a minimum of 4 out of 10 in the June Exam before Other Assessments will be counted, and the combined grade of June Exam and Other Assessments must be at least 5 out of 10. Other Assessments include Mini-exam, Mid-term exam, Class Preparation, Class

participation, and Case Group video.

Students Repeating the Subject:

If you are repeating this subject, you do not have to do the Case Group Video. For the December Announcement, your December Final Exam will be worth 45% (30%+15%). All other assessments are required, which means preparing each lesson, coming to class, and participating like everyone else. If you do not pass in December then for the June Announcement, the June Final Exam will be worth 40% and the other assessments (mini-exam, mid-term exam, class preparation and participation) will be worth 60%. This means it is better for you to pass the subject in December since a December final exam is worth more than a June final exam.

Class Attendance:

Class attendance is your responsibility. I will not explicitly take class attendance. Punctual class attendance is required. I will begin classes strictly on time. If you are not in the classroom at the start of the hour, please do *not* come. I will try to make the classes as interesting as possible and make it worth your time to attend. But if you don't want to come or cannot come for whatever reason, I am not going to hold it against you.

Although class attendance is not compulsory, it is directly linked with your class participation grade. If you attend class, you can participate and get class participation grades. Students with good participation grades will have a better chance of improving their grade especially if they are borderline cases. For example, you receive a total of 6.9 ("Aprobado") in all your assessments together. If you received a good class participation grade, there is more chance I will be kind and increase the grade to 7.0 ("Notable"). If your class participation grade is on the borderline between pass and fail, then you deserve no kindness from me.

Class Preparation and Participation:

Students are required to prepare before each lesson according to the Lesson-By-Lesson (LBL) Plan available in ADI. Preparation includes reading the set readings and doing the assigned drills and problem sets for the lesson.

Each week on the same day of your class, *all students* must hand-in their own

solutions to the assigned drills and problem sets. You will receive a grade that counts towards your class preparation. If you can't hand-in the work during the class that the work is due, you can it hand-in before the class or give it to one of your classmates to hand-in for you. Work will *not* be accepted after the due date.

Students are required to participate in class by answering questions regarding the lesson preparation material, asking interesting and well thought questions, and showing a keen interest in the topics. Good quality questions include ones that show you have thought about the problem but that there is something unclear that you want explained. Bad quality questions are those that show little thought about what has been said (repeatedly) before. Each lesson, several students will be randomly selected to answer questions.

The following is a guide to how I will grade *each* class preparation assignment and *each* class participation:

Class Preparation (20%)	Class Participation (10%)
-1 point = work not done	0 point = not present to answer any questions and did not inform me before class of absence
-1 point = work submitted but is terrible/ far below standard required	0 points = couldn't answer a simple question, showing little effort to participate
0.5 points = work done but below standard required	0 points = asked a question that showed no prior thought/ answer was incomplete or inadequate
1 point = work done to required standard	1 point = asked a decent question/ answered a question to the standard expected
2 points = work done very well; a model for others	2 points = asked a very good question/ answered a question very well

NOTE: In order to encourage you, I am in favor of awarding a standard 1 point when I see students making an effort. In exceptional cases I will give 2 points. If you get -1 point, then it is a warning to improve performance.

After the mid-term exam and just before the final exam, I will give an interim grade for class preparation and another for class participation each out of 10. As a guide (the actual grading may be different):

Class Preparation (20%)	Class Participation (10%)
> 80% of maximum points = 9-10	> 80% of maximum points = 9-10
70-80% of maximum = 7-8	70-80% of maximum = 7-8
60-70% of maximum = 5-6	60-70% of maximum = 5-6
< 60% of maximum = 0-4	< 60% of maximum = 0-4

NOTE: Maximum points is the sum of points given to the best performing student.

Examinations:

All examinations are closed-book and consist of problems that require showing step-by-step solutions that demonstrate financial thinking. Some formulae may be given. The problems will be similar to those that appear in the Problem Sets and past exams (which are all available in ADI).

Grading criteria: Students solutions to problems will be graded according to *numerical accuracy* of solution, *clear step-by-step development* of solution, and *clear diagrams* that reflect fundamental financial thinking.

Missing the Final Exam will mean receiving a final grade of “NO PRESENTADO” (“NO SHOW”). If no written justification is provided and verified by the Director of Studies, then it is equivalent to failure.

Case work in groups:

Students will be required to solve a case in groups. You will be assigned to a group according to alphabetical order. A limited time will be given to solve the case. Your group will have to make a video recorded presentation of their solution, upload it to the internet, and email the link to the professor before the deadline (i.e. YouTube-like videos).

*Grading criteria***:** the video should not last more than 3 minutes, and will be graded on the *accuracy of the solution*, *clear step-by-step presentation*, *clarity of speech and body language*, and *innovativeness*, which includes being original and humorous.

5. Conduct

Code of Conduct

- Punctuality is required at all times. Students must be on time for classes. If you don’t come on time, please do not come at all.

- If you cannot come to class for whatever reason, you may send an email before the start of the class with the reason and I will take note of it. However, your class attendance will still show that you did not attend that day.
- If you need to leave class early (e.g. to take a driving or TOEFL test), please see me before the start of class to tell me that you need to leave early.
- If you need to leave the class temporarily (e.g. to answer an urgent phone call or go to the restroom), just go and come back quietly and with minimum disturbance to your colleagues and to the class.
- Financial and scientific calculators are permitted, but computers, PDAs, mobile phones, and anything with communication capabilities are strictly prohibited into exams or quizzes.
- If you do not bring your calculator to an exam, or are missing other things for the exam, you will have to do without it. You will not be allowed to borrow anything from anyone once the exam has begun.
- There is no talking, socializing, or disruption of class (Classes can be fun, but you are here to learn and so is the student next to you). Specifically, no mobile or smart phones, PDA, etc are allowed to be used during a class.
- Water is allowed, but no food or other drinks are allowed in class.

6. Resources

6. Resources

Required textbook

- T.J. Biehler (2008) “The Mathematics of Money. Math for Business and Personal Finance”, McGraw-Hill Higher Education. All exercises will be set from this first edition. You can use a paper version or electronic version.
- UNAV Library has the textbook: click here
- http://www.mhhe.com/biehler1e : You can purchase premium access to the textbook’s website.

Excel Websites

Students are expected to learn excel by themselves. You will asked to do exercises and hand-in work that is done in Excel. There are many website you can learn from and which you should discover by yourself. However here are a few that I find helpful, especially in converting between English and Spanish versions of Excel.

- http://www.piuha.fi/excel-function-name-translation/index.php?page=espanol-english.html

- http://www.planillero.com/convert-formulas.aspx

Recommended bibliography:

("Recommended" means you do not need to get it, but are further sources you can use for your personal study).

- J.E. Rogers, Haney B. F (2000). "Mathematics of Business" Pearson Prentice Hall Find it in the Library
- Pilar Maynar (2008), "La Economía de la Empresa en el espacio de educación superior", McGraw Hill. Find it in the library (print version) Find in in the Library (electronic version)
- Samuel A. Broverman, "Mathematics of investment and credit" ACTEX Academic series, 5th edition (2008). Find it in the Library
- Jesús Mª Ruiz Amestoy, "Matemática Financiera – Ejercicios resueltos", Ed. Centro de Formación del Banco de España. Find it in the Library
- Eduardo Pérez Gorostidi (2003), "Introducción a la administración de empresas", Ed. Centro de Estudios Ramón Areces. Find it in the Library
- Eduardo Pérez Gorostidi, (2003) "Prácticas de administración de empresas", Ed. Pirámide. Find it in the Library

Other Websites:

http://www.studyfinance.com

http://www.teachmefinance.com/bondvaluation.html

http://ahe.com

http://www.investopedia.com

http://www.beanactuary.org/exams/exams/

@X@buscador_unika.obtener@X@

7. Office hours & FAQ

7. Office hours & FAQ

(Click here to make appointment online) - TO BE UPDATED AT START OF

Universidad de Navarra

CLASS

Office hours & out-of-class communication

To help students resolve problems or receive more detailed and personal explanations of concepts you find difficult, students are strongly encouraged to visit me during my office hours outside of class time. Rather than come individually, try to come in groups of 2 or 3 people. My office hours are Tuesdays 12:00-13:30 and 15:30-17:00 in Office 4030 on the 4th floor of the tower section of the Amigos Building.

Before coming for Office Hours, you should book an office hour time slot by clicking on the link here. If there are no bookings, I will not come for office hours.

If you have important or urgent needs (including justification for missing an exam or assignment deadline), the first thing is to ask me in class. If you can't come, write me an email (ikwan@unav.es) stating your Group and Class number. You can also call me at my office on 948 425 600 Ext. 802496. When you write me an email, also

Frequently Asked Questions & Frequently Given Answers

Student's FAQs (Frequently Asked Questions):

1. Do I really need to get the required textbook?
2. Which version of the textbook should I get?
3. Where can I get the textbook from? Can I borrow it from someone else? Can I borrow it from the library?
4. Is class attendance compulsory?
5. How do I get class participation grades?
6. What happens if I have an assignment due on a day I cannot go to class?
7. How should I inform the professor of my absence?
8. What happens if I don't hand in an assignment?
9. What should I do if I miss an exam?
10. What is and where do I get my group and class number? How do I use them?
11. What happens if I forget my calculator or other things on the day of the exam?

Professor's FGAs (Frequently Given Answers):

1. It is a required textbook, but I cannot force you to buy it so it depends on you. Many of the exercises in the Drill Sets will come from the textbook. If you don't have it you can't do the exercises. Many students have trouble with the vocabulary and need definitions. The textbook is

good for this. If you are learning a subject for the first time completely in English, then you will probably need a textbook to help you through. We will use 50% of the textbook, especially the first five chapters and parts of the other chapters on applications. You will be expected to read most of it yourself as assigned reading. If you don't read it and you don't understand what the content of the classes, then you can only blame yourself for not doing your own personal study.

2. The required version is the old one, the first edition published in 2008. All the exercises and drills refer to this version. The book can be a paper or electronic version; it's up to you. If you want to get a newer version, you may but the numbering of the exercises and the exercises themselves may be quite different from the 2008 edition.
3. You can get the textbook any way you like. Unfortunately the University bookstore does not generally stock books in English, so you will have to purchase it from an online store. There are also old copies that you can buy from other students who took the subject before. You can also borrow the book from the library (see link)
4. Going to class is your own responsibility. I will not explicitly take class attendance, but I will randomly ask students to provide answer to questions in order to award class participation grades. See the next question and answer.
5. To get class participation grades, you need to ask and answer questions in class. To help students get these grades, I will randomly ask 5-7 students in each lesson to answer questions. I call you by class number and if you can answer the question, you will get 1 point; if you answer the question well, you will be awarded 2 points. If you are not there, then you will be awarded zero points for class participation.
6. If you have assignments due on a day but you cannot go to class, you should give them to a friend who should hand it in for you. If you miss the deadline, then that is also your responsibility (see related Q&A). You cannot hand-in assignments after the deadline. They will not be accepted.
7. If you are going to be absent from class and don't want to risk losing class participation grades, you can send me an email (ikwan@unav.es) to inform me of your absence, stating correctly your name, reason, group and class number (e.g. A21 means your group A and class number 21). You must send me the email *before* class.
8. If you don't hand in an assignment, you will get -1 point for class preparation. If you could not hand in an assignment because of illness or other truly exceptional circumstances, send me an email *stating your full name, group and class number, and reason* for not handing in the assignment. In these cases you will just get zero points.
9. If you miss an exam with no prior written warning by email, you will automatically get zero with no chance of taking the exam at another time. If you cannot go to an exam because you are sick, you need to submit to the School Office a medical certificate to get authorization for your absence. Once the authorization has been obtained, your zero grade will be reconsidered.
10. Because there are many students taking this subject and there are multiple groups, each group is named A, B, or C. Within each group, each student is given a Class Number (e.g. 1, 2, 3…) to help in class administration. I will assign each student a class number after the first few weeks of lessons. Please put on ALL your work including exams, your Group and Class number. It helps me enormously in the administration of your grades.
11. If you forget your calculator on the day of the exam, BAD LUCK! If you don't have it, you will

have to do without. You not permitted borrow a calculator or anything at all from another person during the exam.

8. Subject details

8. Detailed Subject Outline

Detailed outline

The following is a more detailed outline of the content of the subject. See the Lesson-by-Lesson Plan for more details about what assignments are due and when.

Topic 1: Introduction to Finance and Time Value of Money

1.1 Introduction to Finance

- Valuation and cash flows
- Role of time and risk
- The problem of finance jargon – simple concepts with complex vocabulary

1.2 Concept of TVM

- TVM = time value of money; simply speaking “Time equals money”.
- In general, the longer you invest your money, the higher the expected return.

1.3 Problem of finance jargon

- Finance, like all other subjects and professions, has its own technical vocabulary called jargon.
- Quite often different jargon terms have the same underlying meaning but used in ways that depend on the situation; this is a cause of confusion for students.
- Students need to be aware of this and focus on the financial thinking to avoid the confusion, especially when looking at the same concept in different textbooks.

1.4 Importance of self-learning excel and calculator skills

- In this subject and in most of your university and working careers, you will be expected to have intermediate to advanced skills in Microsoft Excel. However, you will need to learn these skills yourself and be required to produce work using Excel.

- You will not be required to take Excel into exams. You are expected to know how to use your business or scientific calculator.

Topic 2: TVM: Valuation of single cash flows

2.1 TVM: “interest on principal cash flow” perspective

- Simple interest – depends only on time, principal, and interest rate calculated on the principal; there is only one period in time

- Compound interest – depends on time, principal, accumulation of interest on principal, and the interest rate on the principal plus accumulated interest; there are multiple periods in time

- Future value vs. Present value using simple or compound interest

2.2 TVM: “discount on final cash flow” perspective

- Simple discount – depends on time, final cash flow, and discount calculated on the final cash flow; there is only one period in time

- Compound discount – depends on time, final cash flow, accumulation of interest on principal, and the interest rate on the principal plus accumulated interest; there are multiple periods in time

2.3 TVM: “effective interest” perspective

- Effective interest rate

- Effective discount rate – not used often, but to illustrates the parallel between interest and discount

- Future value vs. Present value using effective interest or discount rates

2.4 Use of Excel to value single cash flows

Topic 3: TVM: Valuation of multiple cash flows

3.1 Valuation of Cash Flows (*a finite number of different* cash flows)

- The value of an asset is equal to the sum of the present value of each future cash flow.
- The general valuation formula for future cash flows.
- "Moving" cash flows from present to future and from future to present

3.2 Valuation of Annuities (*a finite number of level* cash flows)

- If future cash flows are the same and are of a finite number, the general valuation formula can be simplified.

3.3 Valuation of Perpetuities (*an infinite number of level* cash flows)

- If the future cash flows are the same and are continue infinitely into the future, the general formula can be simplified even more.

3.4 Use of Excel to value a stream of cash flows

Topic 4: Measuring asset performance

4.1 Types of asset performance measures

- Percentage returns: dividend yield, total returns
- Dollar returns (or dollar value): capital gain, accounting return, economic return
- Introduction to risk and diversification (not part of syllabus à Finance 1)
- Risk adjusted returns / Sharpe ratio (not part of syllabus à Finance 1)

4.2 Rates of Return

- Simple (or arithmetic, absolute, total) rates of return
  - Holding Period Rates
  - Annual Percentage Rates
- Effective (or geometric) rates of return
  - Effective Annual Rates & CAGR

- Internal Rate of Return

- Effects of inflation on rates of return

4.3 Dollar Returns (dollar value)

- Simple dollar returns (capital gain, accounting dollar value) – no TVM
- Net present value (economic dollar value) – includes TVM

4.4 Use of Excel to measure asset performance

Topic 5: Applications

5.1 Stocks

- Dividend discount model

5.2 Bonds

- Characteristics: par value, coupon amount, coupon rate, coupon frequency, maturity
- Primary and secondary sales of bonds
- Premium vs. discount vs. par bonds
- Coupon paying vs. Zero coupon bonds
- Calculating yield to maturity
- Constructing and interpreting a yield curve
- Bond ratings and investment risk
- Hold to maturity vs. secondary sales and coupon reinvestment risk, etc.
- Clean vs. dirty prices

5.3 Mortgages

- Amortization table

- Floating vs. fixed rate mortgages
- Making extra payments

5.4 Use of Excel to in each of these applications

8a. Lesson-by-lesson plan

Lesson-by-lesson Plan (LBL Plan)

Access LBL Plan HERE - updated

At the start of the semester, additional information will be provided on the Required Readings, Required Exercises, etc., in a detailed Lesson-By-Lesson Plan. You use this Plan to plan your study and submission of exercises. The Lesson-by-Lesson Plan will be continuously updated to reflect the on-going teaching progress.

The LBL Plan contains a detailed outline of what will be taught and when, as well as what assignments have been set and when they are due. You need to follow the LBL Plan closely.

9. Group A Content: ADEb(1)/ECO/ELG

Content specific to Group A will be posted here...

- Degree in Management (ADE-Group 1)
- Degree in Economics (ECO)
- Economics, Leadership and Governance (ELG)

(currently empty)

10. Newly arriving students

If you come to the first to few classes, you do not need to use the link below.

However, if you miss the first few classes because of late enrollment, please use the link below.

To access class materials for Topics 1, 2, and 3, please click here:

Universidad de Navarra

Asignatura: **Principles of Macroeconomics A (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

Introduction

http://www.unav.edu/asignatura/pmacroeconomAeconom/

Principles of Macroeconomics A (F. ECONÓMICAS)

Course name: PRINCIPLES OF MACROECONOMICS

Course description:

The objective of the course is to introduce the basic concepts and tools used in macroeconomic analysis. In this course the student will learn how to use and compare different economic models to analyse and understand current economic issues. The course studies the functioning of the aggregate economy both in the long run and in the short run, and covers many of the issues that dominate the theoretical and political debate: unemployment, inflation, growth, etc.

Degree: Degree in Economics & Degree in Managament

Department: Economics

Instructor: Mirko Abbritti (mabbritti@unav.es)

Competences

Basic Competencies (Management and Economics)

BC2. Students should be able to apply their knowledge to their job or vocation in a professional way. They should be able to prove their general competencies by developing and defending arguments and solving problems within their subject area.

BC5. Students should have developed the learning skills necessary to undertake higher programs of study with greater independence.

General competences (Management and Economics)

GC1. Understanding the different areas of economic analysis in theory and practice.

GC2. Identifying, incorporating and using acquired knowledge in argument, discussion and problem solving as they apply to economics and business.

Specific competences (Economics)

SC1. Thoroughly understanding the fundamental concepts and methods of economic theory.

Specific competences (Management)

SC14. Understanding the influence of the economic context on business activities.

SC20. Defending personal ideas on economic issues with astute and sound arguments.

Program

Part 1: Introduction

Part 2: The Data in Macroeconomics

1. Measuring a Nation's Income

- The Economy's Income and Expenditure
- How to Measure Gross Domestic product (GDP)
- The Components of GDP
- Real versus Nominal variables

2. Measuring the Cost of Living

- The Consumer Price Index
- Inflation

Part 3: The Real Economy in the Long-Run

4. Production and Growth

- Economic Growth around the World
- Productivity: Role and Determinants
- How to Foster Economic Growth

5. The Financial System

- Financial Institutions
- Saving and Investment in the National Accounts
- The Basic Tools of Finance

6. Unemployment

- How to Measure Unemployment?
- Why is there Unemployment?
- Alternative Theories

Part 4: Money and Prices in the Long-Run

7. The Monetary System

- What is Money?
- Central Banks, Commercial Banks and Monetary Policy

8. Inflation: Causes and Costs

- What Causes Inflation: the Classical Theory of Inflation

- Costs and Benefits of Inflation

Part 5: The Macroeconomics of Open Economies

9. Open Economy Macroeconomics

- The International Flows of Goods and Capital

- The Prices for International Transactions: Real and Nominal Exchange Rates

- Theories of Exchange Rate Determination

Part 6: Short Run Economic Fluctuations

10. Aggregate Demand and Supply

- Key Facts about Economic Fluctuations

- Explaining Short-Run Economic Fluctuations

- The Aggregate Demand Curve

- The Aggregate Supply Curve

- What Causes Recessions?

11. Influence of Economic Policy on Aggregate Demand

- Monetary Policy

- Fiscal Policy

12. The Short-Run Trade-off between Inflation and Unemployment: The Phillips Curve

- The Phillips Curve

- The Role of Expectations

- The Role of Supply Shocks

- The Cost of Reducing Inflation

Educational activities

EA1. On-campus classes

EA2. Supervised projects (independently and in groups)

EA3. Tutorials

EA4. Individual Study

EA5. Assessment

Assessment

The final grade for the course is calculated on the basis of

- Two 30 minutes partial exams (10% of the grade each) - SA2
- A one-hour midterm exam (30%) - SA3
- A two-hours final exam (50%) - SA4
- Bonus point: class participation and problem set corrections (10%) - SA1 and SA2

The grade of the retake exam is calculated as follows:

- Class participaton and partial tests: 30% - SA1, SA2 and SA3
- Retake-exam: 70%. - SA4

Bibliography and Resources

Main Reference:

Mankiw, G. and Taylor, M.P: Economics, Cengage learning, 2nd edition Find it in the Library

Complementary References:

Bernanke, B. and Frank, R: Principles of Economics, McGraw-Hill, 3rd edition Find it in the Library

Krugman, P. and Wells, R.: Macroeconomics, Worth Publishers, 3rd edition. Find it in the Library

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Universidad de Navarra

Asignatura: **Principles of Microeconomics A (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

Introduction

http://www.unav.edu/asignatura/pmicroeconomAeconom/

Principles of Microeconomics A (F. ECONÓMICAS)

"Principles of Microeconomics" is your first contact with economic theory. Therefore, it forms the basis on which your future studies of Microeconomics, and to a lesser extent of Macroeconomics build. In this course you will understand how economists perceive and study the reality that surrounds them. In particular, you will study in a rigorous and mathematical way the decisions taken by individuals and the interaction of individuals and firms in markets.

6 ECTS (European Credit Transfer System)

Departament: Economics

Faculty: Economics and Management

Degrees: Economics and Business Management

Course: 1st (Economics, Management, Governance and Economics)

Basic subject

Competences

Basic Competencies (Management and Economics)

BC1. Students should demonstrate knowledge and understanding of the subject area based on a general secondary school education. They should have a general level that is well supported by advanced texts, but that also encompasses aspects that suggest knowledge of the leading edge of their field of study.

BC2. Students should be able to apply their knowledge to their job or vocation in a professional way. They should be able to prove their general competencies by developing and defending arguments and solving problems within their subject area.

BC5. Students should have developed the learning skills necessary to undertake

higher programs of study with greater independence.

General Competencies (Management and Economics)

GC1. Understanding the different areas of economic analysis in theory and practice.

GC2. Identifying, incorporating and using acquired knowledge in argument, discussion and problem solving as they apply to economics and business.

Specific Competencies (Economics)

SC1. Thoroughly understanding the fundamental concepts and methods of economic theory.

SC3. Reaching conclusions relevant to economic policy based on real information.

SC5. Handling the concepts, theories and models necessary to form firm opinions about the economic context.

Specific Competencies (Management)

SC14. Understanding the influence of the economic context on business activities.

SC20. Understanding the basics of economic theory and the economic environment.

Programme

I. Introduction

Chapter 1: Economic principles **Ch1**

Chapter 2: Think like an economist **Ch1**

II. Working of Markets

Chapter 3: Demand, supply and prices **Ch2**

Chapter 4: Elasticity **Ch4, pg. 111-120**

Chapter 5: Economic regulation **Appendix 2, pg. 47-52**

Chapter 6: Market and economic welfare **Ch5, pg. 144-147**

Chapter 7: Market Failure **Ch16, 17**

III. Consumer Theory

Chapter 8: Consumer Theory **Ch3, 4 (Ch7, 8 for a deeper understanding and some criticism)**

IV. Producer Theory (and basic introduction to Game Theory)

Chapter 9: Cost function **Ch9, 10**

Chapter 10: Perfectly competitive markets **Ch11**

Chapter 11: Monopoly **Ch12**

Chapter 12: Oligopoly **Ch13, pg. 414-433**

Note: The literature references refer to the Frank book.

Assessment, Educational Activities, Bibliography

Evaluation (mark out of 10)

- Ordinary examination date:

  Final exam: 50%

  Partial exam: 30%

  Continuous evaluation: 20% mini-exams and *contribution in class**

- Extraordinary examination date:

  Final exam: 60%

  Partial exam: 30%

  Continuous evaluation: 10% mini-exams and *contribution in class**

- Two mini-exams, partial and final exam: see “important dates” in ADI.
- **Contribution in class:* the best around 5 students in each group receive a bonus of 0.5 points towards the final mark. A student qualifies for this bonus based on contribution in class and on Problem Set exercises elaborated at home.
- The final exam consists of two parts: the first and longer one contains questions that mainly require mathematical or graphical solutions. The second part consists of multiple choice questions.
- The mid-term and mini-exams are similar to the final exam but shorter. In the mini-exams there are no multiple choice questions.
- The mathematical exam questions are based on problem sets *two to five* which

the student is elaborating by himself during the semester. A student can find copies in ADI of last year's final and mid-term exam. While solutions will not be provided in ADI, the students are invited to ask their doubts about the solutions to these questions during office hours.

- Problem Sets, the mini and partial exams are solved in practical classes.
- The duration of the final exam is 75 minutes and that of the mid-term exam 50 minutes.

Educational Activities

Theoretical and practical classes are imparted and are compulsory. The students attend and actively participate in theoretical classes. The students prepare problem sets and solve them in practical classes. This is part of the contribution in class grade they receive. An exhaustive timetable scheduling both types of classes is available in the link "Cronograma - Timetable" and "Important Dates".

Recommended Bibliography

Frank, Robert (2010) *Microeconomics and Behavior*, McGraw Hill, 8th edition. Find it in the Library

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Other Bibliography

Bernanke, Ben and Robert Frank (2008) *Principles of Economics.* McGraw Hill, 4th edition. Find it in the Library

Varian, Hal R. (2002) *Intermediate Microeconomics*, W. W. Norton & Company, 6th edition. Find it in the Library

Important Dates

All students:

Partial Exam: October 25th (during class)

Final Exam: December 5th, 16:00-17:15, Lecture Room (Aula) 11

Exam Revision: January 10th and 11th in the afternoon, please book a slot under "Professor and Office Hours"

Final Re-Take Exam: June 12th, 10:30-11:45

Miniexam 1: October 4th (during class)

Miniexam 2: November 15th (during class)

CHANGE OF CLASSES: On Tuesday, November 22nd there will be an extra class in Aula 10 of Amigos Building from 16-18. Therefore, the class scheduled for Wednesday, November 30th will be cancelled.

OFFICE HOURS AT THE END OF NOVEMBER: Please be aware that the last regular office hours will take place on Wednesday, November 23rd from 15:00-18:00 after booking a slot in Google Docs. Due to the recovery class on November 22nd, there will be no office hours that day and neither in the following week given that November 29th is a holiday.

Regular theoretical and applied classes are scheduled: a detailed schedule is available under "Cronograma".

Cronograma - Timetable of Educational Activities

		Lecture Hrs.	Chapter	Problem Set Hrs.	Activity	Study Hrs. (theory)	Preparation Hrs. (PS / Exams)	STUDENT
Week 1		2	1; 2	0		3		5
Week 2		4	2; 3	0		3PS 1	3	10
Week 3		4	4; 5	0		3PS 1; 2	3	10
Week 4		2	5; 6	2	PS 1	3PS 2	3	10
Week 5	Miniex 1	2	6; 7	2	PS 2	3PS 3	3	10
Week 6		4	8	0		3PS 3	5	12
Week 7		2	8	2	PS 3	3Partial Exam	5	12
Week 8	Parti	02	8	2	PS 4 & Partial	3PS 4	3	82

	al Exam							
Week 9		4	9	0		3PS 4	3	10
Week 10		2	9;10	2	PS 4	3PS 5	3	10
Week 11	Mini ex 2	2	10	2	PS 5	3PS 5	3	10
Week 12		4	11; 12	0		3Final exam	3	10
Week 13		2	12	2	PS 5	0Final exam	10	14
Week 14		2		0		0Final exam	13	15
Final Exam		2						2
150		40		14		36	60	150

Professor and Office Hours

Responsible Professor: Markus Kinateder (mkinateder@unav.es)

Office: 2550 (2nd floor, tower, Amigos Building)

Office Hours: tba

Universidad de Navarra

Asignatura: **Principles of Business Administration A (F. ECONÓMICAS)**

Guía Docente

Curso académico: 2016-17

Welcome: Please READ!

Dear All,

You will find all the information about this course in one document: the syllabus. It is in the Contents Section. Please read it carefully.

In the Contents Section you will also find the slides for the course. Print them out (two slides on one page is my suggestion) and bring them with you to class to take notes on.

In class, computers of any sort (notebooks, tablets, mobile phones) are not allowed. This rule is strictly enforced.

Best

Matthias Huehn

Introduction

Course name: Introduction to Business Administration

Course description:

The subject offers the students different ideas on what managers do and in what contexts managerial action happens. Thus, it not only has a practical focus - what do managers do? - but also enables students to understand the axiomatic underpinnings of different approaches to managing. The latter enables students to reflect on their own practice and on emerging theories for the rest of their lives.

Degree: IDM, GML

Year: First

Semester: Second

Lecture schedule: TBD

Number of credits: 6 ECTS

Type of course: Required

Universidad de Navarra

Language: English

Instructors: **Matthias Huehn** (mhuehn@unav.es)

Department: Business

Office: n.1430, *Edificio Amigos*

Office Hours: Mondays and Tuesdays from 12:00 to 13:00

Competences

The course has two related goals: teach students about the different views on what managing actually involves and enable them to reflect on these different approaches so that their learning does not stop but accelerates when they become practicing managers. Its goal therefore is to act as a primer for life-long learning in management.

- Students should demonstrate knowledge and understanding of the subject area based on seminal texts, but that also encompasses aspects that suggest knowledge of the leading edge of their field of study.
- Students should be able to apply their knowledge to their job or vocation in a professional way.
- Students should be able to reflect on why they gather and interpret certain data and not other. So they are able to critically assess their judgment calls. That encompasses consideration of relevant social, scientific and ethical topics.
- Students should be able to convey information, ideas, problems and solutions to both specialised and general audiences.
- Students should have developed the learning skills necessary to undertake higher programmes of study with greater independence.
- Identifying, incorporating and using acquired knowledge in argument, discussion and problem solving as they apply to economics and business.
- Teamwork.
- Developing the capacity for independent critical thought on matters relevant to economics and business.
- Communicating results and analyses useful in economics and business, both verbally and in writing.
- Knowing the different settings in which work is done: circumstances and markets, as well as historic, legal and humanistic contexts.

Programme

- Understanding six concrete philosophical concepts of management and the attendant tools:
- Fayol's principles of Management, Weberian concepts of organisation, Tayloristic Management, Management as decision-making
- Maslow's, McGregor's & Herzberg's concepts of motivation, Mayo's management principles, Argyris' personal development model. Contingency theory (Burns/Stalker, Lawrence/Lorsch, Aston Group), Institutional Myths (Meyer/Rowan), Population Ecology (Hannan/Freeman).
- Learning Organisation by Argyris/Schön, Morgan's Holographic Organisation
- Culture as a concept: Hofstede, Deal/Kennedy, Gergen, Weick, Garfinkel
- Politics in organisations, Pfeffer, Mintzberg
- Psychology and management: Freud, Becker, Schein, Morgan, Jung.

Educational Activities

I. Classroom teaching activities

1. Lectures

Lectures are given by the professor on the themes indicated in the syllabus with the help of the blackboard, power point presentations, and videos. The power point presentation is posted on ADI in the Contents section. The lectures are interactive that means that students are encouraged to ask questions, make comments and engage in discussions with both the professor and their class mates. The participation is one of the three grade components and counts for 30% of the overall grade.

2. Presentations (Required)

Students will form groups of 7 to 10 members, choose one of the papers listed in the Bibliography and then present the papers in front of the class. The students may choose whether to present 30 minutes and allow questions during their presentation or whether they have a 10 minute Q&A session after their presentation. Those presenting cannot answer questions: that must be done by those not presenting. The presentations will be at the end of the second third of the semester.

4. Evaluation

The final exam assesses the successful accomplishment of the objectives and carries a weight of 40% of the overall course grade.

II. Personal work

Students must understand themes covered early in the course to be able to comprehend information presented later in the course, and will have to be able to integrate material learnt throughout the course. Therefore, it is important that they do not fall behind and try to set aside regular times outside of class to work on the course material on a daily basis.

1. Students must read all the papers before the presentation.

2. Students should conduct personal study using the notes they take during the lectures.

3. Students have to engage in team work and meet with the professor as a group to prepare their presentation.

Credits/hours distribution of the activities. 6 ECTS= 150 h (25 h/ECTS)

- 60 hours attending classes.
- 40 hours of personal study: reading articles and study.
- 30 hours of team work for the presentation.
- 20 preparing for the final exam.

Assessment

There will be 3 grading components. Exams questions will be drawn directly from lectures, class discussions and the presented papers.

To calculate the final grade, course performance and grading will be determined as follows :

- Presentation 30 %
- Final exam 40 %
- Class Participation 30 %

The final exam will be held in May - the precise date will be announced during the semester.

Criteria to pass the course

Universidad de Navarra

Students whose final grade is 5 points or more will pass the course.

Students whose final grade is below 5 points will not pass the course and will be graded as *Suspenso* .

Students who do not take the final exam will not pass the course and will be graded as *No presentado* .

Exams review

Students will be able to review the exams in an interview with the professor, after publication of the grades, on a day and place that will be announced.

Special assessment

For those who do not pass the course in May or did not take the exam (grades *Suspenso* or *No presentado*) there will be an extraordinary resit exam in June which will account for 40% of the final grade.

Students with special learning needs

Accommodation will be provided for students with special learning needs, either regarding the methodology and/or evaluation of the course, but they will be expected to fulfill all course objectives. Students with a learning impediment must approach the professor at the beginning of the semester, otherwise their special situation cannot be taken into consideration.

Bibliography and Resources

The PowerPoint slides for the lecture can be found under Contents.

Here is the list of papers from which students must choose their presentation from:

Conklin, J. (2001). Wicked problems and social complexity. *CogNexus Institute*. (first chapter of a book, free to download at CogNexus)

Drucker, P. F. (2004). What makes an effective executive. *Harvard Business Review*, *82*(6).

Gosling, J., & Mintzberg, H. (2003). The five minds of a manager. Harvard Business Review, 81(11), 54-63

Hamel, G. (2011). First, let’s fire all the managers. *Harvard Business Review*, *89*(12), 48-60.

Herzberg, F. (2003). One more time: How do you motivate employees? *Harvard Business Review*, 81(1), 87-96.

Mintzberg, H. (1971). Managerial work: Analysis from observation. *Management Science*, 18(2), B-97.

Mintzberg, H. (1995). Musings on management. Ten ideas designed to rile everyone who cares about management. *Harvard Business Review*, *74*(4), 61-67.

Mintzberg, H., & Waters, J. A. (1985). Of strategies, deliberate and emergent. *Strategic Management Journal*, 6(3), 257-272.

Mintzberg, H., & Westley, F. (2001). It's not what you think. *MIT Sloan Management Review*, *42*(3), 89-93

Pfeffer, J. (1992). Understanding power in organizations. *California Management Review*, *34* (2), 29-50.

Schein, E. H. (2002). The anxiety of learning. Interview by Diane L. Coutu. *Harvard Business Review*, *80*(3), 100-106

When you are using the University´s internet connection, you simply go to Scholar Google, search for the papers like on regular Google and use the right hand links to download the paper. The Conklin paper should be searched for on regular Google: it is freely available on Jeff Conklin´s website.

Office Hours

Mondays and Tuesdays 12:00 to 13:00 and by prior email appointment.

My office is in the Gallery : 2240

Universidad de Navarra

Asignatura: **Calculus II B (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

Introduction

http://www.unav.edu/asignatura/calculus2Beconom/
Curso 2016-17

CALCULUS II

Course description: The aim of this course is to provide the basic tools of optimization and functions of many variables which are necessary to succeed in the following courses that are taking part in the degrees of Economics, Management and Business Administration.

Department: Economics

School: Economics and Business

Degrees: ADEb, double degrees DADEb and DECOb

Year: 1st

Semester: 2nd

ECTS credits: 6 (approximately 150 working hours)

Type: compulsory

Language: English

Instructors:

- Pedro Mendi, pmendi@unav.es, office 2490 (2nd floor, Tower).
- Montserrat Ana Miranda Galcerán, montse@unav.es, office 2110 (Hilera).

Course schedule and room:

- Wednesdays, 8:15-9:45am, Room 01.
- Thursdays, 10:00-11:30am, Room 10.

Competences

Basic Competencies (Management and Economics)

BC5. Students should have developed the learning skills necessary to undertake higher programs of study with greater independence.

General Competencies (Management and Economics)

GC3. Mastering the digital, mathematical and technical tools necessary for academic and professional activity in economics and business.

Specific Competencies (Economics)

SC10. Using mathematical reasoning and quantitative tools to analyze the economic context.

Specific Competencies (Management)

SC10. Incorporating mathematical reasoning and quantitative tools in a business's decision-making processes.

Program

A tentative calendar may be found here.

1-. Functions of many variables. [Chapter 11]. Functions of two variables. Partial derivatives with two variables. Geometric representation. Surfaces and distance. Functions of more variables. Partial derivatives with more variables. Economic examples and applications. [2 weeks].

2-. Tools for comparative statics. [Chapter 12]. A simple chain rule. Chain rules for many variables. Implicit differentiation along a level curve. More general cases. Homogeneous functions of two variables. Homogeneous and homothetic functions. Linear approximations. Differentials. System of equations. Differentiating systems of equations. Economic examples and applications. [2 weeks].

3-. Multiple optimization. [Chapter 13]. Two variables: necesary conditions. Two variables: sufficient conditions. Local extreme points. Linear models with quadratic objectives. The extreme value theorem. Three or more variables. Comparative statics and the envelope theorem. Economic examples and applications. [2 weeks].

4-. Constrained optimization. [Chapter 14]. The Lagrange multiplier method. Interpreting the Lagrange multiplier. Several solutions candidates. Why the Lagrange methods Works. Sufficient conditions. Additional variables and constraints. Comparative statics. Non-linear programming: A simple case. Multivariate inequality constraints. Nonnegativity constraints. Economic examples and applications. [2 weeks].

5-. Difference equations. [Chapter 20]. First order difference equations. Stationary points. Stability. Linear difference equations with variable coefficients. Second order difference equations. Second order equations with constant coefficients. [2 weeks].

6-.Differential equations. [Chapter 21]. First order differential equations. Qualitative theory of differential equations. Solving differential equations by separating variables. First order linear differential equations. Qualitative theory. Stability. Second order differential equations. Second order differential equations with constant coefficients. [2 weeks].

Assessment

The final grade in this course will be a weighted average of different exams, with the weights being as follows:

May exam

- Midterm exam: 20%
- Final exam: 60%
- In-class activities: 20%

June exam

- Midterm exam: 20%
- Final exam: 60%
- In-class activities: 20%

Educational activities

The course includes different face-to-face and non face-to-face activities.

Classes of the Calculus II course will include theoretical and practical sessions, problem-solving sessions and seminars where particular applications to Economics and Business will be discussed.

Apart from a midterm and a final exam, there will be two quizzes.

Face-to-face activities:

1. Theoretical/practical classes: 36 hours.
2. Problem solving classes. Problem sets will be assigned and some problems will be discussed in class: 24 hours
3. Exams. Midterm and final exams: 4 hours.

Non face-to-face activities:

1. Personal solving problems: 46 hours.
2. Personal study: 40 hours (there will be support groups for 24 out of these 40 hours).

Total face-to-face activities: 64 hours.

Total non face-to-face activities: 86 hours.

Methodology

The course includes different face-to-face and non face-to-face activities.

Classes of the Calculus II course will include theoretical and practical sessions, problem-solving sessions, computer laboratory sessions and seminars where particular applications to Economics and Business will be discussed.

Each week students will be given a set of problems to solve and reinforce the topics that have been learned. Office hours will be devoted to discuss these exercises.

Apart from a midterm and a final exam, several control tests will be held. Dates for the midterm and final exams will be fixed by the faculty and will be published in due course.

Bibliography and resources

- **Sydsaeter, K., Hammond, P., Strom, A. (2012). Essential Mathematics for Economic Analysis. 4th Edition. Pearson. Find this book in the Library**
- **(Sydsaeter, K. Hammond, P., Seiserstad, A. (2008). Further Mathematics for Economic Analysis. Second Edition. FT Prentice Hall. Find this book in the Library**

- Chiang, A. and Wainwright, K. (2005). *Fundamental methods of Mathematical Economics.* 4th Edition. McGraw Hill Find this book in the Library

- Larson, R. and Edwards, B.H. (2011). *Calculus*. 9th Edition. McGraw Hill. Find this book in the Library

@X@buscador_unika.obtener@X@

Office hours

- Pedro Mendi, office 2490 (2nd floor, Tower). Office hours: Mondays and Tuesdays, 3:00-4:30pm. Email: pmendi@unav.es
- Montserrat Ana Miranda, office 2110. Tutorials (units 5 and 6) on Wednesdays from 18:00 to 20:00 (last session on the 26th of April before the exam and without previous appointment).

Universidad de Navarra

Asignatura: **Algebra B (F. ECONÓMICAS)**
Guía Docente
Curso académico: 2016-17

Presentation

http://www.unav.edu/asignatura/algebraBeconom/
Curso 2016-17

Algebra B (F. ECONÓMICAS)

Algebra enhances the capacity for analysis and synthesis. Helps speed the reasoning and facilitate abstract thinking.
As for inclusion in Business Administration/Economics studies is essential for quantitative modeling of economic reality, and it can solve complex problems with many variables (impossible to synthesize intuitively).
To achieve these objectives usual topics are thoroughly discussed in mathematics, such as linear programming, matrices and determinants, systems of linear equations, matrix and systems of equations for economic applications and graphs and networks.

Department: Economics.
Faculty: Economics and Business.
Degrees: ADE+Dcho (b), ADE+ECO (b), ECO, ADE (b), ELG.
Groups: G1 (ECO, ADE1 (b), ELG), G2 (ADE+Dcho (b), ADE+ECO (b), ADE2 (b)).
Schedule: Wednesdays 8-10 h and Fridays 10-12 h.
Classroom: 10
Year: 1st
Organization: Second semester, from January to May
ECTS credits: 6 (150 hours)
Type of course: Basic
Language: English.
Professors: Ignacio Rodriguez Carreño, irodriguezc@unav.es and María Castillo Latorre mclatorre@unav.es

Competences

Basic Competencies (Management and Economics)

BC1. Students should demonstrate knowledge and understanding of the subject

area based on a general secondary school education. They should have a general level that is well supported by advanced texts, but that also encompasses aspects that suggest knowledge of the leading edge of their field of study.

BC5. Students should have developed the learning skills necessary to undertake higher programs of study with greater independence.

General Competencies (Management and Economics)

GC3. Mastering the digital, mathematical and technical tools necessary for academic and professional activity in economics and business.

GC5. Developing the capacity for independent critical thought on matters relevant to economics and business.

Specific Competencies (Economics)

SC10. Using mathematical reasoning and quantitative tools to analyze the economic context.

SC11. Properly using software applications in quantitative analysis of economic questions.

Specific Competencies (Management)

SC10. Incorporating mathematical reasoning and quantitative tools in a business's decision-making processes.

Program

Chapter 1: Introduction to Algebra. Basic concepts

Principles of logic. Proposition. Theorem. Induction. Reductio ad absurdum. Set Definition. Numerical sets. Cartesian product. Application

Chapter 2: Matrices, Determinants and Linear systems of equations

Matrix definition. Operation with matrices: add and product. Different classes: row matrix, column matrix, square matrix, diagonal matrix, scalar matrix, identity matrix, symmetric matrix, skew symmetric matrix, transpose matrix. Determinant definition. Sarrus law. Properties. How to calculate a determinant. Rank. Inverse matrix definition. Properties. Equivalent matrix. Similar matrix. Definition of a linear system of equations. Solution of a complete system. Solution of a homogeneus system. Resolution methods.

Systems discussion, Rouché-Frobenius theorem.

Chapter 3: Linear Programming

Introduction. Objective function and constraints. Mathematical model. Feasible region. Graphical and analytical solution.

Chapter 4: Matrices' and linear systems of equations' applications

Matrix applications: election forecasting, Markov chains and dynamic systems, eigenvalues and eigenvectors, analysis of brand change, conditions of equilibrium in population migration. Applications of system of equations: equilibrium in a two goods market, equilibrium of the national income, Leontief's input-output model.

Chapter 5: Graphs and networks

Introduction. Aims. Definition and properties: graphs and networks, network size, degree of a node and network density. Accessibility, network distances, cycle paths and walkways. Centrality and power. Degree centrality. Closeness centrality. Degree centrality. Betweeness centrality. Eigenvector and eigenvalues. Eigenvector centrality. Dynamic networks. Economic networks.

Educational activities

In this section the overall methodology of the subject is detailed and hours of student workload are estimated.

There will be classroom activities and non-face activities:

1. Classroom activities (66 total hours). In this section the lectures to be given in large groups, the practical classes of problems, the hours devoted to the presentation of work, hours of examination, class test hours and hours of practice encompass computer.

a) Lectures. In 28 lessons of 1 hour, the most important points of each topic of the course will be presented by the teacher. Theory of the subject with examples and economic applications will be discussed.

b) Practical classes. In 20 1 hour classes key and difficult problems will be solved.

c) Video of an oral presentation. Throughout the course there will be one oral presentation that will be recorded in a video consisting of a case study related to the chapters 3, 4 or 5 of the subject.

d) Exams. In total throughout the course, there will be 8 hours of written examination. There will be some surprise tests or exams, together with the midterm and the final exams.

e) Computer practices. There will be 2 computer lab sessions of 2 hours each.

f) Cooperative learning experience. In 4 hours we will have a experience in cooperative learning in which you will be your colleagues' teacher.

2. Non face activities (84 hours). The main activity will be personal study of the subject. The number of estimated hours are 84.

Assesment

Ordinary evaluation:

1. Continuous evaluation: 30%+10%.

a) Cooperative work (10%). There will be a pioneer experience of cooperative work in the subject.

b) Computer practices (10%).

c) Video (oral work presentations) (10%). In the 13th week of the course, 3rd to 7th of April.

d) Surprise exams (10%). There will be some surprise exams that will be graded aditionally.

2. Midterm exam: 20%. 3 hours. In the 8th week of the course, Friday 3rd of March.

3. Final exam: 50%. 3 hours. The student will have to get at least a 4 in this exam.

Extra-ordinary evaluation:

In case the student do not pass the subject in the ordinary evaluation, he/she will have to go to the extraordinary evaluation. The final exam will be graded as the 70%, and the rest of the grade will be given by its work during the course (cooperative learning experience 7.5%, computer practices 5%, the video with the oral work presentations 7.5%, the surprise exams an additional 5%, and the midterm exam 10%).

Office hours

Professor Ignacio Rodríguez Carreño, irodriguezc@unav.es: Thursdays from 10:30 to 11:30 and from 15:30 to 17:30 h. Office 2080. 2nd floor, corridor.

Professor María Castillo Latorre, mclatorre@unav.es: Tuesdays and Wednesdays from 16:00 to 17:30 h. Office 2280. 2nd floor, corridor.

Bibliography and Resources

Basic bibliography:

- *Algebra for Economics and Business Administration students. Theory book.* Ignacio Rodríguez and Jorge Biera.
- *Matemáticas para la Economía. Álgebra Lineal y Cálculo Diferencial*. Gloria Jarne, Isabel Pérez-Grasa, Esperanza Minguillón. Ed. McGraw Hill. Localízalo en la Biblioteca

- *Matemáticas para la Economía. Libro de Ejercicios. Álgebra Lineal y Cálculo Diferencial*. Gloria

Jarne, Isabel Pérez-Grasa, Esperanza Minguillón. Ed. McGraw Hill. Localízalo en la Biblioteca

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Other resources:

- Khan Academy: https://www.khanacademy.org. Useful media resource to learn algebra.

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