Universidad
Carlos III de Madrid
www.uc3m.es

COURSE: Mathematics for Economics II

| DEGREE: Economics, Law-Economics, International Studies-Economics | YEAR: 1 | TERM: 2 |
| :--- | :--- | :--- |


| WEEKLY PLANNING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \sum_{i}^{\text {n }} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 资 } \\ & \text { N } \\ & \text { Z } \end{aligned}$ | DESCRIPTION | GROUPS (mark X) |  | Special room for session (computer classroom, audio-visual classroom...) | WEEKLY PROGRAMMING FOR STUDENT |  |  |
|  |  |  | LECTURES | SEMINARS |  | DESCRIPTION | CLASS HOURS | HOMEWORK HOURS (Max. 7h week) |
| 1 | 1 | Chapter 1: Matrices, determinants, inverse matrix, minors and rank of a matrix. | X |  |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 1 | 2 | Chapter 1: Exercises |  | X |  | Resolution of problems and/or realization of assigned works | 1,5 | 4 |
| 2 | 3 | Chapter 1: Rouché-Frobenius Theorem. Resolution of linear systems: Gauss and Cramer methods. | X |  |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 2 | 4 | Chapter 1: Exercises |  | X |  | Resolution of problems and/or realization of assigned works | 1,5 | 4 |
| 3 | 5 | Chapter 1: Eigenvalues and eigenvectors. Matrix diagonalization. | X |  |  | Resolution of problems and/or realization of assigned works | 1,5 | 5 |


| 3 | 6 | Chapter 1: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 54 | 7 | Chapter 1: Orthogonal diagonalization of symmetric matrices. Quadratic forms. | X |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 4 | 8 | Chapter 1: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 | 5 |
| 5 | 9 | Chapter 2: Primitives: methods of calculus. | X |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 5 | 10 | Chapter 2: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 | 5 |
| 6 | 11 | Chapter 2: Definite integral: properties. Relationship between integral and derivative: Fundamental Theorem of Calculus | X |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 6 | 12 | Chapter 2: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 | 5 |
| 7 | 13 | Chapter 2: Barrow's Rule. Continuity and integration: Mean Value Theorem for integrals. | X |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 7 | 14 | Chapter 2: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 | 5 |
| 8 | 15 | Chapter 2: Area and integral. Exact and approximated calculus of a bounded región in the plane. | X |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 8 | 16 | Chapter 2: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 | 5 |
| 9 | 17 | Chapter 3: Improper integrals: convergence criteria. | X |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 9 | 18 | Chapter 3: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 | 5 |
| 10 | 19 | Chapter 3: Sequences and limits: convergence criteria. | X |  | Resolution of problems and/or realization of assigned works | 1,5 |  |
| 10 | 20 | Chapter 3: Exercises |  | X | Resolution of problems and/or realization of assigned works | 1,5 | 5 |




