



IDENTIFYING DATA

Mathematics: calculus I

Subject	Mathematics: calculus I			
Code	V12G750V01104			
Study programme	PCEO Grado en Ingeniería Biomédica/Grado en Ingeniería Mecánica			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	1st	1st
Teaching language	Spanish Galician			
Department				
Coordinator	Martínez Martínez, Antonio			
Lecturers	Bajo Palacio, Ignacio Busto Ulloa, Saray Díaz de Bustamante, Jaime Estévez Martínez, Emilio Martínez Martínez, Antonio Martínez Torres, Javier Meniño Cotón, Carlos Prieto Gómez, Cristina Magdalena Rodal Vila, Jaime Alberto Vidal Vázquez, Ricardo			
E-mail	antonmar@uvigo.es			
Web	http://moovi.uvigo.gal/			
General description	(*)O obxectivo desta materia é que o estudante adquira o dominio das técnicas básicas de cálculo diferencial nunha e en varias variables e de cálculo integral nunha variable que son necesarias para outras materias que debe cursar na titulación.			

Skills

Code

Learning outcomes

Expected results from this subject	Training and Learning Results
(*)	
(*)	
(*)	
(*)	
(*)	

Contents

Topic	
Convergence and continuity	Introduction to real numbers. Absolute value. Euclidean space \mathbb{R}^n . Successions. Series. Limits and continuity of functions of one and several variables.
Differential calculus of functions of one and several variables	Differential calculus of real functions of one real variable Differential calculus of functions of several real variables
Integral calculus of functions of one variable	The Riemann integral. Calculus of primitives. Improper integrals. Applications of the integral.

Planning

	Class hours	Hours outside the classroom	Total hours
Problem solving	20.5	30	50.5
Laboratory practical	12.5	5	17.5
Lecturing	32	39	71
Problem and/or exercise solving	3	3	6
Essay questions exam	2	3	5

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Problem solving	The professor will resolve problems and exercises type and the student will have to resolve similar exercises.
Laboratory practical	They will employ computer tools to resolve exercises and apply the knowledges obtained in the classes of theory.
Lecturing	The professor will expose in the theoretical classes the contents gives the matter.

Personalized assistance

Methodologies	Description
Problem solving	The professor will attend personally the doubts and queries of the students.
Laboratory practical	The professor will attend personally the doubts and queries of the students.

Assessment

	Description	Qualification	Training and Learning Results
Problem and/or exercise solving	They will make proofs written and/or works.	40	
Essay questions exam	It will do a final examination on the contents of the whole of the matter.	60	

Other comments on the Evaluation

The continuous eval. carry to cape on the previously exposed criteria. Those students that do not receive to the continuous eval be evaluated with a final examination on the contents of the whole of the matter, that will be the 100% of the note.

The continuous eval. of the students in second announcement consist in an examination on the contents of the whole of the matter, that will be 100% of the note.

Commitment:

"It expects that the present student a behaviour ethic o suitable. In case to detect a behaviour no-ethic o (copy, plagiarism, use of electronical devices unauthorised, and others) consider hat the student doesnt the necessary requirements to surpass the matter. In this case the calification in the present course will be of suspense (0.0)."

Sources of information

Basic Bibliography

- Burgos, J., **Cálculo Infinitesimal de una variable**, 2ª, McGraw-Hill, 2007
- Burgos, J., **Cálculo Infinitesimal de varias variables**, 2ª, McGraw-Hill, 2008
- Galindo Soto, F. y otros, **Guía práctica de Cálculo Infinitesimal en una variable**, 1ª, Thomson, 2003
- Galindo Soto, F. y otros, **Guía práctica de Cálculo Infinitesimal en varias variables**, 1ª, Thomson, 2005
- Larson, R. y otros, **Cálculo 1**, 9ª, McGraw-Hill, 2010
- Larson, R. y otros, **Cálculo 2**, 9ª, McGraw-Hill, 2010
- Stewart, J., **Cálculo de una variable. Trascendentes tempranas**, 7ª, Thomson Learning, 2014

Complementary Bibliography

- García, A. y otros, **Cálculo I**, 3ª, CLAGSA, 2007
- García, A. y otros, **Cálculo II**, 2ª, CLAGSA, 2006
- Rogawski, J., **Cálculo. Una variable**, 2ª, Reverte, 2012
- Rogawski, J., **Cálculo. Varias variables**, 2ª, Reverte, 2012
- Tomeo Perucha, V. y otros, **Cálculo en una variable**, 1ª, Garceta, 2011
- Tomeo Perucha, V. y otros, **Cálculo en varias variables**, 1ª, Garceta, 2011

Recommendations

Subjects that continue the syllabus

Mathematics: Calculus 2 and differential equations/V12G330V01204

Subjects that are recommended to be taken simultaneously

Mathematics: Algebra and statistics/V12G330V01103
