

| Teaching Guide | | | | | |
|---------------------|--------------------------------------|---------------------|-----------------|--------------------------|---------------------------|
| | Identifying Data 2019/20 | | | 2019/20 | |
| Subject (*) | Mathematics 1 | | | Code | 610G01001 |
| Study programme | Grao en Química | | | | |
| | | Descriptors | S | | |
| Cycle | Period | Year | | Туре | Credits |
| Graduate | 1st four-month period | First | | Basic training | 6 |
| Language | Spanish | | | | |
| Teaching method | Face-to-face | | | | |
| Prerequisites | | | | | |
| Department | Matemáticas | | | | |
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| Web | | | | | |
| General description | Esta asignatura pretende o dese | nrolo de competenci | ias que permita | n ao alumnado obterr u | un conocimento critico do |
| | calculo diferencial e integral así o | como unha pequena | introducción a | o alxebra lineal e as ec | uacions diferenciais. |

| | Study programme competences |
|------|--|
| Code | Study programme competences |
| A15 | Ability to recognise and analyse new problems and develop solution strategies |
| A16 | Ability to source, assess and apply technical bibliographical information and data relating to chemistry |
| A20 | Ability to interpret data resulting from laboratory observation and measurement |
| A24 | Ability to explain chemical processes and phenomena clearly and simply |
| A25 | Ability to recognise and analyse link between chemistry and other disciplines, and presence of chemical processes in everyday life |
| A27 | Ability to teach chemistry and related subjects at different academic levels |
| B1 | Learning to learn |
| B2 | Effective problem solving |
| B3 | Application of logical, critical, creative thinking |
| B6 | Ethical, responsible, civic-minded professionalism |
| C1 | Ability to express oneself accurately in the official languages of Galicia (oral and in written) |
| C3 | Ability to use basic information and communications technology (ICT) tools for professional purposes and learning throughout life |
| C6 | Ability to assess critically the knowledge, technology and information available for problem solving |

| Learning outcomes | | | |
|---|-----------------|--------|-----|
| Learning outcomes | Study programme | | |
| | cor | npeten | ces |
| O estudo, representación e interpretación de funcións elementais de unha e varias | A15 | B1 | C1 |
| variables. | A16 | B2 | C3 |
| | A20 | B3 | C6 |
| | A24 | B6 | |
| | A25 | | |
| | A27 | | |
| Utilizar con destreza as técnicas de cálculo de primitivas e as súas aplicacións. | A20 | B1 | C1 |
| | A24 | B2 | C3 |
| | A25 | B3 | C6 |
| | A27 | B6 | |



| Resolver sistemas de ecuacions lineais e operar con cálculo matricial | A20 | B1 | C1 |
|--|-----|----|----|
| | A24 | B2 | C3 |
| | A25 | B3 | C6 |
| | A27 | B6 | |
| Plantexar e resolver modelos sinxelos que conleven ecuacións e sistemas de | A20 | B1 | C1 |
| ecuacións diferenciais. | A24 | B2 | C3 |
| | A25 | B3 | C6 |
| | A27 | B6 | |

| Topic Sub-topic 2 Differentiation 0 The Chain Rule. 0 Techniques Differentiation. 0 Hopital's Rule. Taylor's Theorem. 0 Hopital's Rule. Taylor's Theorem. 0 Applications of Differentiation. 0 Maxima and Minima. 0 Optimisation Problems. 0 The Newton-Raphson Method. 0 1 0 Integration as Summation. 0 Fundamental Theorem of Calculus. 0 Some Basic Integrats. 0 Integration by Substitution. 0 Integration by Substitution. 0 Integration of Rational Functions. 0 Integration by Substitution. 0 Integration on Support Sale 0 Integration by Substitution. 0 Integration on Substitution. 0 Integration by Substitution. 0 Integration Problems. 0 Integration on Stational Functions. 0 Integration Integration. 0 Nomerical Applications of Integration. 0 Integration Protections. 0 Integration Protections. 0 Integration Protections. 0 Integration Protections. 1 Integratios Integration. 0 Integration Protections. 0 Integration Protections. 0 Integration Protections. 1 Integratios Integration. 0 Stepsone Static Protections. 0 Integration Protections. 0 Elementatic static static st | | Contents |
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Planning



| Methodologies / tests | Competencies | Ordinary class | Student?s personal | Total hours |
|--------------------------------|--------------------|----------------|--------------------|-------------|
| | | hours | work hours | |
| Guest lecture / keynote speech | A15 A16 A24 A25 B1 | 32 | 64 | 96 |
| | B2 B3 C1 C3 C6 | | | |
| Problem solving | A15 A20 B1 B2 B3 | 8 | 18 | 26 |
| Supervised projects | A15 A27 B2 B3 B6 | 8 | 16 | 24 |
| Objective test | B2 B3 | 3 | 0 | 3 |
| Personalized attention | | 1 | 0 | 1 |
| | | | | |

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

| | Methodologies |
|---------------------|---|
| Methodologies | Description |
| Guest lecture / | desarrollo dos conceptos e resolución de problemas |
| keynote speech | |
| Problem solving | Cuestionarios, boletins e exámenes de outros cursos que periódicamente se poñen a disposición dos alumnos sobre distintos |
| | contiidos e que o alumno terá que resolver. |
| Supervised projects | Traballo sobre temas propostos por o profesor, presentarase un resumo teórico xunto con un boletín de problemas resoltos |
| | acerca do tema correspondente |
| Objective test | proba orientada a evaluación dos contidos teóricos que se traballan nas sesions maxistrales |

| | Personalized attention |
|---------------------|--|
| Methodologies | Description |
| Guest lecture / | The personalised attention that describes in relation to these methodologies conceive like moments of face-to-face work for |
| keynote speech | the student with the professor, by what involve a participation for the student; the form and the moment in that it will develop |
| Supervised projects | will indicate in relation to each activity along the course according to the plan of work of the subject. |
| Problem solving | The measures of specific personalised attention for or student with recognition of dedication part time and dispenses |
| | academician of exemption of assistance for the study of the matter, will be delivery of questionnaires, bulletins and |
| | examinations of other courses that will put to disposal of the students on distinct contents and that the student will have to |
| | resolve. |
| | |
| | |

| | Assessment | | |
|---------------------|--------------------|---|---------------|
| Methodologies | Competencies | Description | Qualification |
| Guest lecture / | A15 A16 A24 A25 B1 | Questions to the students. | 10 |
| keynote speech | B2 B3 C1 C3 C6 | | |
| Objective test | B2 B3 | Development of cuestions and problems. Competencie C6 will be assessed. | 70 |
| Supervised projects | A15 A27 B2 B3 B6 | Development of specific aspects with examples and solved problems. Competence B3 will be assessed | 10 |
| Problem solving | A15 A20 B1 B2 B3 | Delivery of exercises and solved exams. Competences A15. B2 and C3 will be | 10 |
| | | assessed. | |

Assessment comments



To surpass the asignatura will be necessary to obtain, added the qualifications of all the activities, a minimum note of 50% of the total and 50% objective test. To obtain the qualification of no presented, sera sufficient that the student do not participate in the objective proof and have not been evaluated in the Works tutelados in but of 50%. In the proof of second opportunity the criterion to surpass the asignatura will be the previous or obtain a no inferior note to 50% in the objective proof. By what refers to successive academic courses, the process of education-learning, included the evaluation, refers to an academic course, and therefore volveria to begin with a new course, included all the activities and procedures of evaluation that went programmed for said course; nevertheless it allows request keep the qualification of practices of a previous course.

The students enrolled in regimen of partial time and academic exemption from attendance exemption, can be evaluated of personalised way regarding the methodologies of Session maxistral, Solution of problems and Works tutelados. The students enrolled in regimen of partial time is compulsory to present to the objective proof, asi as to the partial proofs along the course. For the first and second opportunity the criteria of evaluation for this alumnado, is the same that for the others and the percentage of dispenses of assistance will be of 80%.

The objective Proof is equal for all the students.

They have priority in the granting of matrícula of honour the students at the earliest opportunity.

| | Sources of information | | |
|--------------------------------------|--|--|--|
| Basic | - LARSON (2006). CALCULO. McGrawHill | | |
| | br /> | | |
| Complementary | - Bradley (). Cálculo. Prentice Hall | | |
| - Finney (). Cálculo. Addison-Wesley | | | |
| | - Alfonsa García (). Cálculo I. CLGSA | | |
| | - Salas / Hille / Etgen (). Cálculus. Reverté | | |
| | - NEUHAUSER (2004). MATEMÁTICAS PARA CIENCIAS. Pearson | | |
| | - Rogawski (2014). Cálculo, una variable. Reverté | | |
| | br /> | | |

| Recommendations |
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| Subjects that it is recommended to have taken before |
| |
| Subjects that are recommended to be taken simultaneously |
| |
| Subjects that continue the syllabus |
| |
| Other comments |
| It is convenient to have knowledges of mathematics of 2 bachillerato, if |
| it does not have them recommends do the course of nivelación. . |

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.