Teaching Guide				
Identifying Data				2022/23
Subject (*)	Education in Mathematics I		Code	652G02008
Study programme	Grao en Educación Primaria			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	First	Obligatory	6
Language	SpanishGalician			
Teaching method	Face-to-face			
Prerequisites				
Department	Pedagoxía e Didáctica			
Coordinador	Soneira Calvo, Carlos	E-mail	carlos.soneira@udc.es	
Lecturers	Soneira Calvo, Carlos	E-mail	carlos.soneira@udc.es	
Web				
General description	In this matter pretends describe and analyse the processes that take part in the learning of the mathematics in the Primary Education, as well as know methods, technical and resources for his work in the classroom. This subject is also aimed at showing the role of Mathematics in the current society, along the history and its role in the integral education of scholars.			

Study programme competences / results	
Code	Study programme competences / results
A38	Adquirir competencias matemáticas básicas (numéricas, cálculo, xeométricas, representacións espaciais, estimación e medida, organización e interpretación da información, etc.).
A39	Coñecer o currículo escolar de matemáticas. Analizar, razoar e comunicar propostas matemáticas.
A40	Formular e resolver problemas vinculados coa vida cotiá.
A41	Valorar a relación entre matemáticas e ciencias como un dos pilares do pensamento científico.
A42	Desenvolver e avaliar contidos do currículo mediante recursos didácticos apropiados e promover as competencias correspondentes nos estudantes.
B1	Aprender a aprender.
B2	Resolver problemas de forma efectiva.
B3	Aplicar un pensamento crítico, lóxico e creativo.
B4	Traballar de forma autónoma con iniciativa.
B5	Traballar de forma colaborativa.
B8	Capacidade para elaborar discursos coherentes e organizados loxicamente.
B9	Capacidade para expoñer as ideas elaboradas, de forma oral e na escrita.
B10	Capacidade de expresión oral e escrita en varias linguas (a lo menos nunha lingua estranxeira).
B11	Capacidade de comprensión dos distintos códigos audiovisuais e multimedia e manexo das ferramentas informáticas.
B12	Capacidade de selección, de análise, de avaliación e de utilización de distintos recursos na rede e multimedia.
B15	Capacidade para utilizar diversas fontes de información, seleccionar, analizar, sintetizar e extraer ideas importantes e xestionar a información.
B18	Compromiso ético para o exercicio das tarefas docentes.
B19	Capacidade de adaptarse a novas situacións nunha sociedade cambiante e plural.
B21	CB1 - Que os estudantes demostrasen posuír e comprender coñecementos nunha área de estudo que parte da base da educación secundaria xeneral, e se adoita encontrar a un nivel que, se ben se apoia en libros de texto avanzados, inclúe tamén algúns aspectos que implican coñecementos procedentes da vangarda do seu campo de estudo
B22	CB2 - Que os estudantes saiban aplicar os seus coñecementos ao seu traballo ou vocación dunha forma profesional e posúan as competencias que adoitan demostrarse por medio da elaboración e defensa de argumentos e a resolución de problemas dentro da súa área de estudo
B23	CB3 - Que os estudantes teñan a capacidade de reunir e interpretar datos relevantes (normalmente dentro da súa área de estudo) para emitir xuízos que inclúan unha reflexión sobre temas relevantes de índole social, científica ou ética

B24	CB4 - Que os estudantes poidan transmitir información, ideas, problemas e solucións a un público tanto especializado como non especializado
B25	CB5 - Que os estudantes desenvolvesen aquelas habilidades de aprendizaxe necesarias para emprender estudos posteriores cun alto grao de autonomía
C1	Expresarse correctamente, tanto de forma oral coma escrita, nas linguas oficiais da comunidade autónoma.
C3	Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida.
C4	Desenvolverse para o exercicio dunha cidadanía aberta, culta, crítica, comprometida, democrática e solidaria, capaz de analizar a realidade, diagnosticar problemas, formular e implantar solucións baseadas no coñecemento e orientadas ao ben común.
C6	Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.
C7	Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida.
C8	Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.

Learning outcomes			
Learning outcomes	Study programme competences / results		
Boost and develop the knowledge of basic mathematical concepts.	A38 A40 A41	B23 B24	
The mathematicians in the school curriculum of the Primary Education.	A38 A39 A42	B22 B25	
With the aim that the students experience the utility of the mathematicians in the world that surrounds them day to day, will resolve mathematical problems and no propiamente mathematicians.	A38 A40 A41	B1 B2 B3 B4 B9 B21	
Evaluate and analyze the teaching and the learning of the mathematicians in the stage of Primary Education using didactic resources.	A38 A39 A42	B1 B2 B3 B4 B5 B8 B9 B10 B11 B12 B15 B18 B19 B22 B25	C1 C3 C4 C6 C7 C8

To know the relationship between Mathematics and Science	A40 A41 A42	B2 B4 B5 B8 B9 B11 B12 B15 B18	C3 C4 C7

Contents	
Topic	**Sub-topic**
The relionhship between Mathematics, culture and society.	The mathematics in the culture. The mathematics in the society. The mathematics like tool for the sustainability.
The mathematics through the history.	The mathematics in the Prehistory, in the Ancient Age, in the Half Age, in the Modern Age and in the Contemporary Age.
The teaching and learning of Mathematics in Primary Education.	School curriculum. Teaching and learning theoretical models Development of school mathematics competencies.
Resources and materials for the teahcing and legarning of mathematics.	Mathematical tasks. Didactic material.
The natural numbers. Number systems.	Development of the concept of number. Number systems
The addition and the subtraction.	Additive and substractive problems . The algorithms.
The multiplication and the division.	Multiplicative and division problems. Algorithms. The calculator in the classroom.

Planning				
Methodologies / tests	**Competencies / Results**	**Teaching hours (in-person & virtual)**	**Student?s personal work hours**	**Total hours**
Guest lecture / keynote speech	A42 B2 B3 C8	18	29	47
Laboratory practice	A33 A34 A35 A38 A39 A42 B1 B2 B3 B4 B5 B8 B9 B11 B12 B15 B18 B19 C1 C3 C6 C7 C8	21	25	46
Mixed objective/subjective test	A33 A34 A35 A39 A42 B2 B3 B4 B8 B9 C1	3	11	14
Workbook	A39 A41 A42 B1 B15 C7 C8	0	10.5	10.5
Introductory activities	B18 C4 C7	1	0	1
Directed discussion	A39 A40 B2 B3 B8 B18 B23 B24 C7	2	1	3

Supervised projects	A38 A39 A40 A41 A42 B1 B2 B3 B5 B8 B9 B10 B11 B12 B15 B21 B22 B23 B24 B25 C1 C3 C4 C6 C8	0	26.5	26.5
Personalized attention		2	0	2
(*)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 / keynote speech	Exposition of the different topics by the teacher, seeking to present the information and motivate the study and the work
Laboratory practice	Classroom work on specific aspects of the different topics, solving issues that illustrate or apply the contents of the subject, following more or less open scripts, and with the help of materials
Mixed objective/subjective test	Written test that integrates test questions and objective test questions. As for test questions, it collects open questions of development. In addition, as for objective questions, it may combine multiple answer questions, management, short answer, discrimination, problem solving, completion and/or association. These tests will evaluate the contents exposed/worked in the master sessions, in the laboratory practices and in the readings uploaded to Moodle.
Workbook	Written material proposed to students to know different questions of the subject.
Introductory activities	Dialogue between the teacher and the student to know the interests and motivations of the student.
Directed discussion	Dialogue in the classroom between the students and the teacher, led by the latter, about specific aspects of the subject's topics.
Supervised projects	A work will be proposed, to be done in a group, related to some content of the subject. A written report will be done by the students and a presentation will be made in the classroom, combining the use of ICT resources with oral exposure. There will be at least one follow-up tutoring in which the group must orally expose the progress up to that time and the lines of continuity, in addition to a written script.

Personalized attention	
Methodologies	**Description**
Laboratory practice Mixed objective/subjective test Supervised projects	Personalised attention is described as moments of face-to-face work with the teacher. The form and timing in which they are developed will be indicated in relation to each activity throughout the course according to the work plan of the subject. The supervised works will be guided by group tutoring. Each group of students must attend those follow-up tutors convened by the teacher, and orally expose their progress until that date and planned lines of continuity.

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Laboratory practice	A33 A34 A35 A38 A39 A42 B1 B2 B3 B4 B5 B8 B9 B11 B12 B15 B18 B19 C1 C3 C6 C7 C8	Resolution of the different group activities, issues and problems proposed in laboratory practices, submitted in time and form. The ability to analyze, the argumentation rigor in argument, accuracy, and clarity of exposure, will be taken into account.	20

Mixed objective/subjective test	A33 A34 A35 A39 A42 B2 B3 B4 B8 B9 C1	The specific and precise answers will be valued, as well the degree of correction as required in each question, and the clarity in the exposition. It includes contents of laboratory practices, readings and the master session. It will be individual tests.	40
Supervised projects	A38 A39 A40 A41 A42 B1 B2 B3 B5 B8 B9 B10 B11 B12 B15 B21 B22 B23 B24 B25 C1 C3 C4 C6 C8	The degree of achievement of the objectives will be assessed in compliance with the teaching guidelines, the rigor, the argumentation, the depth of the analysis of the proposed situations, and the clarity of the exhibition. It will be held in group and will be exhibited in the classroom in the last weeks of the course.	40

Assessment comments

Option
A. Students who attend and participates in the 80% of interactive sessions:

The final qualification will be a
result of the results obtained in the following paragraphs:

Laboratory practices: 20%

Mixed test: 40%

Supervised work: 40%

Depending on the demands and capacity of entities
external to the UDC to host students, some groups of students may, if they
prefer, replace the realization of the work supervised by a Learning and
Service project (ApS). This ApS will focus on the subject matter and will be
carried out in a group, in the same way with the protected work. A written report
will be submitted, and a presentation
will be made in the classroom, combining the use of ICT courses with oral
exposure.

There will be at least one follow-up tutoring in which
the group must orally expose the progress up to that time and the lines of
discontinuity, in addition to a written script.

The weight in the planning and evaluation system of the subject will be the same as that of the supervised work (40%).

It is not guaranteed that all students who wish can
choose to do the work of APS, because the offer of places is conditioned by the
capacity of the choice and the needs of the entities external to the UDC.

Each activity and each section will be classified on a
scale of 0 to 10.

Those laboratory practices which are evaluated and to which
the student does not attended, will be qualified with 0 in the calculation of
the average of this section.
To pass the subject, the student must reach a minimum of
5 out of 10 in each of the previous three paragraphs. In this case, the final
total qualification will be the weighted average of these three sections
according to the percentages indicated above.

If a student does not pass any of the sections, the final
grade will be fail, corresponding to the section not passed.

In the 2nd call or retake (June-July), only those failed section in
the 1st call (May-June) will be retaken and the final qualification will be

calculated in an analogous way. That is, with the weighted average following the same percentages if the student passes the 3 sections, and with the fail corresponding to the section not passed otherwise.
Option B.
Students who do not attend or do not participate in the 80% of the interactive sessions:

In this case the evaluation will not be as in the previous case, but the mixed test will constitute 100% of the final qualification.

However, those students can choose, if they prefer, to join a working group, consisting indifferently of assistant or non-assistant students, and carry out the supervised work (or the ApS if they wish and it is possible). In this case, the qualification of the supervised work (or ApS) will mean the 20% of the final grade and the final mixed test 80%, provided that both parts have a rating not less than 5 out of 10.

Otherwise, the final grade will be the one corresponding to the failed part..

In the 2nd call or retake (June-July), only those section which were failed in the 1st call (May-June) will be retaken and the final qualification will be calculated in an analogous way. That is, with the weighted average following the same percentages in case the student passed the 3 sections, and with the note corresponding to the failed section otherwise. For all students in general: Each student must place a photo on their Moodle user profile that identifies them. The typos in the manuscripts and materials submitted will reduce the final score. In the evaluation materials to be submitted, the contents must be appropriately referenced throughout the work and in the reference section using certain rules. The text must be declared using these rules. In the paraphrase must include the original sources of the ideas that are reworked. The presence of scientific sources at work is a sign of credibility that is an essential requirement to demonstrate academic excellence. It is recommended to consult:https://www.udc.es/gl/library/services/apoio_investigacion/servizos_apoio/index.html Plagiarism must be avoided. Citations and references to any text must be declared, the literal use of the text or ideas of other authors paraphrased without declaring the source implies the suspension of the work in application of article 14.4 of the Rules of Evaluation, Review and Claim of qualifications of the University Degree and Master's Studies, approved by the Governing Council of 19 December 2013 and modified on 29 June 2017, "In the carrying out of works, plagiarism and the use of non-original material, including that obtained through the Internet, without express indication of its origin and, where appropriate, the permission of its author, may be considered a cause of qualification of fail in the activity".

Sources of information

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Complementary	

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Education in Mathematics II/652G02018 Education in Mathematics III/652G02024 Problem Solving in Mathematics/652G02030
Other comments
Recoméndase os envíos dos traballos tutelados telemáticamente. En caso contrario, empregar a impresión a dobre cadra, papel reciclado, evitar imprimir borradores, e non utilizar plásticos. Débese facer un uso sostible dos recursos e a prevención de impactos negativos sobre o medio natural. Débese ter en conta a importancia dos principios éticos relacionados cos valores da sostenibilidade nos comportamentos persoais e profesionais.Materia adscrita ao programa "English Friendly"

(*)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.