

Academic Year: 2025/26

201994 - Programming Basics

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Teaching Guide Information

Subject code: 201994

Degree program: 10014 - Degree in Digital Creation, Animation and Video Games

Type: Basic Training

Year: 1

Number of ECTS: 6.0

Period: Second term

Languages:

Lecture-based teaching: Group 101: Spanish

Interactive teaching: Group 101: Spanish

Group 102: Spanish

Group 103: Spanish

Degree coordination: Patricia Comesaña Comesaña

Subject coordination: Juan Jesús Romero Cardalda

Faculty: Álvaro Torrente Patiño, Juan Jesús Romero Cardalda

1. Overview

Nesta materia impártense coñecementos básicos de programación

2. Educational and learning outcomes (RD 822/2021 degree programs) or competences (RD 1393/2007 degree programs)

Competences (RD 1393/2007 degree programs)

- **[A10]** CE10 - Understanding the main stages of the animation or video game production pipeline and their significance in the overall process.
- **[A12]** CE12 - Knowledge of the structures and basic fundamentals of video game programming, as well as the functioning of tools and appropriate technical terminology.
- **[B01]** CB1 - That students have demonstrated possession and understanding of knowledge in a field of study that builds upon general secondary education and is typically at a level that, while supported by advanced textbooks, also includes some aspects involving knowledge from the forefront of their field of study.

- **[B02]** CB2 - That students know how to apply their knowledge to their work or vocation in a professional way and possess the competencies that are usually demonstrated through the preparation and defense of arguments and problem-solving within their field of study.
- **[B04]** CB4 - That students can communicate information, ideas, problems, and solutions to both specialized and non-specialized audiences.
- **[B05]** CB5 - That students have developed the learning skills necessary to undertake further studies with a high degree of autonomy.
- **[B07]** CG2 - Ability to effectively solve problems, mainly of a technological nature, and in the field of creating interactive and animated digital content.
- **[B08]** CG3 - IT knowledge, especially regarding the use of state-of-the-art technologies and software within the field of study.
- **[B10]** CG5 - Critical evaluation of available knowledge, technology, and information for their application in problem-solving.
- **[B11]** CG6 - Critical and self-critical thinking skills, necessary in all creative processes that aim for a commitment to the quality of the work, outcomes, and proposed solutions.
- **[B12]** CG7 - Teamwork skills. Ability to tackle projects collaboratively with other students, assuming roles and fulfilling commitments to the group.
- **[B13]** CG8 - Ability to apply knowledge in practice, integrating the different parts of the program and connecting them in the development of complex products.
- **[C03]** CT3 - Use of basic tools in information and communication technologies (ICT) necessary for professional practice and lifelong learning.
- **[C04]** CT4 - Development for the exercise of citizenship that respects democratic culture, human rights, and gender perspective.
- **[C06]** CT6 - Acquisition of life skills and healthy habits, routines, and lifestyles.
- **[C07]** CT7 - Ability to work in interdisciplinary or transdisciplinary teams, offering proposals that contribute to sustainable environmental, economic, political, and social development.
- **[C08]** CT8 - Appreciation of the importance of research, innovation, and technological development in the socio-economic and cultural advancement of society.
- **[C09]** CT9 - Ability to manage time and resources: develop plans, prioritize activities, identify critical tasks, set deadlines, and meet them.

2.1. Learning outcomes (RD 1393/2007 degree programs)

Learning outcomes	Study programme competences / results		
Nesta materia impártense coñecementos básicos de programación que permitirán ao alumnado crear material multimedia, destacando a creación de videoxogos. Estas técnicas de programación tamén resultarán útiles no desenvolvemento de ferramentas e extensións para programas de creación de contidos dixitais.	A10 A12	B1 B2 B4 B5 B7 B8 B10 B11 B12 B13	C3 C4 C6 C7 C8 C9

3. Contents

Content unit	Description	Education and learning outcomes / competences	Teaching methodology and training activities	Assessment systems
Topic	Fundamentos de programación: 1. Estruturas de programación 2. Diagramas de fluxo 3. Pseudocódigo 4. Linguaxes de programación			

4. Teaching methodologies and training activities

Modality In-person

Methodology	Description	In-person teaching hours	Virtual teaching hours	Independent study hours	Education and learning outcomes / competences
Personalized attention [MAG00]	Resolución de dúbidas de teoría ou prácticas, seguemento das prácticas propostas e traballos tutelados presencialmente e de forma telemática mediante correo electrónico e Teams.	6,00	0,00	0,00	
Laboratory practice [MAG21]	Desenvolvemento de traballos prácticos no laboratorio. Presencial e online	28,00	0,00	56,00	B07, B10, B11, B12, B13, C03, C07.
Mixed objective/subjective test [MAG32]	Proba de avaliación da parte teórica e práctica. Presencial	2,00	0,00	0,00	B01, B05, C09.
Guest lecture / keynote speech [MAG39]	Presentación dos temas teóricos da materia. Presencial e online	8,00	0,00	8,00	A10, A12, B08.
Supervised projects [MAG42]	Resolución de traballos tutelados propostos e resoltos en horario de titorías. Presencial e online	7,00	0,00	35,00	B02, B04, C04, C06, C08.
Sum of hours by type		51,00	0,00	99,00	
Total hours				150,00	

5. Assessment

Modality In-person			
Assessment system	Description	Weighting (%)	Education and learning outcomes / competences
Laboratory practice [SEG21]	Entrega de traballos prácticos de laboratorio. Computa ata un máximo de 4 puntos na nota final. A súa realización é obrigatoria para superar a materia.	40,00	B07, B10, B11, B12, B13, C03, C07.
Mixed objective/subjective test [SEG32]	Proba de avaliación centrada principalmente na parte teórica, aínda que tamén inclúe preguntas sobre prácticas. Computa un máximo de 4 puntos na nota final. A súa realización é obrigatoria para superar a materia.	40,00	B01, B05, C09.
Supervised projects [SEG42]	Resolución e participación en traballos tutelados. Computa un máximo de 2 puntos na nota final. A súa realización non é obrigatoria para superar a materia.	20,00	B02, B04, C04, C06, C08.
Total (%)		100,00	

All aspects related to academic exemption, study dedication, retention, and academic fraud will be governed in accordance with the current [academic regulations](#) of the UDC.

5.1. First opportunity

Para superar a materia é imprescindible aprobar tanto a proba mixta como as prácticas de laboratorio.

É imprescindible conseguir unha nota mínima de 5 sobre 10 nas dúas partes (proba mixta e prácticas de laboratorio) para aprobar a materia (en caso contrario, a máxima nota que se poderá conseguir é un 4,5).

O alumnado poderá ser chamado a revisión das prácticas, e debe ser capaz de defender o seu traballo.

ESTUDANTADO CON MATRÍCULA A TEMPO PARCIAL: Deberán poñerse en contacto co profesorado da materia para posibilitar a realización das tarefas fóra da organización habitual da materia.

Todos os aspectos relacionados con “dispensa académica”, “dedicación ao estudo”, “permanencia” e “fraude académica” rexeranse de acordo coa normativa académica vixente da UDC.

5.2. Second opportunity

Para superar a materia é imprescindible aprobar tanto a proba mixta como as prácticas de laboratorio.

É imprescindible conseguir unha nota mínima de 5 sobre 10 nas dúas partes (proba mixta e prácticas de laboratorio) para aprobar a materia (en caso contrario, a máxima nota que se poderá conseguir é un 4,5).

O alumnado poderá ser chamado a revisión das prácticas, e debe ser capaz de defender o seu traballo.

ESTUDANTADO CON MATRÍCULA A TEMPO PARCIAL: Deberán poñerse en contacto co profesorado da materia para posibilitar a realización das tarefas fóra da organización habitual da materia.

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5.3. Early opportunity

ESTUDANTADO DE OPORTUNIDADE ADIANTADA: Deberán poñerse en contacto co profesorado da materia.

5.4. Academic exemption

Todo o estudantado que teña recoñecida a dedicación a tempo parcial (TP) ou a matrícula adaptada ten dereito a dispensa académica, unha vez acreditada algunha das circunstancias recollidas no artigo 6 da NDEDA.

Tamén a pode solicitar o estudantado con dedicación a tempo completo, sempre que acredite algunha das circunstancias recollidas no artigo 6 da NDEDA.

6. Recommended bibliography

Basic bibliography

- Joyanes Aguilar, Luis (2013). Fundamentos generales de programación. McGraw Hill. Book. [\[URL\]](#)
- Shaw, Zed A., Acera, Miguel Ángel, trad. (2017). Aprenda a programar con Python 3. Ediciones Anaya Multimedia. Book. [\[URL\]](#)

Supplementary bibliography

- Fernández Huerta, Iván., Ema Díez, Paula (2018). Fundamentos básicos de programación: aplicación práctica con SCRATCH y PHYTON. Delta Publicaciones. Book. [\[URL\]](#)