

**COURSE DATA****Data Subject**

Code	40538
Name	Additional training for the specialties of technology and industrial processes
Cycle	Master's degree
ECTS Credits	6.0
Academic year	2020 - 2021

Study (s)

Degree	Center	Acad. year	Period
2024 - M.U. en Profesor/a de Educación Secundaria 09-V.1	Faculty of Teacher Training	1	Annual

Subject-matter

Degree	Subject-matter	Character
2024 - M.U. en Profesor/a de Educación Secundaria 09-V.1	46 - Additional training for the specialties of technology and industrial processes	Optional

Coordination

Name	Department
LLOPIS ALONSO, FRANCISCO	245 - Chemical Engineering

SUMMARY

This course deals with the study of the Spanish education system and its development and regulations. The organization of schools in secondary education within the specialty of Technology and Vocational Training. The secondary curriculum, educational and cultural value of Technology. We will work to deepen and reformulation of the contents of the materials in the context of the curriculum of high school, contemplating his interest and relevance and implications in different areas, and mainstreaming in the areas of specialty



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

OUTCOMES

2024 - M.U. en Profesor/a de Educación Secundaria 09-V.1

- Saber aplicar los conocimientos adquiridos y ser capaces de resolver problemas en entornos nuevos, o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio.
- Saber comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades.
- Poseer las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo.
- Be able to integrate knowledge and handle the complexity of formulating judgments based on information that, while being incomplete or limited, includes reflection on social and ethical responsibilities linked to the application of knowledge and judgments.
- Planificar, desarrollar y evaluar el proceso de enseñanza y aprendizaje potenciando procesos educativos que faciliten la adquisición de las competencias propias de las respectivas enseñanzas, atendiendo al nivel y formación previa de los/as estudiantes así como la orientación de los mismos, tanto individualmente como en colaboración con otros docentes y profesionales del centro.
- Diseñar y desarrollar espacios de aprendizaje con especial atención a la equidad, la educación emocional y en valores, la igualdad de derechos y oportunidades entre hombres y mujeres, la formación ciudadana y el respeto de los derechos humanos que faciliten la vida en sociedad, la toma de decisiones y la construcción de un futuro sostenible
- Conocer y analizar las características históricas de la profesión docente, su situación actual, perspectivas e interrelación con la realidad social de cada época.
- Buscar, obtener, procesar y comunicar información (oral, impresa, audiovisual, digital o multimedia), transformarla en conocimiento y aplicarla en los procesos de enseñanza y aprendizaje en las materias propias de la especialización cursada. Adquirir los conocimientos y las estrategias para poder programar las áreas, materias y módulos propios de su responsabilidad docente.
- Adquirir estrategias para estimular el esfuerzo del alumnado de la etapa o área correspondiente y promover su capacidad para aprender por sí mismo y con otros, y desarrollar habilidades de pensamiento y de decisión que faciliten la autonomía, la confianza e iniciativa personales.



- Diseñar y realizar actividades formales y no formales que contribuyan a hacer del centro un lugar de participación y cultura en el entorno donde esté ubicado.
- Desarrollar las funciones de tutoría y de orientación del alumnado de la etapa o área correspondiente, de manera colaborativa y coordinada; informar y asesorar a las familias acerca del proceso de enseñanza y aprendizaje y sobre la orientación personal, académica y profesional de sus hijos.
- Participar en la evaluación, investigación y la innovación de los procesos de enseñanza y aprendizaje.
- Conocer contextos y situaciones en que se usan o aplican los diversos contenidos curriculares.
- Conocer la historia y los desarrollos recientes de las materias y sus perspectivas para poder transmitir una visión dinámica de las mismas
- Conocer el valor formativo y cultural de las materias correspondientes de la especialidad de Tecnología y Procesos Industriales y los contenidos que se cursan en las respectivas enseñanzas.
- Para el ámbito de la formación profesional, conocer la evolución del mundo laboral, la interacción entre sociedad, trabajo y calidad de vida, así como la necesidad de adquirir formación adecuada para la adaptación a los cambios y transformaciones que pueden requerir las profesiones.
- Conocer el conjunto de teorías y de técnicas que permiten el aprovechamiento práctico del conocimiento científico, adaptado a la enseñanza.

LEARNING OUTCOMES

Common =====

Acquire the ability to apply knowledge to solve problems in the context of teaching and learning.
Develop the skills and abilities of analysis and synthesis and critical reflection on the different educational situations.

Improving own learning strategies, with particular emphasis on independent learning and meaningful.
Develop attitudes and skills for cooperative learning.

Properly handle communication skills

Specific =====

Understand the organizational structure and functioning of secondary schools and the implications for teachers.

Understand the organization, functioning and responsibilities of departmental units.

Understand the basic concepts and Process Technology and know how to adapt this content to teaching

Meet the educational and cultural value of the relevant areas of Technology.

Knowing the history and recent developments in the specialty and perspectives in order to convey a



dynamic view of the same.

Know contexts and situations that are used or applied the various specialty curricula of Technology.

Acquire a sense of professionalism with an emphasis on teacher training models and relationship with society.

To acquire knowledge and skills necessary to practice the tutoring and mentoring of students.

DESCRIPTION OF CONTENTS

1. History and Epistemology of Technology area.

History and Evolution of Technology.

Review of major developments. Current status and future challenges.

Technology and society (social and cultural impact).

Contribution of Technology in the development of people.

2. Curriculum subjects of the specialty

Technology in Secondary level. Consellería decrees.

Cultural and educational value.

Access to University.

3. Mainstreaming subjects

Application of Technology in various fields.

Necessary skills and complementary technology.

Interdisciplinary contribution in the Technology area.

Environmental education. Education for peace. Health education, etc ...

4. Professor of Technology subject

Teacher Competencies. Access to High School teacher's job.

The secondary center: Types and organization. Laboratories.

5. History and Development of Vocational Training

Old vocational training. Actual vocational training.

Professional families: LOGSE. versus LOE cycles.

Current status and future challenges Society and Vocational Training.

Need for qualified vocational training.

**6. The curriculum in the Vocational Training Modules**

Professional qualifications (INCUAL). Curricula for the training courses.

7. Professor of Vocational Training.

Teacher Competencies. The Integrated Vocational Training Centre. Access to the work of Professor Professional Modules. Workshops: Establishment and maintenance.

8. Vocational Guidance

Training in Working Centre (FCT). Tutor functions. Relations with the Company.
Monitoring and Evaluation Practices

9. Safety and health at work.

Occupational health: the management of risk prevention. Work organization.

WORKLOAD

ACTIVITY	Hours	% To be attended
Classroom practices	19,00	100
Theory classes	19,00	100
Tutorials	4,00	100
Group work	4,00	100
Other activities	2,00	100
Development of group work	32,00	0
Development of individual work	30,00	0
Study and independent work	40,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

Depending on the skills, learning objectives and content is used several methods: narrative methodology, cooperative work, group discussion, text analysis, practical activities and individual and group application, etc.. The methodology will be participatory and dynamic in order to promote the involvement and participation of pupils and students in classrooms, including teacher explanations to clarify the theoretical assumptions. Discussion will be used where appropriate and develop practical work, exhibitions and different projects related to the teaching profession and to the discussion of the subject.



EVALUATION

The evaluation of the acquisition of competences by students will be done by combining different types of information, linked to the different activities that students will develop in the subject. The evaluation procedures will be:

Minimum requirements: Assistance and active participation in face-to-face sessions is an essential requirement (at least 80%). Those students whose attendance is lower will be classified as Suspended in the 1st Call.

For the assessment of the different aspects of the subject, the following will be taken into account:

Activities: The classroom activities will grant 40% of the final grade. It includes oral presentations, active involvement in learning, debates, reflections on the concepts raised, participatory attitude, punctuality. This part of the subject has the character of NOT recoverable.

Reports: Students will develop practical or theoretical reports of mandatory nature of parts of the subject. The value of them will be 30% of the final grade. The work delivered out of date, the teacher will admit them by own will, not by obligation. In this case, the grade will be 5.0 (although the work would have deserved a higher grade if it was submitted on time).

Exam: A final evaluation test will be carried out that will incorporate the fundamental knowledge of the subject. The test will integrate essay and objective questions. The value of this test will be 30% of the final grade.

Global Qualification: Each of the professors who teach the subject will issue a rating of the activities and reports assessed. The overall score will result from a weighted average based on your dedication in hours. This average can only be done if the students have followed the subject regularly, according to the minimum requirements already commented.

Students who have not passed the 1st Call in the subject, for not meeting the required face-to-face attendance or not having submitted the reports, may be submitted to a final test of the whole subject, and perform a theoretical-practical exam on the date established in the school calendar. In this test you will have to reach a minimum grade of 5.0 and in the final grade the average of the reports delivered will also be taken into account.

The subject is considered overcome when the mark obtained is equal to or greater than 5 (over 10). In any case, the evaluation system will be governed by the Reglament d'Avaluació i Qualificació de la Universitat de València per a Títols de Grau i Màster (<http://links.uv.es/j0Im3ec>).

REFERENCES

Basic

- ALEMÁN, F. J.; CONTRERAS, F; ENCINAS, P. (1994) Tecnología. Guía didáctica y metodología, Ed. Paraninfo.
- ARIAS, M. y otros (2005) Formación para la prevención. Ministerio de Trabajo y Asuntos Sociales.
- ARBIZU, F. (1998) La Formación Profesional Específica: claves para el desarrollo curricular, Ed. Santillana.



BAIGORRI, J. y otros (1997) Enseñar y aprender Tecnología en la Educación Secundaria, Ed. Horsori.
BLAS, F.A., (2007) Competencias Profesionales en la Formación Profesional, Ed. Alianza.
CARDWELL, D. (1996) Historia de la Tecnología. Madrid: Alianza Universidad.
FONT, J. (1996) La Enseñanza de la Tecnología en la ESO. Ed. EUMO-Octaedro.
ISABEL FERNÁNDEZ, J.L. (1993) Tecnología. Proyectos en el Aula, Ed. Paraninfo
LÁZARO LORENTE, L.M.; MARTÍNEZ USARRALDE, M.J. (1999) Educación, empleo y formación profesional en la Unión Europea, Ed. Univ. València.
LÓPEZ CUBINO, R. (2001) El área de Tecnología en Secundaria. Madrid: Narcea.
MARPEGÁN, C.M.; MANDÓN, M.J.; PINTOS, J.C. (2009) El placer de enseñar Tecnología, Ed. CEP.
MARTÍNEZ USARRALDE, M.J. (2002) Historia de la Formación Profesional en España: de la ley de 1995 a los programas nacionales de Formación Profesional. Ed. Univ. València
ZAGALA CALVO, G. (1993) Condiciones de trabajo y salud (La seguridad en el aula-taller), Ed. Consellería de Cultura, Educació i Ciencia G.V.

Additional

- www.tecno12-18.com
www.catedu.es/aratecno/
www.aulataller.es/
www.aulatecnologia.com
<http://clic.xtec.cat/es/jcllic/index.htm>
<http://lliurex.net/home/>

ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

Contents

The contents initially collected in the course guide are maintained.

Workload and temporary teaching planning

The different activities described in the Course Guide are maintained with the planned dedication.

The material for the follow-up of the theory/practical lessons allows to continue the temporary teaching planning both in days and hours, both if the teaching is in the classroom or not.

Teaching methodology

In theory and practical lessons in the classroom, maximum possible attendance will be the rule, always respecting the sanitary restrictions that limit the capacity of the classrooms to 50% of their usual occupation. Depending on the capacity of the classroom and the number of students enrolled, it may be necessary to distribute the students into two groups. If this situation arises, each group will attend theory and practical sessions with physical presence in the classroom by rotating shifts, thus ensuring compliance with the criteria for occupying spaces. The rotation system will be established once the



enrolment data is known, guaranteeing, in any case, that the attendance percentage of all the students enrolled in the subject is the same. For classroom sessions and theory sessions that are not face-to-face, there will be a preferably synchronous online teaching model if compatibility with other scheduled activities allows. Online teaching will be carried out by synchronous videoconference respecting the schedule, or, if not possible, asynchronous. Once the enrolment data is available and the availability of spaces is known, the Academic Committee of the Degree will approve the Teaching Model of the Degree and its adaptation to each subject, establishing the specific conditions in which it will be taught.

If there is a closure of the facilities for sanitary reasons that totally or partially affects the classes of the course, they will be replaced by online sessions following the established schedules.

Evaluation

The evaluation system described in the Course Guide is maintained. In it the various evaluable activities have been specified as well as their contribution to the final grade of the course is maintained. If there is a closure of the facilities for sanitary reasons that affect the development of any face-to-face evaluable activity of the subject, it will be replaced by a test of a similar nature that will be carried out in virtual mode using the computer tools licensed by the University of Valencia. The contribution of each evaluable activity to the final grade of the subject will remain unchanged, as established in this guide.

References

The literature recommended in the Course Guide is maintained since part of it is accessible and is complemented by notes, slides and problems uploaded to Virtual Classroom as material of the course.