

**1. General information****Course:** QUALITY CONTROL OF AGRICULTURAL PRODUCTS**Code:** 60422**Type:** ELECTIVE**ECTS credits:** 6**Degree:** 411 - UNDERGRADUATE DEGREE PROGRAMME IN AGRICULTURAL AND FOOD ENGINEERING**Academic year:** 2023-24**Center:** 107 - E.T.S. OF AGRICULTURAL ENGINEERS OF C. REAL**Group(s):** 20**Year:** 3**Duration:** First semester**Main language:** Spanish**Second language:** English**Use of additional languages:****English Friendly:** Y**Web site:****Bilingual:** N**Lecturer:** ANTONIA GARCIA RUIZ - Group(s): 20

Building/Office	Department	Phone number	Email	Office hours
San Isidro Labrador	Q. ANALÍTICA Y TGIA. ALIMENTOS		Antonia.GRuiz@uclm.es	

2. Pre-Requisites

Not established

3. Justification in the curriculum, relation to other subjects and to the profession

Not established

4. Degree competences achieved in this course**Course competences**

Code	Description
E50	Ability to know, understand and use the principles of quality management and food safety
E51	Ability to know, understand and use the principles of food analysis
E52	Ability to know, understand and use the principles of traceability
G01	Knowledge of a foreign language
G02	Computer knowledge
G03	Speaking and writing skills
G04	Analysis and synthesis capacity
G05	Organization and planning capacity
G06	Ability to manage information
G07	Problem resolution
G08	Decision-making
G10	Teamwork
G11	Interpersonal relationship skills
G13	Teamwork
G14	Autonomous Learning
G18	Initiative and enterprising spirit
G20	Environmental sensitivity
G21	Ability to apply practical knowledge
G22	Basic knowledge of the profession
G29	Ability to direct and manage all kinds of agri-food industries, agricultural and livestock farms, urban and/or rural green spaces, and public or private sports areas, with knowledge of new technologies, quality processes, traceability and certification and the marketing and commercialization techniques of food products and cultivated plants
G31	Ability to solve problems with creativity, initiative, methodology and critical thinking
G33	Ability to search for and use the rules and regulations relating to their field of action
G34	Ability to develop their activities, assuming a social, ethical and environmental commitment in tune with the reality of the human and natural environment.

5. Objectives or Learning Outcomes**Course learning outcomes**

Description

6. Units / Contents**Unit 1:****Unit 2:****Unit 3:****Unit 4:****Unit 5:**

Unit 6:
Unit 7:
Unit 8:
Unit 9:
Unit 10:
Unit 11:
Unit 12:
Unit 13:
Unit 14:
Unit 15:

7. Activities, Units/Modules and Methodology							
Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures	E50 E51 E52 G03 G04 G06 G20 G21 G22 G29 G31 G33 G34	1.5	37.5	Y	N	
Class Attendance (practical) [ON-SITE]	Practical or hands-on activities	E50 E51 E52 G03 G04 G05 G06 G07 G08 G10 G11 G20 G21 G22 G29 G31 G33 G34	0.6	15	Y	Y	
Practicum and practical activities report writing or preparation [OFF-SITE]	Self-study	E50 E51 E52 G03 G04 G06 G10 G13 G21 G22 G29 G31 G33 G34	0.4	10	Y	Y	
Workshops or seminars [ON-SITE]	Guided or supervised work	E50 E51 E52 G01 G02 G03 G04 G05 G06 G07 G08 G13 G14 G18 G20 G21 G22 G29 G31 G33 G34	0.2	5	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study	E50 E51 E52 G03 G04 G06 G07 G10 G11 G13 G20 G21 G22 G29 G31 G33 G34	3.2	80	N	-	
Mid-term test [ON-SITE]	Assessment tests	E50 E51 E52 G01 G02 G04 G05 G06 G07 G08 G13 G14 G18 G20 G21 G22 G29 G31 G33 G34	0.1	2.5	Y	Y	
Total:			6	150			
Total credits of in-class work: 2.4			Total class time hours: 60				
Total credits of out of class work: 3.6			Total hours of out of class work: 90				

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System			
Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Final test	0.00%	65.00%	
Practical exam	0.00%	35.00%	
Assessment of active participation	5.00%	0.00%	
Practicum and practical activities reports assessment	10.00%	0.00%	
Projects	20.00%	0.00%	
Mid-term tests	65.00%	0.00%	
Total:	100.00%	100.00%	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences).

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	hours
Class Attendance (theory) [PRESENCIAL][Lectures]	37.5
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	15
Practicum and practical activities report writing or preparation [AUTÓNOMA][Self-study]	10
Workshops or seminars [PRESENCIAL][Guided or supervised work]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	80
Mid-term test [PRESENCIAL][Assessment tests]	2.5
Global activity	
Activities	hours
Practicum and practical activities report writing or preparation [AUTÓNOMA][Self-study]	10

Mid-term test [PRESENCIAL][Assessment tests]	2.5
Class Attendance (theory) [PRESENCIAL][Lectures]	37.5
Workshops or seminars [PRESENCIAL][Guided or supervised work]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	80
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	15
Total horas: 150	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	City	ISBN	Year	Description
ASQ Food, drug and cosmetic division	HACCP manual del auditor de calidad	Acribia	Zaragoza	84-200-1010-3	2002	
Astiasarán, I. y Alfredo Martínez, J.	Alimentos. Composición y propiedades	Mc Graw Hill	Madrid	84-486-0305-2	2003	
Belitz, H.D.	Química de los alimentos	AMV	Madrid	97884200011622	2012	
Bolton, Andrew	Quality management systems for the food industry : a guide	Blackie Academic & Professional		0-7514-0303-2	1997	
Britz, J.	Internet, trazabilidad y seguridad alimentaria	MP	Madrid	84-8476-140-1	2003	
Briz Escribano, J. y García Faure, R.	Análisis sensorial de productos alimentarios. Metodología y aplicación al mercado español	MAPA	Madrid	84-491-0487-4	2000	
Carpenter, Roland	Análisis sensorial en el desarrollo y control de calidad de	Acribia	Zaragoza	84-200-0988-1	2002	
Cheftel, Jean-Claude	Introducción a la bioquímica y tecnología de los alimentos	Acribia	Zaragoza	84-200-0444-8	1992	
Damodaran, S.; Parkin, K. L. y Fennema, O.R.	Fennema Química de los alimentos	AMV	Madrid	9788420011424	2010	
Francisco Polledo, J.J.	Gestión de la seguridad alimentaria	MP	Madrid	84-8476-081-2	2002	
Hubbard Merton, R..	Satatistical quality control for the food industry	AMV	Madrid	9781461349440	2012	
Hubbard, M.R.	Choosing a quality control system	Technomic Publishing	EEUU	1-56676-687-7	1999	
Kress-Rogers, E.	Instrumentation and sensors for the food industry	Woodhead Publishing Limited	Cambridge	185573 3633	1998	
Lampercht, J.L.	Iso 9000 en la pequeña empresa. Manual de implementacion	Panorama	México	9 789683805478	1995	
Lyon, D.H.	Guidelines for sensory analysis in food product developement and quality control	Todostuslibro.com		9781461358251	2012	
MAPA	Gestion de la calidad en la industrias agroalimentaria		Madrid	84-491-0404-6	1999	
Madrid Vicente, A y Madrid Cenzano, J.	Normas de calidad de alimentos y bebidas	AMV	Madrid	788471148520	2000	
Madrid Vicente, A.	Los aditivos en los alimentos	AMV	Madrid	9788494285042	2014	
Madrid Vicente, Antonio	Los aditivos en los alimentos	AMV	Madrid	84-7114-403-4	1992	
Madrid Vicente, Antonio	Manual de industrias alimentarias	AMV	Madrid	84-398-7303-4	1986	
Madrid Vicente, Antonio	Nuevo manual de industrias alimentarias	A. Madrid Vicente Mundi-Prensa		84-7114-980-X (Mundi	2001	
Man, Dominic	Caducidad de los alimentos	Acribia	zaragoza	84-200-1028-6	2004	
Moll, Manfred	Compendio de riesgos alimentarios	Acribia	Zaragoza	8420010685	2006	
Moreiras, O. y col.	Tablas de composición de alimentos	Pirámide	Madrid	84-368-1945-4	2005	
Mortimore, Sara	HACCP: enfoque práctico	Acribia	Zaragoza	84-200-0959-8	2001	
Multon, J.L.	Quality control for foods and agricultural products	VCH	Nueva York	9787560816980	1996	
Newslow, Debby L.	The ISO 9000 quality system : applictions in food and tech	Wiley-Interscience		0-471-36913-6	2001	
Rivera Vilas, L.M.	Gestión de la calidad agroalimentaria	MP	Madrid	84-7114-517-0	1995	
Sancho i Vals, J. y col.	Autodiagnostico de la calidad higienica en las instalaciones agroalimentarias	MP	Madrid	84-7114-592-8	1996	
Vaclavik, Vickie A.	Fundamentos de ciencia de los alimentos	Acribia	Zaragoza	84-200-0976-8	2002	