[MM3103] BEHAVIOR AND DESIGN OF BIOMECHANICAL SYSTEMS

GENERAL INFORMATION

Studies	MASTER'S DEGREE IN BIOMEDICAL TECHNOLOGIES	**Subject**	?
Semester	2	**Course**	0
Character	COMPL. TRAINING	**Mention / Field of specialisation**	
Plan	2023	**Modality**	Face-to-face
Language	CASTELLANO		
Credits	5	**Hours/week**	1.89
Total hours	34 class hours + 91 non-class hours = **125 total hours**		

PROFESSORS

MATEOS HEIS, MODESTO
LAPEIRA AZCUE, ESTELA

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
[!]	*(No previous knowledge required)*
[!]	

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
G_R064 - To analyze, calculate and design mechanical structures, analyzing stresses and deformations		*x*		1,64
G_R065 - To design a mechanical component based on its specifications, selecting the material, defining the geometry and sizing it	*x*			3,36
			Total:	5

KC: Knowledge or Content / SK: Skills / AB: Abilities

SECONDARY LEARNING RESULTS

RMM011 **[!]** ***Conoce, comprende y calcula el equilibrio estático de sólidos y las tensiones en sólidos deformables***

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out exercises and solving problems individually and/or in teams	10 h.	25 h.	35 h.
Tutoring sessions and monitoring of training activities	7 h.	14 h.	21 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	60%	Individual written and/or oral tests or individual coding/programming tests
Individual written and/or oral tests or individual coding/programming tests	40%	

CH - Class hours: 17 h.
NCH - Non-class hours: 39 h.
TH - Total hours: 56 h.

RMM012 **[!]** ***Conoce y analiza las propiedades mecánicas de los tejidos humanos***

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out exercises and solving problems individually and/or in teams	2 h.	6 h.	8 h.
Tutoring sessions and monitoring of training activities	6 h.	14 h.	20 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	100%	*(No mechanisms)*

CH - Class hours: 8 h.

NCH - Non-class hours: 20 h.
TH - Total hours: 28 h.

RMM013 **[!]** ***Representar y acotar diferentes tipos de piezas respetando las normas de dibujo técnico***

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out exercises and solving problems individually and/or in teams		14 h.	14 h.
Tutoring sessions and monitoring of training activities	3 h.		3 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	100%	Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems

CH - Class hours: 3 h.
NCH - Non-class hours: 14 h.
TH - Total hours: 17 h.

RMM014 **[!]** ***Diseña un conjunto mecánico mediante software CAD***

LEARNING ACTIVITIES	CH	NCH	TH
Carrying out exercises and solving problems individually and/or in teams		18 h.	18 h.
Tutoring sessions and monitoring of training activities	6 h.		6 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	100%	Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems

CH - Class hours: 6 h.
NCH - Non-class hours: 18 h.
TH - Total hours: 24 h.

CONTENTS

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Moodle Platform
Slides of the subject
Video projections

Bibliography

Técnicas Gráficas (FORMACION PROFESIONAL). EDITORIAL DONOSTIARRA

Adierazpen grafikoa ; unitate didaktikoa

Normalización del Dibujo Técnico; Cándido Preciado y Francisco Jesús Moral; EDITORIAL DONOSTIARRA

Meriam, J.L.; Kraige, L.G. Mecánica para Ingenieros; Estática. 3ª ed. Editorial Reverté: España, 1998.

Özkaya, N.; Nordin, M.; Goldsheyder, D.; Leger, D. Fundamentals of Biomechanics; Equilibrium, Motion and Deformation. Third Edition. Springer: New York, 2012.