

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

Code	34316
Name	Computer-aided optical design
Cycle	Grade
ECTS Credits	4.5
Academic year	2020 - 2021

Study (s)

Degree	Center	Acad. year	Period
1207 - Degree in Optics and Optometry	Faculty of Physics	4	First term

Subject-matter

Degree	Subject-matter	Character
1207 - Degree in Optics and Optometry	16 - Optional subjects	Optional
1207 - Degree in Optics and Optometry	19 - Biomedical optics	Optional

Coordination

Name	Department
GARCIA MONREAL, FRANCISCO JAVIER	280 - Optics and Optometry and Vision Sciences
SILVA VAZQUEZ, FERNANDO	280 - Optics and Optometry and Vision Sciences

SUMMARY**English version is not available**

Cálculo y diseño de sistemas ópticos. Principios de óptica matricial, optimización de aberraciones y criterios de calidad de imagen. Conocimiento y utilización de programas de diseño óptico. Simulación del sistema óptico visual.

PREVIOUS KNOWLEDGE

**Relationship to other subjects of the same degree**

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

Other requirements

To take this course students must have completed the subjects Mathematics, Physics, Physiological Optics, Optics, Optometry and Visual Perception, and Ocular Pharmacology and Pathology courses.

OUTCOMES**1207 - Degree in Optics and Optometry**

- Knowing how to apply the knowledge acquired to professional activity, knowing how to solve problems and develop and defend arguments.
- Being able to gather and interpret relevant data to make judgments.
- To know the fundamentals of the design and optimization of optical systems.
- To acquire basic skills to handle optical design computer programs.

LEARNING OUTCOMES

English version is not available

WORKLOAD

ACTIVITY	Hours	% To be attended
Computer classroom practice	15,00	100
Tutorials	15,00	100
Theory classes	15,00	100
Study and independent work	15,00	0
Preparing lectures	30,00	0
Preparation of practical classes and problem	15,00	0
TOTAL	105,00	

TEACHING METHODOLOGY

English version is not available



EVALUATION

English version is not available

REFERENCES

Basic

- Software de diseño óptico OSLO:
<http://www.lambdares.com/oslo>
- D. Malacara, Handbook of Optical design. Taylor and Francis. 2004
- W.J.Smith. Modern Optical Engineering. McGraw-Hill

Additional

- W.T. Welford. Aberrations of Optical Systems. Adam Hilger. 1991
- OSA. Handbook of Optics

ADDENDUM COVID-19

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

English version is not available