

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

<b>Code</b>	34316
<b>Name</b>	Computer-aided optical design
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	4.5
<b>Academic year</b>	2019 - 2020

**Study (s)**

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

**Subject-matter**

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

**Coordination**

<b>Name</b>	<b>Department</b>
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
<b>TOTAL</b>	<b>105,00</b>	

**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**