

**INTERDISCIPLINARY DOCTORAL PROGRAM IN VISUAL SCIENCES WITH UNIVERSITY OF VALLADOLID AND
MURCIA**

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Ph.D. equivalent programs possess two parts: a theoretical/practical initiation to get knowledge and abilities to do research in Visual Sciences and an original research project, the Doctoral Thesis (*Thesis Doctoral*) which has to be publicly defended by the trainee at the end of the training period.

The first part of the program is organized in courses (theoretical and practical) and seminars. Students of the doctoral training program have to complete 32 credits (1 credit should be equivalent to 10 hours of attendance) in no less than 2 academic years (from September to July). Trainees are devoted to get 20 credits by attendance to courses of their election during the first year. During the second year of training, students must prepare and develop a research project to get the remaining 12 credits. Trainees will count on the guidance of a preceptor designed by the Doctorate Program Committee along their training period. Eventually, trainees are awarded with a certificate which enables them to initiate the Doctoral Thesis.

The second part of the program will take at least two years. Trainees will be devoted to develop his/her Doctoral Thesis research project and to attend to scientific activities organized by the Institute. They will count on the guidance of a thesis director, who may or may not be his/her previous preceptor. During this period, trainees are encouraged to present his/her results in national and international meetings according to his/her thesis director guidance. The Doctoral Thesis Defense Seminar will take place when the research project is complete. 'Defense Seminar' of the Doctoral Thesis means an academic act open to the public that has two parts: a dissertation in front of a five expert panel and a session to answer the questions proposed by the experts.

The aim of the Inter University Ph.D. –equivalent Program in Vision Sciences from IOBA and the Applied Optics and Physics Department (University of Valladolid), the Institute of Optics "Daza de Valdés" (CSIC) and the Ophthalmology, Otolaryngology and Pathological Anatomy Departments (Area of Ophthalmology), the Physics Department (Area of Optics) (University of Murcia) as well as the Instituto Biomédico de Investigação da Luz e Imagem (IBILI, University of Coimbra) is to train investigators both in the biomedical and in the physical (optical) aspects of the Vision Sciences from a multidisciplinary, applied perspective of quality.

Two training blocks have been proposed, with diverse specific courses and the common one, the course called "Foundations of Vision", which will establish the minimal level of general knowledge that all the students who are trained in Vision Sciences should have on the anatomical, pathological, genetic, optical, physiological and ophthalmologic (clinical) aspects of the vision process. Of these two blocks, one has a physical - optical approach and is orientated fundamentally to training in the optical aspects of vision. The other block consisting of has a biomedical approach and contributes to sight threatening vision diseases of knowledge in general aspects of the biomedical research.

Five courses of methodological nature (this means courses designed to get the knowledge and the skills in research techniques) are also offered including the course named "Basic Elements of Scientific Investigation", which trains the students in the basic skills that he/she will use in the development of any investigation project (ethical procedures, good laboratory practices, bibliographical searches, statistics and preparation of scientific articles).