



Universidade do Minho



## **Curricular Unit**

Advanced Physics Topics 1

## **Module**

Nonlinear Optics

## **Type**

Lecture course

## **Contact hours**

18

## **Professor/Researcher in charge**

Michael Belsley, U. Minho

## **Summary of Contents**

From linear to nonlinear optics  
Propagation of optical beams in the linear regime  
Propagation of optical beams in the nonlinear regime  
Second harmonic generation  
Three wave mixing  
The optical Kerr Effect  
Two photon absorption, third harmonic generation  
Ultrafast pulse generation

## **Evaluation**

Homework problems and a Final exam

## **Juri**