ID	2450
Curricular Unit	Environmental Physics
Regent	Rui Miguel Bettencourt Melo
Learning Outcomes	Students should: - acquire the knowledge of the main concepts, laws and principles of Physics concerning the energy exchanges between man and the environment, specifically related to the occupational hazards; - recognize physics as a useful tool for understanding the real world; - acquire problem-solving skills.
Syllabus	Electric interaction Magnetic interaction Electromagnetic induction Simple harmonic motion Waves Electromagnetic radiation Geometrical optics Mirrors and lenses Sound Thermal physics
Evaluation	The presentation and discussion of the theoretical aspects of the syllabus relies on power point presentations and occurs in the first part of each class. It is followed by the practical approach of each issue, which comprises the resolution of a set of problems previously selected from the bibliographic references. Students are supposed to complete 10 exercises and 2 written tests. The 8 highest grades of the exercises have a 30% contribution to the final grade whereas the mean of the tests' grades contributes with 70%. Alternatively, a final exam is also available.
Bibliography	Cutnell, J.D. & Johnson, K.W. (2004). Physics, 6th edition, John Wiley & Sons Inc. Giambattista, A.; Richardson, B.M.; Richardson, R.C. (2010), College Physics, 3rd edition, New York: McGraw-Hill, Inc. Serway; R. A.; Vuille, C. (2012), College Physics, 9th edition, Boston: Brooks/Cole. Wilson, J.D.; Buffa, A.J. (2007), College Physics, 3rd edition, New Jersey: Prentice Hall. Young, H.D. (2012), College Physics, 9th edition, San Francisco: Addison-Wesley.