6. General Physics 3 Lab (PH024IU)

Course designation	*This course provides students with basic knowledge of optics in laboratory, consists of: diffraction, interferences, telescope, brewster's law, photoelectric effect….*
Semester(s) in which the course is taught	1, 2, summer semester
Person responsible for the course	MSc. Lê Thị Quế
Language	English
Relation to curriculum	Compulsory
Teaching methods	Lecture, lesson, assignment.
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: 55 Contact hours (please specify whether lecture, exercise, laboratory session, etc.): lecture: 25 Private study including examination preparation, specified in hours: 30
Credit points/ECTS	1 credit/2 ECTS
Required and recommended prerequisites for joining the course	Parallel course: General Physics 3 (PH023IU) or Physics 4 (PH012IU)

<table>
<tr><td>Course learning outcomes</td><td>Upon the successful completion of this course students will be able to:
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<tr><th>Competency level</th><th>Course learning outcome (CLO)</th></tr>
<tr><td>Knowledge</td><td>CLO1. Understand basic concepts in Optics and Atomic Physics.</td></tr>
<tr><td>Skill</td><td>CLO2. Approach and solve problems in Optics and Atomic Physics experiments
CLO3. Write scientific report, have understanding the relations between theory and experiment</td></tr>
<tr><td>Attitude</td><td>CLO4. Communicate effectively in writing manner</td></tr>
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<tr><td>Content</td><td>The description of the contents should clearly indicate the weighting of the content and the level.
Weight: experiment session (4 hours)
Teaching levels: I (Introduce); T (Teach); U (Utilize)
<table>
<tr><th>Topic</th><th>Weight</th><th>Level</th></tr>
<tr><td>Intensity versus Distance</td><td>1</td><td>T,U</td></tr>
<tr><td>Diffraction and Interference of light</td><td>1</td><td>T,U</td></tr>
<tr><td>Polarization of light</td><td>1</td><td>T,U</td></tr>
<tr><td>Telescope</td><td>1</td><td>T,U</td></tr>
<tr><td>Brewster’s Angle</td><td>1</td><td>T,U</td></tr>
<tr><td>Photoelectric effect 1</td><td>1</td><td>T,U</td></tr>
<tr><td>Photoelectric effect 2</td><td>1</td><td>T,U</td></tr>
<tr><td>Atomic Spectra</td><td>1</td><td>T,U</td></tr>
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<tr><td>Examination forms</td><td>Experiment, write report</td></tr>
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Study and examination requirements	Attendance: A minimum attendance of 80 percent is compulsory for the class sessions. Students will be assessed on the basis of their class participation. Questions and comments are strongly encouraged. Assignments/Examination: Students must have more than 50/100 points overall to pass this course.
Reading list	[1] Lab manual, PASCO Scientific [2] Halliday D., Resnick R. and Walker, J. (2011) *Principles of Physics*, 9th edition, John Willey and Sons, Inc. [3] Alonso M. and Finn E.J. (1992) *Physics,* Addison-Wesley Publishing Company. [4] Faughn/Serway (2006) *Serway's College Physics*, Thomson Brooks/Cole.