

**DESCRIPTION OF THE COURSE OF STUDY  
FOR EXCHANGE STUDENTS**

<b>Name of the course in</b>	English	<b>Introduction to general relativity and applications to astrophysics and cosmology</b>
	Polish	<b>Ogólna teoria względności i zastosowanie do astrofizyki i kosmologii: wstęp</b>

**1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES**

<b>1.1 Field of study</b>	<b>physics</b>
<b>1.2 Level of study</b>	<b>2<sup>nd</sup> degree</b>

**2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY**

<b>2.1 Language of instruction</b>	<b>English</b>
<b>2.2 Semesters in which the course of study is offered</b>	<b>Fall</b>
<b>2.3 ECTS credits</b>	<b>2</b>

**3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY**

<b>3.1. Form of classes</b>	<b>30 hrs of lectures</b>
<b>3.2. Form of assessment</b>	<b>homework</b>

**4. OBJECTIVES, SYLLABUS CONTENT**

**4.1. Course objectives**

**C1 – Description of the most important features and formalism of general relativity**

**C2 - Understanding the physical tools related to general relativity**

**C3 – Developing skills to solve exercises related to general relativity**

**4.2. Fundamentals of general relativity (equivalence principle, movement in a strong gravitational field, gravitational waves). Astrophysics: stability of neutron stars. Standard model of cosmology.**