

Course Information Sheet

University: <i>University of Prešov in Prešov</i>	
Faculty: <i>Faculty of Humanities and Natural Sciences</i>	
Code: <i>2FYZ/mASTRO/22</i>	Title of Course: <i>ASTRONOMY AND ASTROPHYSICS 1</i>
Form of Study: <i>Lectures, seminars</i>	
Number of contact hours: <i>24</i>	
per week: <i>2/0</i> per level/semester:	
Number of credits: <i>2</i>	
Semester: <i>summer</i>	
Degree/Level: <i>2. level</i>	
Prerequisites: <i>2FYZ/mOPTIK/22, 2FYZ/mJADRO/22 - General Physics III, IV</i>	
Grading Policy (Assessment/Evaluation): <i>written and oral exam</i>	
Aims and Objectives: <i>To make students familiar with spherical astronomy, the solar system and celestial mechanics</i>	
Syllabus/Indicative Content: <i>Survey of the history of astronomy.</i> <i>Spherical astronomy - coordinates of objects, time and calendar.</i> <i>Spherical astronomy - corrections of the observations, star catalog.</i> <i>Sun.</i> <i>Solar-earth relations.</i> <i>Overview of the solar system.</i> <i>Kepler's laws of planetary motion.</i> <i>The basic concepts from the celestial mechanics, the problem of two bodies.</i> <i>Problem of three a n-bodies.</i> <i>Kepler's Equation.</i> <i>Orbital elements.</i>	
Suggested readings: <i>Vanýsek, V. 1980. <i>Základy astronómie a astrofyziky</i>. Praha: Academia ČSAV.</i> <i>Andrle, P. 1971. <i>Základy nebeské mechaniky</i>. Praha: Academia ČSAV.</i> <i>Wolf, M. 1992. <i>Astronomická příručka</i>. Praha: Academia ČSAV.</i> <i>Šíroký, J., Šíroká, M. 1966. <i>Základy astronómie v príkladech</i>. Praha: SPN.</i> <i>Hajduk, A., Štohl, J. 1987. <i>Encyklopédia astronómie</i>. Bratislava: OBZOR.</i> <i>Perozzi, A., Celletti, E. 2006. <i>Celestial Mechanics. The Waltz of the Planets</i>. Springer Verlag.</i>	
Language of Instruction: <i>English</i>	
Other course information:	
Lecturer/Instructor: <i>doc. RNDr. Mária Csatáryová, PhD.</i>	
Last update: <i>3. mája 2024</i>	
Approved by: <i>prof. RNDr. Marián Reiffers, DrSc.</i>	