# Information sheet for the course
# Mechanics of Bodies II

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| **University:** *Alexander Dubček University of Trenčín* | |
| **Faculty:** *Faculty of Industrial Technologies in Púchov* | |
| **Course unit code:** *PP-P-21* | **Course unit title:** *Mechanics of Bodies II* |
| **Type of course unit:** *compulsory* | |
| **Planned types, learning activities and teaching methods:**<br><br>*Lecture: 2 hours weekly/26 hours per semester of study; face to face*<br>*Seminar: 2 hours weekly/26 hours per semester of study; face to face*<br>*Laboratory tutorial: 0 hours* | |
| **Number of credits:**   5 | |
| **Recommended semester:** 4th *semester in the* 2nd *year full-time*<br>                                    4th *semester in the* 2nd *year part-time* | |
| **Degree of study:**  *the* 1st *degree of study (Bachelor's degree)* | |
| **Course prerequisites:** *PP-P-14 Mechanics of Bodies I.* | |
| **Assessment methods:**  *Semestral work, Test* | |
| **Learning outcomes of the course unit:** *The student can independently solve tasks in the area of kinematic and dynamic motion analysis system of bodies body respectively. Knowledge gained in the mechanics of bodies II will be used directly in the mechanics bodies III.* | |
| **Course contents:**  *Basic knowledge of the theory of composition mechanisms, analysis of kinematic solutions. The principle of virtual performances and its application to static addressing mechanisms and whip system. Basic concepts, which works dynamics are space, time and weight. In the first part of the lecture, the students familiar with the equations of motion of a mass point in different coordinate systems and the fundamental theorem of momentum of a particle, moving the center of gravity of mass points and solution dynamics of mass points. The second part is being acquired dynamics of rigid bodies and a system of bodies where the release method and the method of reducing material and power values. They discussed the basics of analytical dynamics, basic theory suddenly. An important part of the Lecturers is the oscillation of the mass point with one degree of freedom and vibration systems with several degrees of freedom.* | |

**Recommended of required reading:**
*1. Brousil, Slavík, Zeman: Dynamika, SNTL Praha, 1989*
*2. BRAT, V.: Příručka kinematiky s příklady, 1976.*
*3. JANČINA, J., PEKÁREK, F.: Mechanika II - Kinematika, SNTL Bratislava 1987.*
*4. Juliš, K., Brepta, R.: Mechanika I, II, SNTL Praha 1987.*
*5. JULIŠ, K., BREPTA, R. a kol.: Mechanika II, Dynamika, SNTL, Praha 1987.*
*6. Medvec, Stradiot, Záhorec, Caban: Mechanika III, Dynamika, SNTL Praha, 1988*
*7. Vavro, Husár: Laboratórne cvičenia z mechaniky, Žilina,  1995*
*8. Vavro, J.,Kopecký, M.: Nové prostriedky a metódy riešenia sústav telies I. 1.vyd. ZUSI Žilina 2001.*

| 9. Vavro, J. - Kopecký, M, Sága , M., Fandáková M.: *Nové prostriedky a metódy riešenia sústav telies II. 1.vyd. Digital Graphic Trenčín 2004, ISBN 80-968337-9-0.* |||||||

**Language:** *Slovak*

**Remarks:**

**Evaluation history:**

| A | B | C | D | E | FX |
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**Lecturers:** *prof. Ing. Ján Vavro , PhD., doc. Ing. Ján Vavro, PhD. Ing. Petra Kováčiková, PhD.*

**Last modification:** *31.03.2015*

**Supervisor:** *doc. Ing. Ján Vavro, PhD.*