

Information sheet for the course Chemical Engineering I

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>VILA – Joint Glass Centre</i>	
Course unit code: <i>ChI I</i>	Course unit title: <i>Chemical engineering I</i>
Type of course unit: <i>compulsory</i>	
Planned types, learning activities and teaching methods: <i>Lecture: 2 hours weekly, face to face</i> <i>Seminar: 1 hour weekly</i>	
Number of credits: <i>4</i>	
Recommended semester: <i>1. semester in the 1st year</i>	
Degree of study: <i>II. (engineer, magister)</i>	
Course prerequisites: <i>none</i>	
Assesment methods: <i>Final written exam, theoretical part – 50 points, two examples – 25 points each</i> <i>Requirement – 20 points for one example</i>	
Learning outcomes of the course unit: <i>Student has knowledge of theory of momentum and heat transport in defined technological processes. Student masters the principles of designed and operational calculations of unit processes and equipment in the technology.</i>	
Course contents: <ol style="list-style-type: none">1. <i>Matter balance</i>2. <i>Balance of energy and system enthalpy</i>3. <i>Floating and transport of fluids</i>4. <i>Filtration</i>5. <i>Sedimentation</i>6. <i>Heat transfer by conduction, convection and radiation</i>7. <i>Heat exchange</i>8. <i>Thermal isolations</i>9. <i>Evaporation</i>10. <i>Filtration equipment</i>11. <i>Mixed reactors</i>12. <i>Vaporizers</i>13. <i>Heat exchangers</i>	
Recommended of required reading:	

Bafrnec, M., Báleš, V., Langfelder I., Longauer, J.: Chemické inžinierstvo I. Bratislava : Malé centrum, 1999.

Bafrncová, S. a kol.: Chemické inžinierstvo : Príklady a úlohy. Bratislava : STU, 1996.

Lodes, A., Langfelder, I.: Procesy a zariadenia I. Bratislava : ALFA, Praha : SNTL 1987.

Language: *Slovak*

Remarks:

Evaluation history:

A	B	C	D	E	FX

Lecturers:

doc. Ing. Peter Vrábel, PhD.

Last modification: *31.1. 2014*

Supervisor: *prof. Ing. Marek Liška, DrSc.*