

## KYF0280 Physical Chemistry

### Assessment criteria

Assessment method	Assessment criterion
Tests 2x20=40p (40%)	Two tests are foreseen, based on the example calculations carried out during seminars. The tests contain average complexity calculation tasks on the laws of thermodynamics, thermochemistry, equilibrium calculations, properties of dilute solutions, chemical kinetics and electrochemistry. Summary grade from tests is formed according to correct or false calculation pathways and results and both tests must give minimum 50% of the overall points.
Laboratory works 10p (10%)	During practical work students learn to determine different physico-chemical parameters, preparation of dispersed systems, acquire knowledge about their properties and equipment needed to study these systems. Grade scale is from 0 to 2 per work and it is considered if the protocol is handed in time. All Works have to be defended. Here, theoretical background of the work is asked.
Homework	Homework assumes a longer and more complex calculation using respective databases and correct drafting of the work applying calculation pathways, tables and charts. Homework does not add to the grade but is one premise for the exam.
Quizzes in web	Tests with short answers, choices or simple calculations to estimate students understanding of the main concepts of thermodynamics, laws of thermodynamics, thermochemistry, chemical equilibrium, phase equilibrium, properties of solutions, electrochemistry. Quizzes are meant for self-training, for preparing for the tests and defence of practical works.
Premise for exam	Premise for the exam involves passing the two tests with minimum result of 50% from both tests; passing, accounting and defending of all laboratory works and accounting the homework.
Written exam on theory 50p (50%)	Written exam measures the level of acquiring the learning outcomes. 5 – The knowledge of the student in the learning outcomes are excellent and sufficiently detailed. Student can use the obtained theoretical knowledge in analysing of systems using principles of physical and colloidal chemistry. Student can give examples in practice with explanations. In laboratory course the student shows creative approach. 4 – The knowledge of student in the described above learning outcomes are very good or excellent, but small superficialities and nonimportant inaccuracies can appear. The answers are generally correct. No extraneous help is needed in laboratory course. Small calculation errors can appear. 3 – The knowledge of student in the described above learning outcomes are good, but there exists some deficiencies in criteria of knowledge of one or two learning outcomes. The calculations are principally right but some mistakes exist in the calculations and in the choice of units. Some help is needed in laboratory course. 2 – The knowledges of student in the described above learning outcomes are mediocre. The student gives mostly satisfied and good answers but not all answers are exact and right, some mistakes exist, some lack of individual analyse and detailed knowledge can be found. 1 – The knowledges of student in the described above learning outcomes are not sufficient and he knows the terminology of the speciality incompletely. The answers to questions are weak, frequently superficial, not grounded. The student cannot evaluate the application of physicochemical principles in life.
Final Grade	The final mark is formed as the sum of the results of running knowledge controls and the points from the written exam.