Module Description

MPKP 434 Selected Topics in Physical Chemistry

Module Name	**Selected Topics in Physical Chemistry**
Module level, if applicable	Undergraduate Program
Code, if applicable	MPKP 434
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	7th Semester
Module coordinator(s):	Berlian Sitorus, S.Si, M.Si, M.Sc, Ph.D
Lecturer	Berlian Sitorus, S.Si, M.Si, M.Sc, Ph.D Ferdinand Hidayat, S.Si, M.Si Risya Sasri, S.Si, M.Sc
Language	Bahasa Indonesia
Relation to curriculum	Elective Courses for the Undergraduate Programme in Chemistry
Type of teaching, contact hours	Decide teaching/training components for each course outcome ● Theory /Face-to-face lecture (for understanding): 4 lecture meetings ● Seminar (for communication skills): 4 ● Assignments: 4 ● Project: 2
Workload	*(Estimated) Total workload: 2 x 2.83 hours = 5.66 hours per week.* *Contact hours (lecture): 2 x 0.83 hours = 1.66 hours per week.* *Private study including examination preparation, specified in hours: 2 x 2 hours = 4 hours* *2 x 50 minutes lectures,* *2 x 60 minutes structured activity,* *2 x 60 minutes individual activity,* *79.33 total hours*
Credit points	2 (3.34 ECTS)
Requirements according to the examination regulations	Registered in this course Minimum 75% attendance in this course

<table>
<tr><td>Learning goals/competencies:</td><td>Intended Learning Outcomes (ILO)
After taking this course, students will be able to:
1. LO-1
2. LO-2
3. LO-3</td></tr>
<tr><td>Module objectives</td><td>1. Students are able to master the latest developments in the field of physical chemistry
2. Students are able to analyse and apply appropriate technology related to physical chemistry studies.</td></tr>
<tr><td>Content:</td><td>1. The latest development in physical chemistry studies
2. Technology in manufacturing and method development
3. The development of physical chemistry applications
4. Appropriate technology and product downstreaming</td></tr>
<tr><td>Attribute Soft skill:</td><td>Discipline, collaboration, responsibility, and argumentation in the natural classroom setting</td></tr>
<tr><td>Recommended prerequisites</td><td>-</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>Students are considered to be competent and pass if they get at least 50% of the maximum final grade. The final grade (NA) is calculated based on the following :

<table><tr><th>Assessment Components</th><th>Percentage Contribution</th></tr><tr><td>Participation</td><td>10%</td></tr><tr><td>Assignment</td><td>20%</td></tr><tr><td>Mid-semester test</td><td>35 %</td></tr><tr><td>Final semester test</td><td>35%</td></tr><tr><td>Total</td><td>100%</td></tr></table>Mid and final semester tests are carried out as a project exam.</td></tr>
<tr><td>Learning Methods</td><td>Case-based teaching method
Project-based learning</td></tr>
<tr><td>Media employed</td><td>white board; power point presentation; and e-learning system</td></tr>
<tr><td>Reading list</td><td>1. Journal of Physical Chemistry
2. Chemical Reviews
3. Chemistry and Industry</td></tr>
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