

INTERNATIONAL SEMESTERS

Academic year 2024-2025

School of Chemical Industry

- Chemical and Materials Engineering autumn & spring semesters
- Energy and Environmental Engineering autumn & spring semesters
- Contact: ana.kupri-karenmaa@turkuamk.fi

Chemical and Materials Engineering

Autumn semester 2024 (end of August - mid December)

Materials Technology 2* (<i>recommended to take the module as a whole</i>)		
Location: Kupittaa Campus, Turku / Mon & Thu module		
Course name	Course code	ECTS credits
Processing of Plastics	TE00BX98	5
Packing Technology	TE00BX99	5
Project	TE00BY00	5
Total		15

*Please note that courses from Materials Technology 2 & Biomaterials and Bioprocesses 2 may overlap in timetables.

Biomaterials and Bioprocesses 2* (<i>recommended to take the module as a whole</i>)		
Location: Kupittaa Campus, Turku / Mon & Thu module		
Course name	Course code	ECTS credits
Biomaterials Manufacturing Processes	5021221	5
Biotechnological Production	5021222	5
Methods in Biotechnology	5021167	5
Total		15

Food Engineering 1* (<i>recommended to take the module as a whole</i>)		
Location: Kupittaa Campus, Turku / Tuesdays & Fridays module		
Course name	Course code	ECTS credits
Food ingredients and raw materials	TE00BV66	5
Product Development and Analytics	TE00BV68	5
Food Processes 1	TE00BX89	3
Sensory Analysis	TE00BX90	2
Total		15

Innovation project		
Location: Kupittaa Campus, Turku / Tue & Fri module		
Course name	Course code	ECTS credits
Innovation Project (Capstone)*	TE00BL66	10
Total		10

**Innovation project is typically a development project implemented in co-operation with a company or another external customer. However, the project may also be a part of Turku University of Applied Science's internal research and development activities, or it can be based on a student's, student team's own project, or business idea. In addition, development projects related to different student competitions are applicable. Students select their preferred projects they want to work on after the exhibition.*

After completing the course, the student can:

- *participate in systematic research and development activities as a responsible member of the project team*
- *describe the principles of project team operation and project control*
- *explain the importance of the project's goals to the business of the stakeholders*
- *use modern tools of project management in project planning and implementation*
- *solve problems related to project implementation*
- *apply his/her knowledge to achieve project goals*
- *document the project*
- *identify areas of further development related to one's professional skills and can deepen one's professional skills according to the project's goals*
- *evaluate his/her learning and professional development in the project.*

More information: <https://innovaatioprojektit.turkuamk.fi/en/capstone-projektit-english/>

Energy and Environmental Engineering

Autumn semester 2024 (end of August - mid December)

Water conservation Kupittaa Campus, Turku/ Tue & Fri module			
Course name + link to study guide	Course code	ECTS credits	Prerequisites / quota of students / weekly schedule etc.
Introduction to the Baltic Sea on-line	5100BI69	4	
Water conservation and technical solutions	5100BI71	11	
Total		15	

Distributed Energy Systems Kupittaa Campus, Turku/ Mon & Thu module			
Course name + link to study guide	Course code	ECTS credits	Prerequisites / quota of students / weekly schedule etc.
Wind Power Systems	TE00BX17	4	
Photovoltaic Systems	TE00BX18	4	
Battery Storage systems	TE00BX19	4	
Total		12	

Circular Economy Online course/ Mon & Thu module			
Circular Economy	KI00BR05	5	
Total		5	

Chemical and Materials Engineering

Spring semester 2025 (January - end of April)

Biomaterials and Bioprocesses 1* <i>(recommended to take the module as a whole)</i>		
Location: Kupittaa Campus, Turku / Mon & Thu module		
Course name	Course code	ECTS credits
Basics of Genetic Engineering and Diagnostics	5021169	5
Biotechnological Processes and Downstream Processing	5021220	5
Biomaterials and Tissue Engineering	5021168	5
Total		15

Materials Technology 1* <i>(recommended to take the module as a whole)</i>		
Location: Kupittaa Campus, Turku / Mon & Thu module		
Course name	Course code	ECTS credits
Basics of Material Technology	5021223	5
Processing Technologies	5021224	5
Selection of Materials	5021225	5
Total		15

Food Engineering 2* <i>(recommended to take the module as a whole)</i>		
Location: Kupittaa Campus, Turku / Mon & Thu module		
Course name	Course code	ECTS credits
Food Processes 2	TE00BY03	10
Food Legislation and Food Hygiene and Safety	TE00BX91	5
Food Project	TE00BR60	5
Total		15

Innovation project		
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Energy and Environmental Engineering

Spring semester 2025 (January - end of April)

Renewable Energy Project			
Location: Kupittaa Campus, Turku/ Mon & Thu module			
Course name + link to study guide	Course code	ECTS credits	Prerequisites / quota of students / weekly schedule etc.
Renewable Energy Project Development	TE00BX21	10	
Renewable Energy Laboratory Project	TE00BX22	5	
Total		15	

Research Hatcheries on Circular Economy			
Location: Kupittaa Campus, Turku/ mainly Wednesdays			
Course name + link to study guide	Course code	ECTS credits	Prerequisites / quota of students / weekly schedule etc.
Research Hatcheries on Circular Economy (REHA)*	TE00BQ93	2-10	
Total		2-10	

*The Research Hatchery (REHA) is a model in which a multidisciplinary team of students works to solve a circular economy related brief. The need for the brief can rise from a research, development and innovation project, from a client in work life, or from a student. Research Hatchery is led by coaches, people working on the projects and student tutors. In a REHA students learn about the substance and they also develop their innovation competences: creativity, critical thinking, initiative, group work and networking. The student can participate in this course for a total of ECTS agreed with the course leader and depending on the needs to support their Learning Agreement. The amount ranges from 2 to 10 ECTS.

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