Towards BioBased Finland Course 2025

KABI4022-3003 (UTU)

1-3 April 2025, on-site only
1 April lecture room DEN280, Dent3
2 April lecture room DEN218, Dent2
3 April Smart Chemistry Park, Raisio

A student participating this course will get knowledge in the basic concepts of bioeconomy and circular economy and will learn about different industrial companies operating in the field in Finland. Moreover, the students will learn about R&D related to bioeconomy and of the transfer of knowledge from academy to industry and back. Working life skills: Students will learn about R&D and operation in different chemical/biochemical industrial companies, operation in different chemical/biochemical industrial companies, and gain valuable information about company activities, start-ups and career possibilities. Direct interaction with industry representatives will stimulate critical thinking, lively discussion and create network with industry professionals. The course includes one-day excursion to Smart Chemistry Park in Raisio which is South Western Finland's technology innovation park largely devoted to bioeconomy and cleantech.

Academic lecturers

Yagut Allahverdiyeva-Rinne, UTU
Patrik Eklund, ÅAU
Henrik Grénman, ÅAU
Pauli Kallio, UTU
Erik Nimelä, UTU
Mikko Tikkanen, UTU
Chunlin Xu, ÅAU

Industry lecturers

Ted Bergman, Elomatic/Green North Energy
Markus Blomquist, FP-Pigments
Johan Fagerlund, Cyient
Reeta Huhtinen, Business Turku
Jan Nylund, Chementors Oy
Antti-Pekka Partonen, Valio
Daniel Solymosi, Neste
Marjaana Suorsa, Finnish Forest Industries Federation
Mika Tuomola, Honkajoki Oy
Lari Vähäsalo, CH Bioforce

The students are expected to keep a learning diary throughout the course and at the end of the course each student is assigned one of the topics to plunge into and to write a final report. The in-depth essay should describe the Finnish as well as global current situation, reflect on the future and include literature search.

The course lasts three full days and requires full attendance but in case of colliding events students need to be in contact with the responsible teachers in advance. The course is intended for advanced Master students as well as for PhD researchers.

Responsible teachers

Prof. Yagut Allahvediyeva-Rinne (allahve@utu.fi)
Prof. Henrik Grénman (henrik.grenman@abo.fi)

The course is a joint effort of University of Turku and Åbo Akademi University and it is supported by BioCity Turku research program SmartBIO and Smart Chemisty Park.

Åbo Akademi University
UNIVERSITY OF TURKU
BIOCITY TURKU
SmartBIO
SCP SMART CHEMISTRY PARK

Towards Sustainable Bioeconomy

Programme

1 April 2025, lecture room DEN280, Dent3

09:15 **Yagut Allahverdiyeva-Rinne** and **Henrik Grénman**
Welcome words and course introduction

09:30 **Yagut Allahverdiyeva-Rinne**, University of Turku
Photosynthesis at the forefront of a sustainable life

10:15 **Pauli Kallio**, University of Turku
Synthetic biology and future industrial biotechnologies

11:00 **Mikko Tikkanen**, University of Turku
From basic photosynthesis research to commercialization of bioproduction optimization technology: The story of Versa Elements startup

11:45 LUNCH

12:30 **Marjaana Suorsa**, The Finnish Forest Industries Federation
Forest-Based Innovations as Drivers of the Bioeconomy

13:10 **Antti-Pekka Partonen,** Valio
R&D, sustainability and circular economy at Valio

13:50 **Daniel Solymosi**, Neste
From waste to renewable fuels

14:30 **Erik Niemelä**, University of Turku Innovation Services
Pearls and Pitfalls - innovation journey

15:10 **Mika Tuomola,** Honkajoki Oy
Nutrient upcycling by modern processing of animal-based food sidestreams

2 April 2025, lecture room DEN218, Dent2

10:00 **Henrik Grénman**, Åbo Akademi University
Aspects of biomass and biogenic CO_2 as resources

11:00 **Chunlin Xu**, Åbo Akademi University
Biopolymers for coating and packaging

12:00 LUNCH

13:00 **Patrik Eklund,** Åbo Akademi University
Biomolecules for bioactive compounds and medical applications

14:00 **Johan Fagerlund**, Cyient
Carbon capture technologies and carbon storage

15:00 **Ted Bergman**, Elomatic/Green North Energy
Green ammonia production (and more) in Naantali

The course is a joint effort of University of Turku and Åbo Akademi University and it is supported by BioCity Turku research program SmartBIO and Smart Chemisty Park.

Åbo Akademi University · UNIVERSITY OF TURKU · BIOCITY TURKU · SmartBIO · SCP SMART CHEMISTRY PARK

Towards Sustainable Bioeconomy

3 April 2025, Smart Chemistry Park, Raisio

09:00	Bus leaving from Turku Cathedral to Smart Chemistry Park
09:30	Arrival to Smart Chemistry Park
09:40	**Reeta Huhtinen,** Business Turku Smart Chemistry Park presentation
10:00	**Lari Vähäsalo,** CH-Bioforce Company presentation
10:20	**Markus Blomquist,** FP-Pigments Company presentation
10:40	**Jan Nylund,** Chementors Oy Company presentation
11:00	**Markus Blomquist**, FP-Pigments Laboratory visit
12:00	LUNCH
13:00	**Lari Vähäsalo,** CH Bioforce Pilot visit
14:15	Bus leaving back to Turku
14:45	Arrival to Turku Cathedral

Welcome!

Event sites

Dentalia
Lecture rooms DEN218 (Dent2) and DEN280 (Dent3)
2nd floor, entrance from Unica restaurant
Lemminkäisenkatu 2
20520 Turku

Bus pick-up and drop-off place in Turku
Turku Cathedral
Tourist bus stop, in front of the main entrance
Tuomiokirkonkatu 1
20500 Turku
Bus company: Linjaliikenne Nyholm Oy

Smart Chemistry Park
Raisionkaari 55
21200 Raisio

The course is a joint effort of University of Turku and Åbo Akademi University and it is supported by BioCity Turku research program SmartBIO and Smart Chemisty Park.