

Towards Sustainable Bioeconomy

Towards Bio-Based Finland Course (3 ECTS)

KABI4022-3002 (UTU)

TK00CL91-3002 (ÅAU)

9-11 April 2024, on-site only

9 April DEN216 lecture room

10 April DEN218 lecture room

11 April ChemBio Finland, Chemistry and biotechnology event in Helsinki

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 ChemBio Finland, Chemistry and biotechnology event arranged in Helsinki Expo and Convention Centre.

Academic lecturers

Yagut Allahverdiyeva-Rinne, UTU

Patrik Eklund, ÅAU

Henrik Grénman, ÅAU

Pauli Kallio, UTU

Erik Nimelä, UTU

Chunlin Xu, ÅAU

Industry lecturers

Anni Alitalo, Q-power

Johan Fagerlund, Cyient

Viljami Kinnunen, Gasum

Marjaana Suorsa, Finnish Forest Industries Federation

Mikko Tikkanen, UTU and Versa Elements

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 Allahverdiyeva-Rinne (allahve@utu.fi)

Prof. Henrik Grénman (henrik.grenman@abo.fi)



Towards Sustainable Bioeconomy

Programme

9 April 2024, Dentalia 2nd floor, DEN216 (Dent1) lecture room

- 09:00 **Yagut Allahverdiyeva-Rinne** and **Henrik Grénman**
Welcome words and course introduction
- 09:15 **Yagut Allahverdiyeva-Rinne**, University of Turku
Photosynthesis at the forefront of a sustainable life
- 10:00 **Pauli Kallio**, University of Turku
Synthetic biology and future industrial biotechnologies
- 10:45 **Marjaana Suorsa**, Finnish Forest Industries Federation
Towards sustainable future – the role of forest industry and its wood-based products
- 11:30 LUNCH
- 12:30 **Anni Alitalo**, Q-power
Ongoing activities at Q-Power
- 13:15 **Viljami Kinnunen**, Gasum
Industrial biogas production
- 14:00 **Erik Niemelä**, University of Turku Innovation Services
From idea towards reality: Pearls and Pitfalls
Personal experiences from bringing research developments towards product development
- 14:30 **Mikko Tikkanen**, University of Turku and Versa Elements
New technologies to facilitate plant research-based innovation
- 15:15 END OF DAY 1

10 April 2024, Dentalia 2nd floor, DEN218 (Dent2) lecture room

- 09:00 **Henrik Grénman**, Åbo Akademi University
Aspects of biomass resources
- 09:30 **Chunlin Xu**, Åbo Akademi University
Biopolymers for coating and packaging
- 10:15 STRETCH BREAK
- 10:30 **Patrik Eklund**, Åbo Akademi University
Biomolecules for bioactive compounds and medical applications
- 11.15 LUNCH
- 12:30 **Henrik Grénman**, Åbo Akademi University
Biomass to fuels, chemicals, and biogenic CO₂ as a resource
- 13:15 **Lari Vähäsalo**, CH Bioforce
Novel biomass fractionation – from laboratory to commercial scale
- 14:15 **Johan Fagerlund**, Cyient
Carbon capture technologies and carbon storage
- 15:00 END OF DAY 2



Towards Sustainable Bioeconomy

11 April 2024, ChemBio Finland, Helsinki

- 07:00 Bus leaving from Turku Cathedral to Helsinki (Linjaliikenne Nyholm Oy)
09:00 Arrival to Messukeskus Helsinki
15:30 Bus leaving from Messukeskus Helsinki back to Turku
17:30 Arrival to Turku Cathedral

Welcome!

Event sites

Dentalia

Lecture rooms DEN216 (Dent1) and DEN218 (Dent2)
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

ChemBio Finland

Messukeskus Helsinki
00520 Helsinki

ChemBio Finland details

ChemBio Finland is the most significant event for the chemistry and biotechnology professionals in the Nordic Countries and Baltic regions. It gathers the most recent information of the industries together with distinguished professionals, companies and their decision makers. The event provides effective encounters and creates a forum for both the academic world and the business world to meet.

The fare is free of charge but **pre-registration as a visitor is highly recommended** for smooth arrival. More details and registration: <https://chembio.messukeskus.com/?lang=en>

