

N5T Extended Campus Programme: Master level courses in Batteries 2024/25
 Course list subject to change for 2025/26

| University | Course code | Title | ECTS | Semester | Course description |
|------------|-------------|---|----------|--------------------|---|
| Aalto | AAE-E3120 | Circular Economy for Energy Storage D | 5 ECTS | Fall | Circular Economy for Energy Storage D |
| Aalto | AAE-E3070 | Electrical Energy Storage Systems D | 5 ECTS | Spring | Electrical Energy Storage Systems D |
| Aalto | CHEM-E4106 | Electrochemistry D | 5 ECTS | Spring | Electrochemistry D |
| Aalto | CHEM-E4255 | Electrochemical Energy Conversion D | 5 ECTS | Fall | Electrochemical Energy Conversion D |
| Aalto | CHEM-E6180 | Fundamentals of Hydrometallurgy | 5 ECTS | Fall | Fundamentals of Hydrometallurgy |
| Aalto | CHEM-E6160 | Fundamentals of Pyrometallurgy | 5 ECTS | Fall and Spring | Fundamentals of Pyrometallurgy |
| Aalto | CHEM-E6230 | Recycling technologies | 5 ECTS | Fall | Recycling technologies |
| Aalto | CHEM-6140 | Fundamentals of Minerals Engineering and Recycling D | 5 ECTS | Fall | Fundamentals of Minerals Engineering and Recycling D |
| Aalto | ELEC-E8714 | Sustainable Electronics D | 5 ECTS | Fall | Sustainable Electronics D |
| Aalto | ELEC-E8412 | Power Electronics | 5 ECTS | Fall | Power Electronics |
| Aalto | ELEC-E8402 | Control of Electric Drives and Power Converters D | 5 ECTS | Spring | Control of Electric Drives and Power Converters D |
| Aalto | ELEC-E8405 | Electric Drives | 5 ECTS | Fall | Electric Drives |
| Aalto | ELEC-E8424 | Distributed Generation Technologies | 5 ECTS | Fall | Distributed Generation Technologies |
| Aalto | ELEC-E8403 | Converter Techniques D | 5 ECTS | Spring | Converter Techniques D |
| Aalto | ELEC-E8417 | Switched-Mode Power Supplies | 5 ECTS | Spring | Switched-Mode Power Supplies |
| Aalto | ELEC-E8421 | Components of Power Electronics | 5 ECTS | Fall | Components of Power Electronics |
| NTNU | TMT4287 | Hydrogen Technology, Fuel Cells and Batteries | 7.5 ECTS | Spring | https://www.ntnu.edu/studies/courses/TMT4287/2023/1#tab=omEmnet |
| NTNU | TMT4445 | Advanced Functional Materials | 7.5 ECTS | Fall | https://www.ntnu.edu/studies/courses/TMT4445/2023/1#tab=omEmnet |
| NTNU | TMR4290 | Marine Electric and Hybrid Power and Propulsion Systems | 7.5 ECTS | Spring | https://www.ntnu.edu/studies/courses/TMR4290/2023/1#tab=omEmnet |
| NTNU | TKP4158 | Hydrometallurgical Process Technology | 7.5 ECTS | Fall | https://www.ntnu.edu/studies/courses/TKP4158/2023/1#tab=omEmnet |
| NTNU | TEP4506 | Sustainable Energy Systems, Specialization Course | 7.5 ECTS | Fall | https://www.ntnu.edu/studies/courses/TEP4506/2023/1#tab=omEmnet |
| NTNU | TKJ4200 | Irreversible Thermodynamics | 7.5 ECTS | Fall | https://www.ntnu.edu/studies/courses/TKJ4200/2023/1#tab=omEmnet |
| KTH | EJ2201 | Electrical Machines and Drives | 6 ECTS | Fall | KTH EJ2201 |
| KTH | EJ2410 | Hybrid Vehicle Drives | 7,5 ECTS | Fall | KTH EJ2410 |
| KTH | KE2110 | Applied Electrochemistry | 7,5 ECTS | Fall | KTH KE2110 |
| KTH | CK2300 | Batteries | 7,5 ECTS | Fall | KTH CK2300 |
| KTH | CK2020 | Advanced Inorganic Chemistry | 7,5 ECTS | Fall | KTH CK2020 |
| KTH | CK2320 | Hydrogen | 7,5 ECTS | Fall | KTH CK2320 |
| KTH | EI2460 | Batteries for Energy Storage in Electrical Systems | 6 ECTS | Spring | KTH EI2460 |
| KTH | EI2455 | Smart Electrical Networks and Systems | 7,5 ECTS | Full academic year | KTH EI2455 |
| KTH | EG2230 | Electricity Pricing and Emissions | 6 ECTS | Fall | KTH EG2230 |
| KTH | EG2240 | Power System Planning | 6 ECTS | Spring | KTH EG2240 |
| KTH | EJ2440 | Electric Transportation | 6 ECTS | Spring semester | KTH EJ2440 |
| KTH | MJ2386 | Energy Storage Technology | 6 ECTS | Fall | KTH MJ2386 |
| Chalmers | EEN016 | Lithium-ion battery systems for vehicles and large-scale energy storage | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=36869 |
| Chalmers | TIF351 | Functional energy materials | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=37053 |
| Chalmers | TRA285 | Structural batteries: Design, manufacturing and characterisation | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=37318 |
| Chalmers | TRA350 | Structural batteries: Design, manufacturing and characterisation | 15 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=36869 |
| Chalmers | TRA360 | Battery processing: From materials to components | 7.5 ECTS | Spring | https://www.student.chalmers.se/ci/course_approve?course_id=41317 |
| Chalmers | TRA280 | Battery essentials: Fundamentals and future trends | 7.5 ECTS | Spring | https://www.student.chalmers.se/ci/course_approve?course_id=41305 |
| Chalmers | MMS195 | Introduction to propulsion and energy systems for transport | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=35901 |
| Chalmers | EEN140 | Electric drive systems for vehicles and vessels | 7.5 ECTS | Spring | https://www.student.chalmers.se/sp/course?course_id=35912 |
| Chalmers | TME095 | Electric and hybrid vehicles | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=36952 |
| Chalmers | ENM056 | Electrical machines - design and analysis | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=36752 |
| Chalmers | EEN135 | Electric machines for vehicles and vessels | 7.5 ECTS | Spring | https://www.student.chalmers.se/sp/course?course_id=37036 |
| Chalmers | SEE030 | Variation management in the electricity system | 7.5 ECTS | Spring | https://www.student.chalmers.se/sp/course?course_id=36465 |
| Chalmers | TRA275 | Fuel cell systems | 7.5 ECTS | Spring | https://www.student.chalmers.se/sp/course?course_id=37244 |
| Chalmers | TRA230 | Solar energy: From photons to future societal impact | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=37222 |
| Chalmers | KOO093 | The synthesis, properties and structures of solid state materials | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=36248 |
| Chalmers | KBT245 | Green chemistry | 7.5 ECTS | Fall | https://www.student.chalmers.se/sp/course?course_id=36299 |

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| DTU | 47330 | Energy storage and conversion | 5 ECTS | Fall | https://kurser.dtu.dk/course/47330 |
| DTU | 47211 | Electrochemical energy storage and Power2X | 5 ECTS | Fall | https://kurser.dtu.dk/course/47211 |
| DTU | 47305 | Electrochemistry | 5 ECTS | Spring | https://kurser.dtu.dk/course/47305 |
| DTU | 28870 | Energy and Sustainability | 5 ECTS | Fall | https://kurser.dtu.dk/course/28870 |
| DTU | 47310 | Battery materials and chemistries: from fundamental mechanisms to battery cells | 5 ECTS | Fall | 47310 Battery materials and chemistries: from fundamental mechanisms to battery cells (dtu.dk) |
| DTU | 47332 | AI-orchestrated self-driving labs | 5 ECTS | June | 47332 AI-orchestrated self-driving labs (dtu.dk) |
| DTU | 47335 | Atomic-scale modelling of energy materials (online) | 5 ECTS | Spring | https://kurser.dtu.dk/course/47335 |
| DTU | 47319 | Functional materials | 5 ECTS | Spring | https://kurser.dtu.dk/course/47319 |
| DTU | 47338 | Organic energy materials | 5 ECTS | Fall | https://kurser.dtu.dk/course/47338 |
| DTU | 38102 | Technology Entrepreneurship | 5 ECTS | Fall | https://kurser.dtu.dk/course/38102 |
| DTU | 45200 | Innovation in Engineering (Polytechnical Foundation) Students with advanced innovation competences should take 42502/42505/42503. | 5 ECTS | Jan, June, August | https://kurser.dtu.dk/course/42500 |