Thematic Learning Area: Energy

To help you make informed choices regarding broadening and deepening electives, within each Thematic Learning Area (TLA) a number of learning paths are offered. A learning path is a selection of TLA electives across departments, grouped around a specific subtheme. The learning paths within a TLA are based on the assumed amount of pre-requisite knowledge, indicating that familiar programs have better access. This means that some learning paths are specifically accessible for students from one department, whereas other learning paths suits best for students from a specific department. If you have met the expected pre-knowledge, the relevant electives become accessible. You can make well-informed choices by either choosing specific electives across the different learning paths, or by choosing a pre-defined learning path.

Always make sure that you check the required pre-requisite knowledge/courses via the Course Catalogue for the elective courses you would like to follow!

TLA Energy	
Description of the content	The TLA Energy connects bachelor electives addressing the physics, chemistry, engineering, environmental, policy and behavioral aspects of energy and (beyond) state-of-the art energy technologies, as well as the design, analysis and modeling of energy systems.
Offered by	CE&C, ME, APSE, EE
Language	English
Contact person	Michel van Etten, m.p.c.v.etten@tue.nl

Learning path 1 – Energy Systems

Course code	Course name	Link to course catalogue
4RC30	Introduction to Computational Fluid dynamics	
4BC10	Dynamics of Energy Systems	
4CBLB00	Solar Heat System	

Learning path 2 – Process Technology

Course code	Course name	Link to course catalogue
6BER09	CBL Process Design	
6BER07	Process Dynamics & Control	

Learning path 3 – Energy Conversion & Storage

Course code	Course name	Link to course catalogue
6BER06	Electrochemical Energy Conversion & Storage	
34FEH	Fundamentals of Energy Harvesting & Storage	

Learning path 4 – Electrical Power Systems

Course code	Course name	Link to course catalogue
5XWG0	Power System Computation & Simulation	
5XWA0	Power System Analysis & Optimization	
5XWB0	Electric Drive Systems	

Thematic Learning Area: Energy

Process Technology

Energy Conversion & Storage

Electrochemical Energy Conversion & Storage
C: 6BER06 L: 3 Q: 1 T: C

Fundamentals of Energy Harvesting & Storage
C: 34FEH L: 3 Q: 4 T: B

CBL Process Design
C: 6BER09 L: 3 Q: 2 T: C

Process Dynamics & Control
C: 6BER07 L: 3 Q: 1 T: B

4

3

Power System Computation & Simulation
C: 5XWG0 L: 3 Q: 4 T: C

Power System Analysis & Optimization
C: 5XWA0 L: 3 Q: 4 T: E

Electric Drive Systems
C: 5XWB0 L: 3 Q: 3 T: B

Introduction to Computational Fluid Dynamics
C: 4RC30 L: 3 Q: 4 T: A

Dynamics of Energy Systems
C: 4EC10 L: 3 Q: 3 T: A

Solar Heat System
C: 4CBLB00 L: 2 Q: 1 T: AB

2

5

Energy Systems

Electrical Power Systems

1

1 **Thermodynamics**
CE&C: 6BBR04 & 6BAR01
AP: 32TDY
ME: 4EB00

Transport Phenomena
CE&C: 6BPR01 & 6BPR02
AP: 32PTP
ME: 4RA10 & 4PB00
2

3 **Process Technology**
CE&C: 6BPR03 & 6BPR04
ME: 4PC00 & 4BC00

Electrochemistry
CE&C: 6BAR02
4

Electronics
EE: 5EWA0, 5APA0 & 5EWA0
5

Start