Bachelor of Engineering in MECHANICAL ENGINEERING

Specialization in SUSTAINABLE DESIGN ENGINEERING

PMECES25

| Structure of studies | ECTS |
|--------------------------|------|
| Core Competence | 120 |
| Complementary Competence | 45 |
| Optional studies | 30 |
| Practical training | 30 |
| Thesis | 15 |
| Sum | 240 |

1st Academic Year

"GETTING ENGINEERING BASIC SKILLS AND TOOLS & DESIGNER-ATTITUDE"

| Autumn 2025 | | |
|---------------------|---------------------------------------|----|
| Engineering Tools 1 | | 15 |
| | Introduction to Mathematical Sciences | 5 |
| | Physics | 5 |
| | ICT Tools | 5 |
| | | |

| Studying and Communication Skills | 15 |
|--|----|
| Finnish A1 | 5 |
| English Professional Skills B2 | 5 |
| Introduction to Higher Education Studies | 5 |

| Spring 2026 | |
|---|----|
| Basic Skills for Engineers 1 | 15 |
| Engineering Precalculus | 5 |
| User-centered Design Approach | 4 |
| Fundamentals of Sustainable Development | 1 |
| Finnish A2 | 5 |

| Engineering Tools 1 | | 15 |
|---------------------|---|-----------|
| M | Material science for mechanical engineering | 5 |
| | Technical Drawing and 3D Modelling | 5 |
| | Heat and Electricity | 5 |
| | | |

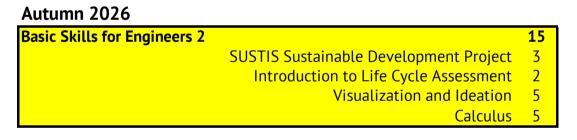
| Recommended optional studies | | | |
|--|---|--|--|
| Occupational Safety | 1 | | |
| Hot work safety education and training | 1 | | |

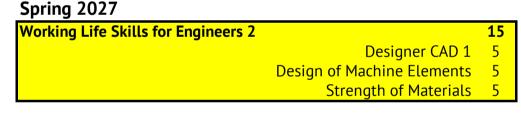
Summer 2026

| Basic Training | 10 |
|----------------|----|
|----------------|----|

2nd Academic Year

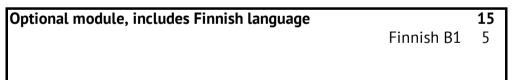
"DEEPENING MECHANICAL ENGINEERING SKILLS & INTRODUCTION TO SUSTAINABLE DEVELOPMENT"







| Engineering Tools 3 - 15 ECTS | 15 |
|-------------------------------|----|
| Production Technology | 5 |
| Engineering Mechanics | 5 |
| Product documentation | 5 |
| | |



3rd Academic Year

"CO-CREATING SUSTAINABLE DESIGN ENGINEERING FOR THE FUTURE TRANSITIONS"



| Design Fut |
|--|
| Optional module, includes Finnish language |

Spring 2028

Future Co-Design



15

5

Finnish B2

Finnish C1

| Project and Research Skills | | T.2 |
|-----------------------------|-----------------------------|-----|
| | CAPSTONE Innovation project | 10 |
| | Research Methods | 5 |
| | | |

| 4th Academic Year | |
|-----------------------------------|--|
| "PROFESSIONAL DESIGN ENGINEERING" | |

| | Spring 2029 | |
|-----------------------|-------------------------------|-------------------------------|
| Engineerig Project 15 | Optional Studies etc. if left | |
| | | Optional Studies etc. if left |

Thesis