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TU WIEN ACADEMY FOR CONTINUING EDUCATION

ENERGIEPARK

Shape the Future of Renewable Energy

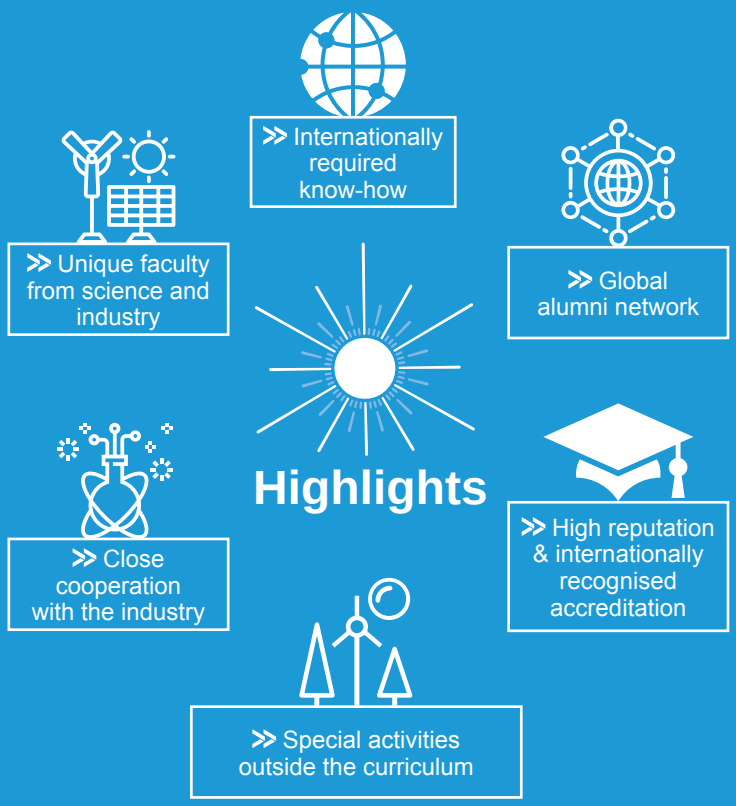
MSc (CE) Renewable Energy Systems

TU Wien I Energiepark Bruck/Leitha

Postgraduate Program

20 YEARS ANNIVERSARY

Since 2005 MSc (CE) Renewable Energy Systems



Expertise for the most important topic of our times

More than ever, identifying pathways for heading towards sustainable energy systems must be our priority.

Integrating all the usable renewable energy systems available into already existing grids and furthermore, building new intelligent grids is another main challenge of our times.

The demand for the fast-growing renewables sector for well-founded know-how has increased tremendously. The complementary strengths of the TU Wien and Energiepark Bruck/Leitha makes this interdisciplinary MSc(CE) Program an outstanding opportunity to satisfy the market demand worldwide.

This part-time master's program is designed to give the participants a state of the art skill-set to become experts in their respective fields of interest.

PROGRAM OBJECTIVES

With the MSc(CE) Program, the participants acquire knowledge and competence for

- Planning and operating of facilities using renewable energy sources
- Understanding economic and legal frameworks concerning renewable energy topics
- Strategies and means to promote the energy transition and system integration
- Future assessment of environmental, technical, and economic developments of renewable energy systems
- Introduction of innovative concepts such as sector coupling, power-to-X, hydrogen, storage, flexibility, smart grids, electro mobility and the relevance of AI

FINAL DEGREE

The MSc(CE) Program is concluded by writing a Master's thesis. Achievement of the final degree **Master of Science, MSc(CE)** granted by the TU Wien.

ADMISSION REQUIREMENTS

- Completion of a subject-related study program in technical and natural sciences, economics, or law at a recognized Austrian or foreign post-secondary institution of education and a minimum of 2 years of professional experience

LANGUAGE OF INSTRUCTION: English

COHORT

- Cohort-based program comprising 20–25 students annually
- Varied academic and professional backgrounds and interests, spanning engineering, physical and social sciences, business, and humanities
- Gender-balanced, demographically-diverse, purpose driven, globally-representative

LOCATION AND TIMING

Two years (4 academic semesters), Part-time, blocked modules, in-person and some online, classes held 4–6 days a month (9 am–5 pm), TU Wien or Energiepark Bruck/Leitha plus excursions.

WORLD-CLASS FACULTY

- Energy and sustainability professionals
- Scientists and tenured faculty who deliver academic rigor from a practitioner's perspective
- Experts with interdisciplinary actionable insight

PROFESSIONAL OUTLOOK

- Now is the right time to accelerate your career in the rapidly expanding global energy and sustainability workforce.
- A powerful combination of engaged alums and program network has supported extremely competitive placement and compensation rates for our graduates.
- Students frequently recruit into consulting and advisory, renewables developers and utilities, corporate and municipal sustainability (operations, food/water, supply chain & procurement, environmental), and energy and decarbonization engineering.

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MSc (CE) Renewable Energy Systems

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Class 2025 – 2027

DURATION AND TIME SCHEDULE:

The part-time program is presented in modules and takes four semesters. Blocked modules and weekend lectures facilitate compatibility with professional life. Lectures take place on 4 – 6 days a month from 9am – 5pm.

HIGHLIGHTS:

- Unique combination of up-to-date scientific knowledge and practical learning
- Dynamic on-site lectures are accompanied by field trips to experience renewable energy at first hand and deepen the knowledge practically

NEXT PROGRAM START:

November 6, 2025

LOCATIONS:

The MSc (CE) Program is held on several locations: Vienna, Bruck/Leitha; selected courses live online and field trips.

Schedule

FIRST SEMESTER	SECOND SEMESTER	THIRD SEMESTER	FOURTH SEMESTER
THU Nov 06, 2025	WED Mar 11, 2026	WED Sep 09, 2026	Master's Thesis
FRI Nov 07, 2025	THU Mar 12, 2026	THU Sep 10, 2026	Mar 2027 – Aug 2027
SAT Nov 08, 2025	FRI Mar 13, 2026	FRI Sep 11, 2026	
SUN Nov 09, 2025	SAT Mar 14, 2026	SAT Sep 12, 2026	Graduation
	SUN Mar 15, 2026		Nov/Dec 2027
MON Dec 01, 2025		THU Oct 08, 2026	
TUE Dec 02, 2025	THU Apr 09, 2026	FRI Oct 09, 2026	
WED Dec 03, 2025	FRI Apr 10, 2026	SAT Oct 10, 2026	
THU Dec 04, 2025	SAT Apr 11, 2026	SUN Oct 11, 2026	
FRI Dec 05, 2025	SUN Apr 12, 2026		
SAT Dec 06, 2025		THU Nov 12, 2026	
	MON May 11, 2026	FRI Nov 13, 2026	
THU Jan 15, 2026	TUE May 12, 2026	SAT Nov 14, 2026	
FRI Jan 16, 2026	WED May 13, 2026	SUN Nov 15, 2026	
SAT Jan 17, 2026	THU May 14, 2026		
SUN Jan 18, 2026	FRI May 15, 2026	THU Dec 10, 2026	
	SAT May 16, 2026	FRI Dec 11, 2026	
THU Feb 12, 2026		SAT Dec 12, 2026	
FRI Feb 13, 2026	WED Jun 10, 2026	SUN Dec 13, 2026	
SAT Feb 14, 2026	THU Jun 11, 2026		*Vienna*
SUN Feb 15, 2026	FRI Jun 12, 2026	THU Jan 14, 2027	*Bruck/Leitha*
	SAT Jun 13, 2026	FRI Jan 15, 2027	
	SUN Jun 14, 2026	SAT Jan 16, 2027	
		SUN Jan 17, 2027	

Subject to modification
Version February, 2025

Since 2005 MSc (CE) Renewable Energy Systems

Curriculum

MODULE 1 | *4 DAYS*
Introduction on Renewable Energy

- Non-conventional energy production, energy mix, energy trade, international and European programs and conventions in the sector of renewable energy;
- Economic aspects of renewable energy, basic economics, basic management, introduction on risk evaluation and risk management;
- Structural planning;
- Distribution networks (electric, thermal, gas), feeding-in and control of distribution networks; Practical examples of network interaction.

6 ECTS

MODULE 2 | *8 DAYS*
Biomass, Biogas, and Biofuels

- Principles of energetic use of biomass (physical, chemical), available raw material resources, and ecological resource management
- Plant engineering for the energetic use of biomass (electric, thermal, gas, liquid);
- Planning, construction, implementation, operation, and maintenance;
- Economic evaluation, risk, and cost aspects;
- Practical examples, field trips to existing plants.

15 ECTS

MODULE 3 | *7 DAYS*
Solar Energy – Solar Heating and Photovoltaics

- Physical principles of the use of solar energy;
- Potentials;
- Plant engineering for the use of solar energy (electric, thermal);
- Planning, construction, implementation, operation, and maintenance;
- Economic evaluation, risk, and cost aspects;
- Practical examples, field trips to existing plants.

10 ECTS

MODULE 4 | *9 DAYS*
Geothermal Energy, Wind Power, and Small Hydro Power

- Physical principles of energy usage;
- Available resources, potentials;
- Plant engineering for energy generation (electric, thermal);
- Planning, construction, implementation, operation, and maintenance;
- Economic evaluation, risk, and cost aspects;
- Practical examples, field trips to existing plants.

15 ECTS

MODULE 5 | *5 DAYS*
Efficient Energy Use and Thermal Building Optimization

- Physical principles, energy demand of buildings, building services engineering;
- Optimised building concepts, potentials, opportunities;
- Energy efficiency in the public sector and in companies;
- Outsourcing of energy supply services;
- Economic evaluation, risk, and cost aspects;
- Analysis of practical examples.

10 ECTS

MODULE 6 | *5 DAYS*
General Legal & Economical Frameworks

- Legal aspects of renewable energy according to the EU regulatory system
- Basics of European Community Law
- Austrian national legal basis of renewable energy
- Valuation and Financing of Energy Projects
- Business Plans for Energy Projects
- Financial Planning for Energy Projects
- Principles of Accounting
- Tax law
- Investment law / Licensing Procedure

10 ECTS

MODULE 7 | *8 DAYS*
Integration of RES into the Energy System

- Fundamentals of electricity markets and CO_2 emissions trading
- Basics of electricity grids
- Future role and responsibilities of transmission grids
- Grid integration of renewables and the concept of Smart Grids
- Market integration of renewables and storages
- Direct marketing of green electricity
- Example for integrating RES-E into the grid

14 ECTS

MODULE 8 | *6 DAYS*
Management and Soft Skills

- Operative organization, team building;
- Self management, conflict management;
- Information work and opinion forming, media relations;
- Civic participation;
- Presentation, moderation.

6 ECTS

MODULE 9 | *4 DAYS*
Perspectives on the Use of Renewable Energy

- Developments in world energy consumption;
- Future technologies;
- Technology assessment;
- Environmental protection and environment-related issues.

4 ECTS

MODULE 10
Master's Thesis

- A master's thesis is written with the assistance of a supervisor, preferably, relating to the student's occupational activity and focusing on the feasibility of practical implementation.

30 ECTS

Admission

TUITION FEE

EUR 23,500 (VAT-free) including course materials and refreshments during breaks. The tuition fee does not include the cost of trips and overnight stays.

INFO SESSIONS

Presentations of the MSc (CE) Program will be held in the form of monthly info sessions. During these info sessions the Academic Director and Program Managers provide you with in-depth information on the program and look forward to answering your questions.

Registration: newenergy@tuwien.ac.at

Admission/Application

Start Your Online Application:
www.tuwien.at/newenergy

After receiving your complete application, an individual admission interview with the Academic Director and the Program Management is planned. Admission interviews will take place after individual appointment.

PERSONAL ADVISORY SERVICE

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MR Dr. **Gerhard Burian** – ETRI – European Training and Research Institute
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Dipl.-Päd.Ing. **Werner Weiss** – AEE INTEC
DI **Lukas Weißensteiner** – RP Global Austria

This represents a selection of the faculty of class 2024–2026.

Help create a world with a sustainable future!

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