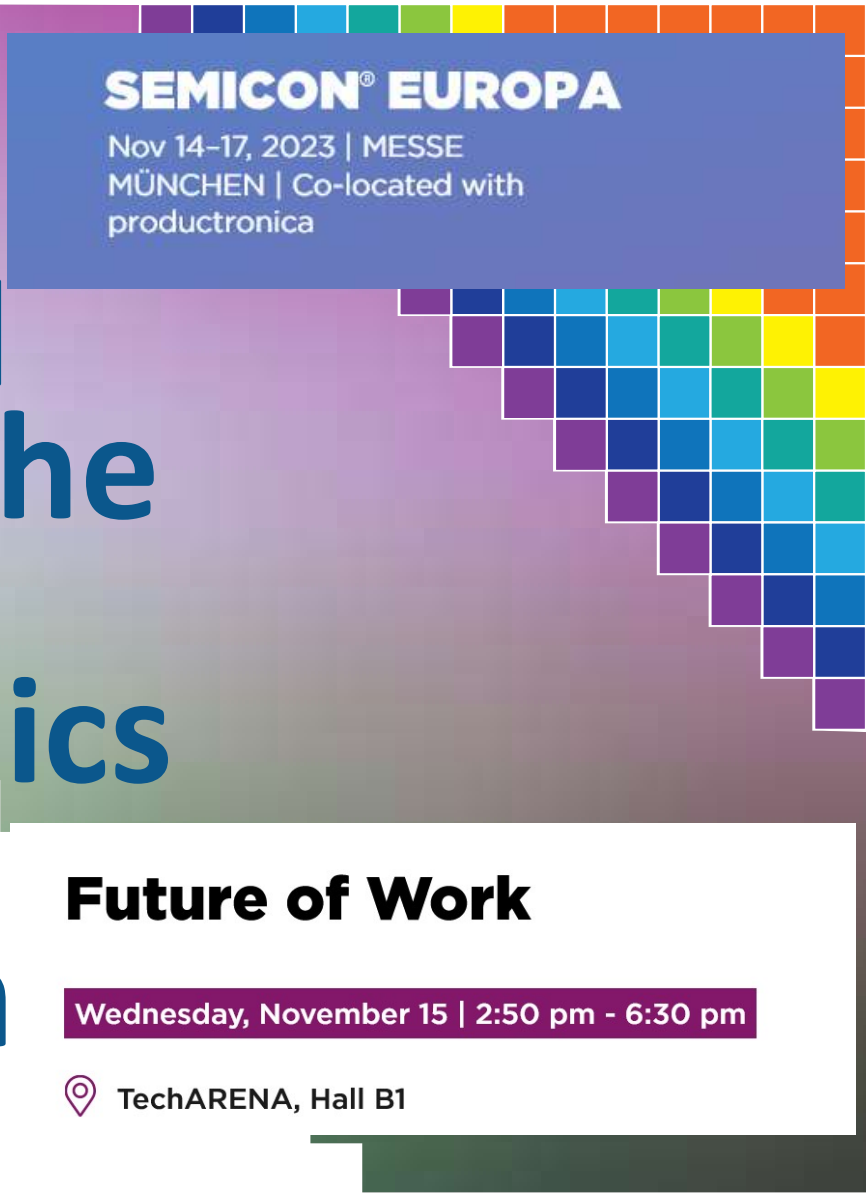
ECVEM
European Centre of Vocational Excellence in Microelectronics

New educational activities for the European Microelectronics & chips (r)evolution

November 2023



Co-funded by the Erasmus+ Programme of the European Union

European Centre of Vocational Excellence in Microelectronics

ECoVEM
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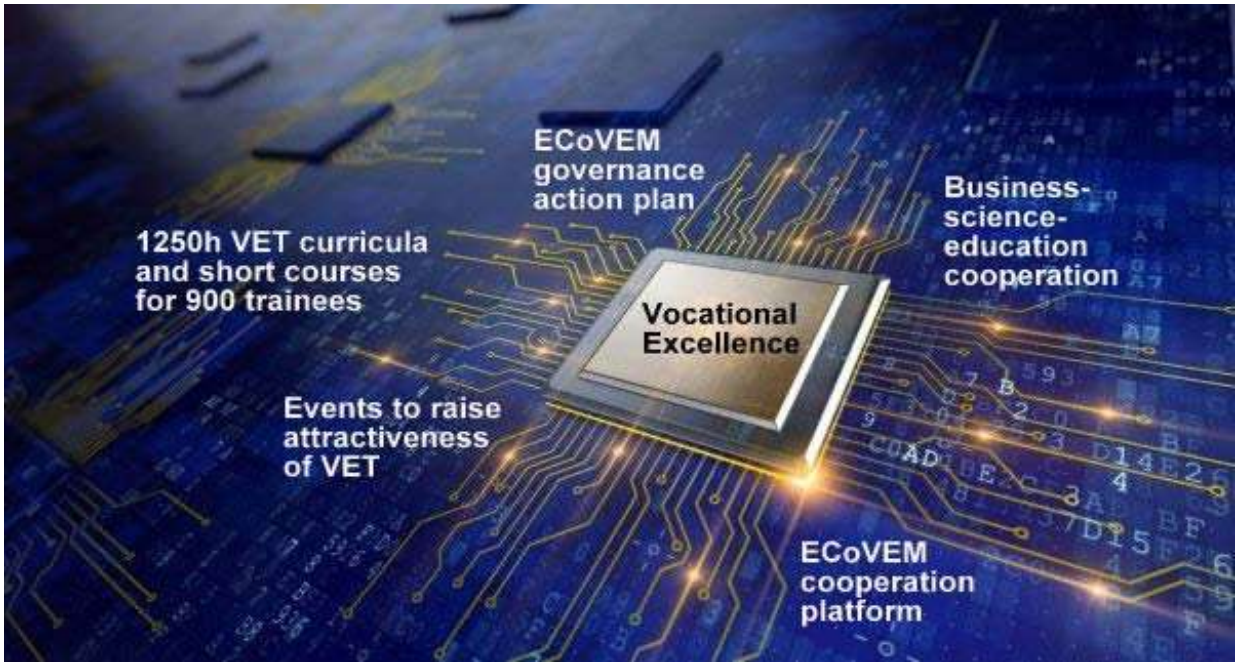
VET capable to train people with life-long capacity to self-regulate learning, in order to adapt continuously at rapidly changing environments

Implementation of the advanced countries' best practices and approaches to excellence in VET into less advanced regions



European Vocational Education Area with shared OERs, improved virtual mobility of students and academic staff and integrated programmes of study, training and research

More responsive VET to the fast changing skills need of the labour market

Higher employment of graduates, better opportunities for research and innovation of enterprises

Efficient financial models for VET including work-based and apprenticeship and for investment in VET and applied research

Raised role of VET in Smart Specialisation Strategies

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https://ecovem.eu/

620101-EPP-1-2020-1-BG-EPPKA3-VET-COVE (2020 – 2024)

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ECoVEM Project

https://canal.uned.es/video/magic/djqipts2ftc8sokowk0koo0cwsg0s8w

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CoVEs in iVET and in cVET

Key Industry Stakeholders

Organisations Working on Social Inclusion and Reintegration

National and Regional Authorities

https://ecovem.eu/

BG 5 / GE 4 / ES 3 / IT 3 / CY 3 / NO 1

European Centre of Vocational Excellence in Microelectronics

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- Design and manufacture of PCB
- Microelectronics packaging technologies
- Integrated circuits design
- System design
- Fundamentals of microelectronics manufacturing
- Microelectronics for a greener economy
- Key competences and skills

- EQF 3↔8 (VET 2, 3, 4 – B, M, PhD)
- ECTSs / ECVET points
- iVET, cVET, lifelong learning, training, re-training, up-training
- min. 1.250 hours / 20 courses / 40 modules
- Performance-Support Design / Work-Based Learning approach

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ECoVEM courses deliverables

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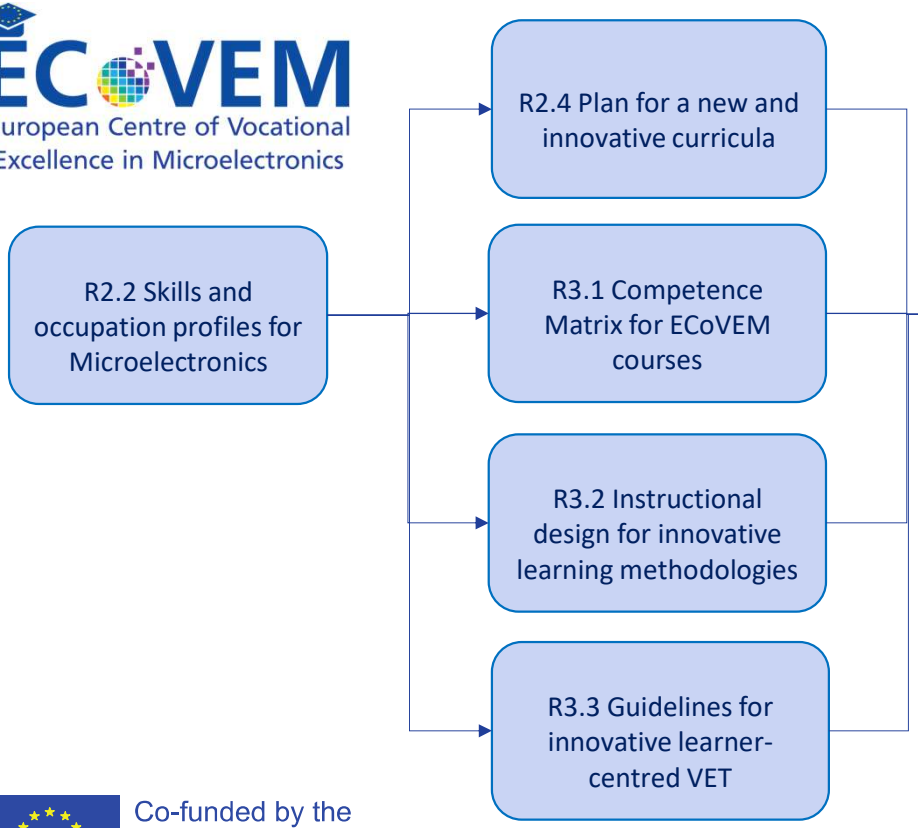

WPs/Deliverables in ECoVEM content development

- **WP1 Preparation, TUS (BG)**
- **WP2 ECoVEM Cooperation Platform, SEMI Europe (GE)**
- **WP3 Design of innovative VET, UNED (ES)**
- **WP4 Exploitation/Implementation of VET, INES (FR)**
- **WP5 Quality Assurance, Exolaunch (GE)**
- **WP6 Dissemination, ECWT (NO)**
- **WP7 Governance Action Plan, BIA (BG)**
- **WP8 Management, TUS (BG)**

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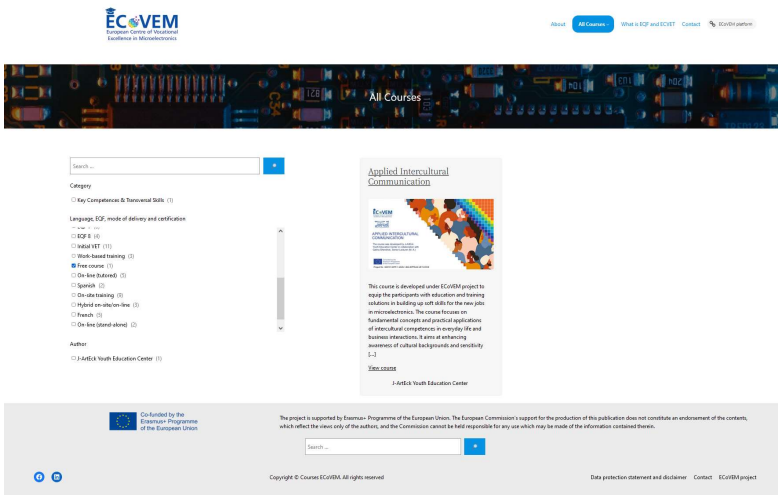
ECoVEM shell

- https://courses-ecovem.eu/
- Courses
- Filtering
- Categories
- Language, EQF, mode of delivery and certification
- Author
- Analytics of arriving/departing



Courses Subjects

ECoVEM Shell – https://courses-ecovem.eu/

- Microelectronics Packaging technologies
- Integrated Circuits Design
- System Design
- Basic of microelectronics manufacturing
- Microelectronics for greener economy and industrial applications
- Key Competences & transversal skills
- Design and manufacture of PCB

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Courses Contents Design

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ECoVEM Shell – https://courses-ecovem.eu/

Author

- J-ArtEck Youth Education Center (1)
- Romit LTD (5)
- UNED (7)
- ANCCP (3)
- Technical University Sofia (5)
- INES Formation (3)
- CYPRUS PRODUCTIVITY CENTER (2)
- Exolaunch (4)
- Student Computer Art Society (2)
- SEMI (2)

Language, EQF, mode of delivery and certification

- English (30)
- Bulgarian (3)
- Spanish (2)
- French (5)
- Greek (2)

- EQF 3 (8)
- EQF 4 (20)
- EQF 5 (23)
- EQF 6 (19)
- EQF 7 (8)
- EQF 8 (4)

- Free course (33)

- On-line (tutored) (9)
- On-line (stand-alone) (14)
- E-learning in autonomy (13)
- Hybrid on-site/on-line (7)

- Continuous VET (31)
- Initial VET (11)
- Work-based training (9)

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http://ecovem.ieectqai.uned.es/moodle2/

UNED Moodle ECoVEM

All courses at UNED Moodle ECoVEM site:

- UNED 7
- ANCCP 3

Circuit Training with Analog Devices in Direct Current (CTAD)- ANCCP)

Circuit Training with Analog Devices in Alternating Current (CTAD)-ANCCP)

Training in Electronic Circuits with Analog Devices (TECAD) - ANCCP

- J -ArtEck 1

Introduction to Intercultural Communication – J -ArtEck youth education Center

http://moodle-tus.ecovem.eu/

TUS Moodle ECoVEM

Available courses

- PCB Design, Assembling and Packaging EQF 3
- PCB Design, Assembling and Packaging EQF 4
- PCB Design, Assembling and Packaging EQF 5
- PCB Design, Assembling and Packaging EQF 6
- Microelectronics packaging technologies EQF 4

- Microelectronics packaging technologies EQF 5

- Microelectronics packaging technologies EQF 6

- Microelectronics packaging technologies EQF 7

- FPGA hardware and programming

- Nanoelectronics CAD
- Nanoelectronics for ICT
- Nanomaterials for Electronics
- Design, Prototype Fabrication and Challenging Applications of Silicon Microsystems with Piezoresistive Feedback

- Microprocessor systems

The aim of this training course is to provide the necessary knowledge and skill
subsystems and interfaces and ability to select the right processor according t
perform practical tasks in the form of written tutorials have been prepared.

- Design and fabrication of PCB

The aim of this training course is to provide the necessary knowledge and skill

The free KiCad Electronic Design Automation software is used to design, chec
the task may be an test or practical like schematic draw, components placeme

The students are expected to solve the tests or to upload results file for practi

- Introduction to Internet of Things (IoT)

Internet of Things is a general term used for devices talking over a network fo
As per the definition the students will learn the design for all three aspects of
This course is based on hands on approach where students will be doing vario

- LoraWan technology

The LoraWan course offers a complete curriculum for VET students and profes
understanding of the fundamentals that make Lora radio modulation and how
standard called LoRaWAN. The course provides theoretical concepts along wi

- Computer modelling and simulation in Analogue electronics

The aim of this training course is to provide the necessary knowledge and skill
simulate the circuits. The Performance-centered approach is used to implemen
circuits with LTSpice , and students are expected to upload for each task simul
transistors, electronic amplifiers with bipolar and field-effect transistors, as we
been prepared for each topic and task for performance.

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Future of Work

Wednesday, November 15 | 2:50 pm - 6:30 pm

TechARENA, Hall B1

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