TRiREME

DIGITAL & GREEN SKILLS TOWARDS FUTURE OF THE MOBILITY ECOSYSTEM

OPETUSHALLITUS, Autoalan ammatillisen koulutuksen Erasmus+ -webinaari 28/1/2026

TRIREME projekti

Auto- ja kuljetusalan sekä liikkumisen tulevaisuuden osaaminen Euroopassa

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Co-funded by the European Union

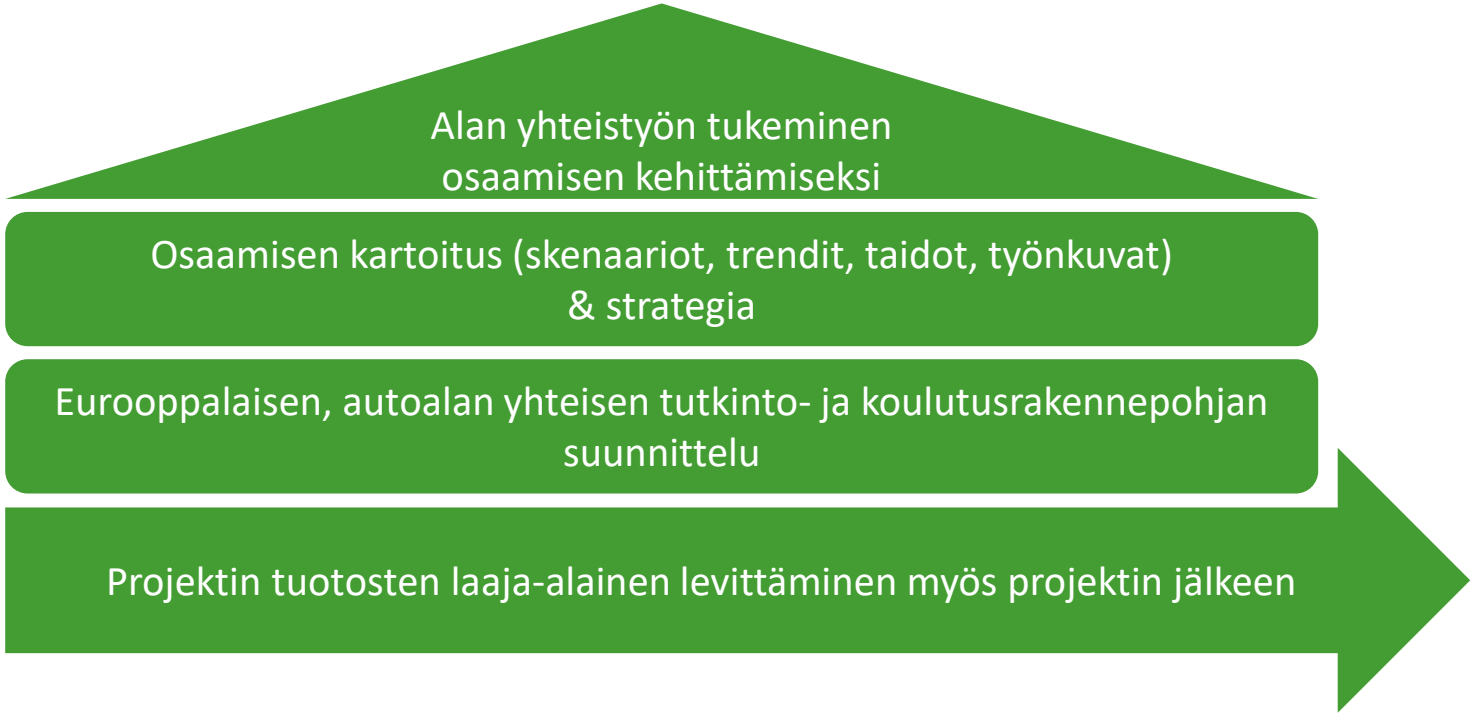
Projektin info

DigiTal & GReen Skills TowaRds FuturE of the Mobility Ecosystem (TRIREME)

4-vuotinen ERASMUS+ Blueprint -projekti 3/2024 – 3/2028

Auto- ja kuljetusalan sekä liikkumisen tulevaisuuden osaamisen kehittäminen Euroopan alueella (Automotive-Mobility Academy)

Yhteensä 31 partneria Automotive Skills Alliance -verkostosta



Support skills agenda in the Automotive-Mobility Ecosystem through the Large-scale Pact for Skills Partnership

AUTOMOTIVE SKILLS ALLIANCE

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TRIREME-projektin parissa työskentelee 31 kumppania 14 eri maasta:

- 6 korkeakoulua (HE)
- 4 ammatillisen koulutuksen järjestäjää (VET)
- 7 teollisuuden edustajaa EU:n tai kansallisella tasolla
- 1 aluehallinto
- 3 työmarkkinaosapuolta
- 5 pk-yritystä
- 5 muun tyyppistä kumppania, kuten koulutuksen tarjoajia, konsulttiyrityksiä ja kansalaisjärjestöjä.
- Belgia, Espanja, Italia, Itävalta, Portugal, Puola, Romania, Ruotsi, Saksa, Slovenia, Suomi, Tanska, Tsekki ja Unkari

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Tutkimuskohteet: Alaan vaikuttavat trendit

Digitalisaatio

- Connected vehicles (Internet of Things, V2X coms, Cloud)
- Autonomous Driving (ADAS, Full Autonomy, sensors)
- AI, Machine Learning, Data Analytics
- Cybersecurity (vehicle security, data privacy)
- Digital twins and simulation
- Industry 4.0/5.0
- Virtual/augmented reality (VR/AR)

Vihreä siirtymä ja kiertotalous

- Electromobility (electric vehicles)
- Hybrid Vehicles (PHEVs, mild hybrids)
- Other alternative fuels and propulsion (hydrogen, e-fuels, CNG, etc.)
- Circular economy
- Charging Infrastructure
- Eco-Friendly Innovations
- Corporate sustainability goals
- Public perception of Green Transition
- Supply chain sustainability

Arvoketjujen joustavuus

- Supply Chain Optimalisation
- Local Sourcing and Production
- Inventory Management
- Risk Management (scenario planning, strategic stockpiling)
- Manufacturing and production technologies innovation
- Predictive maintenance
- Testing and approval

Uudet yritystoimintamallit

- Digital Retail
- Subscription Services (vehicle subscriptions, flexible leasing options)
- Mobility as a Service
- Tyre as a Service
- Maintenance as a Service
- Aftermarket Services
- Dynamic customer preferences (Total Cost of Ownership/Mobility, infotainment)
- Customer services innovations and adaptations
- Fleet management

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Tutkimuskohteet: Koulutuksen haasteet ja tarpeet

- **Miten opetusta/koulutusta tarjotaan**: esim. VR/AR, yhdistelmäoppiminen, mukautuva oppiminen, osallistava koulutus ja muut
- **Opetuksen tehostaminen**: esim. ajankäyttö, rakenne, multimedia, opetusalustat, jne
- **Järjestelmän joustavuus ja sertifiointi**: osaamisen ja koulutuksen kattavuus EU:n tasolla, micro-credentials, micro-learning, jne
- **Yhteistyö** keskeisten sidosryhmien välillä: myös eritasoilla, esim VET/HE
- Muutoksen vaikutukset myös **sosiaalisesta näkökulmasta**: esim. työmarkkinaosapuolet ja politiikka

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Projektin tuotosten käyttäminen

Tuotokset vapaasti saatavilla

Eurooppalainen **Automotive-Mobility Academy**:

- **Osaamistarpeiden analysointi** (Sectoral skills intelligence survey – julkaistu)
- **Osaamisen ja työtehtävien kuvaukset** (Skills cards, - nyt 30kpl valmiina, joista 13 pt/at-tasolla)
- **Osaamisstrategia**: yhteinen **opetussuunnitelma ja koulutusmodulit** koulutusrakenne, -materiaali, kokeet, jne. – yli 60 koulutusmodulia. Nyt 9 modulia saatavilla ASAn ylläpitämällä koulutusalustalla (learning platform): **learn.skills-hub.eu**
- Koulutusten tunnistaminen/hyväksyntä (osaamismerkit) – pohjautuu "**micro-credentials (digital certificates)"** sekä osaamis- ja työtehtäväkuvauksiin (Skills cards and Job roles)
- EU:n kattavan osaamisen ja koulutusmodulien datapankin päivitys – **Learning Path/Journey** (combination of different providers, etc.) ASAn ylläpitämä osaamisalusta (skills hub): **skills-hub.eu**
- **Tiekarttana osaamisen kehittämisen ja uudelleen kouluttamisen parhaat käytänteet** koko autoalalla Euroopan alueella (yli sadan eri projektin toimintamallin arviointi käynnissä)

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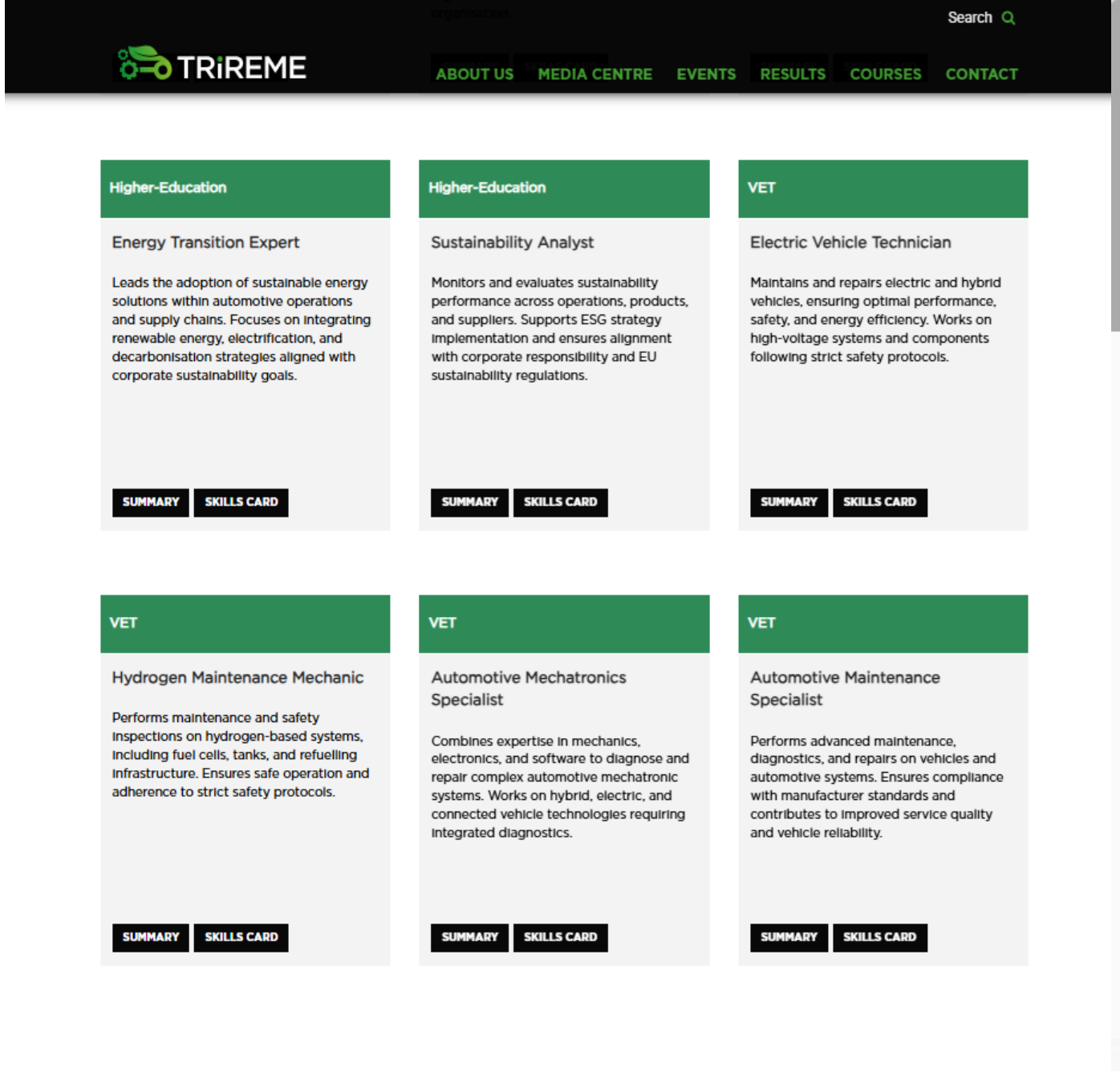

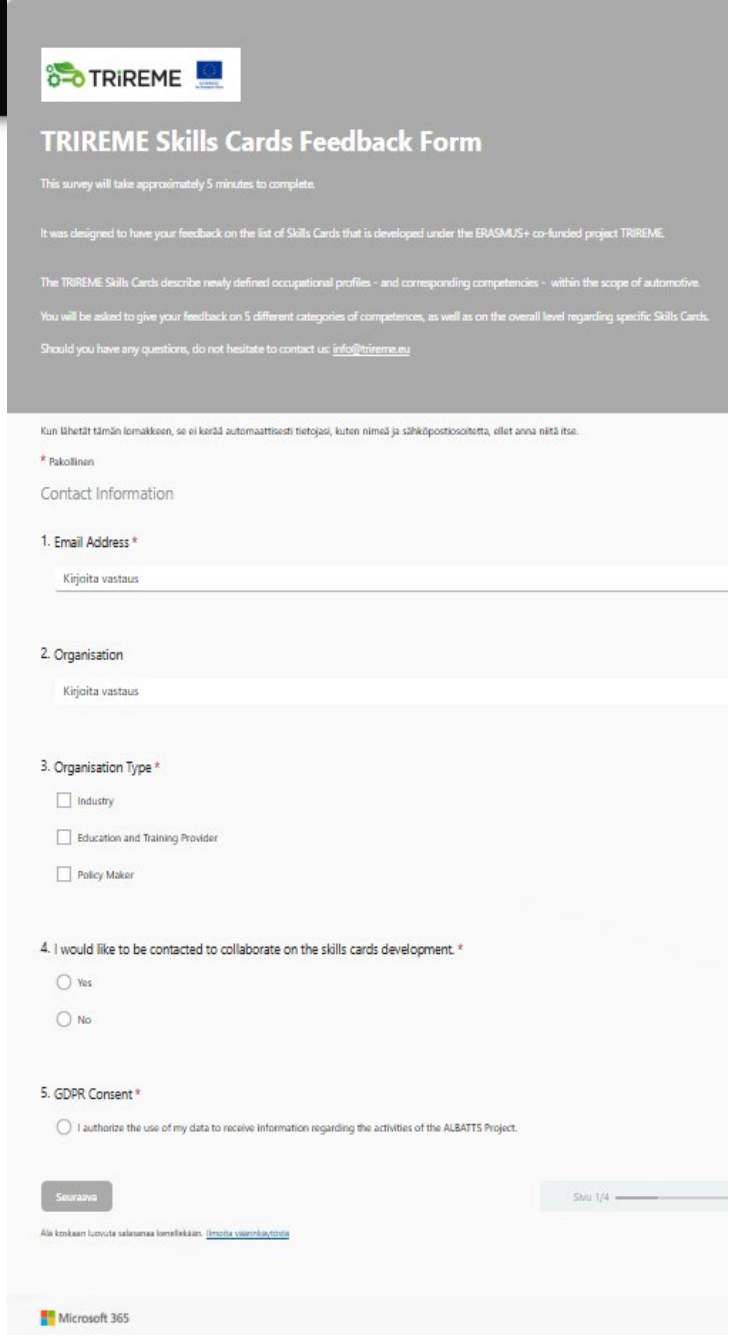

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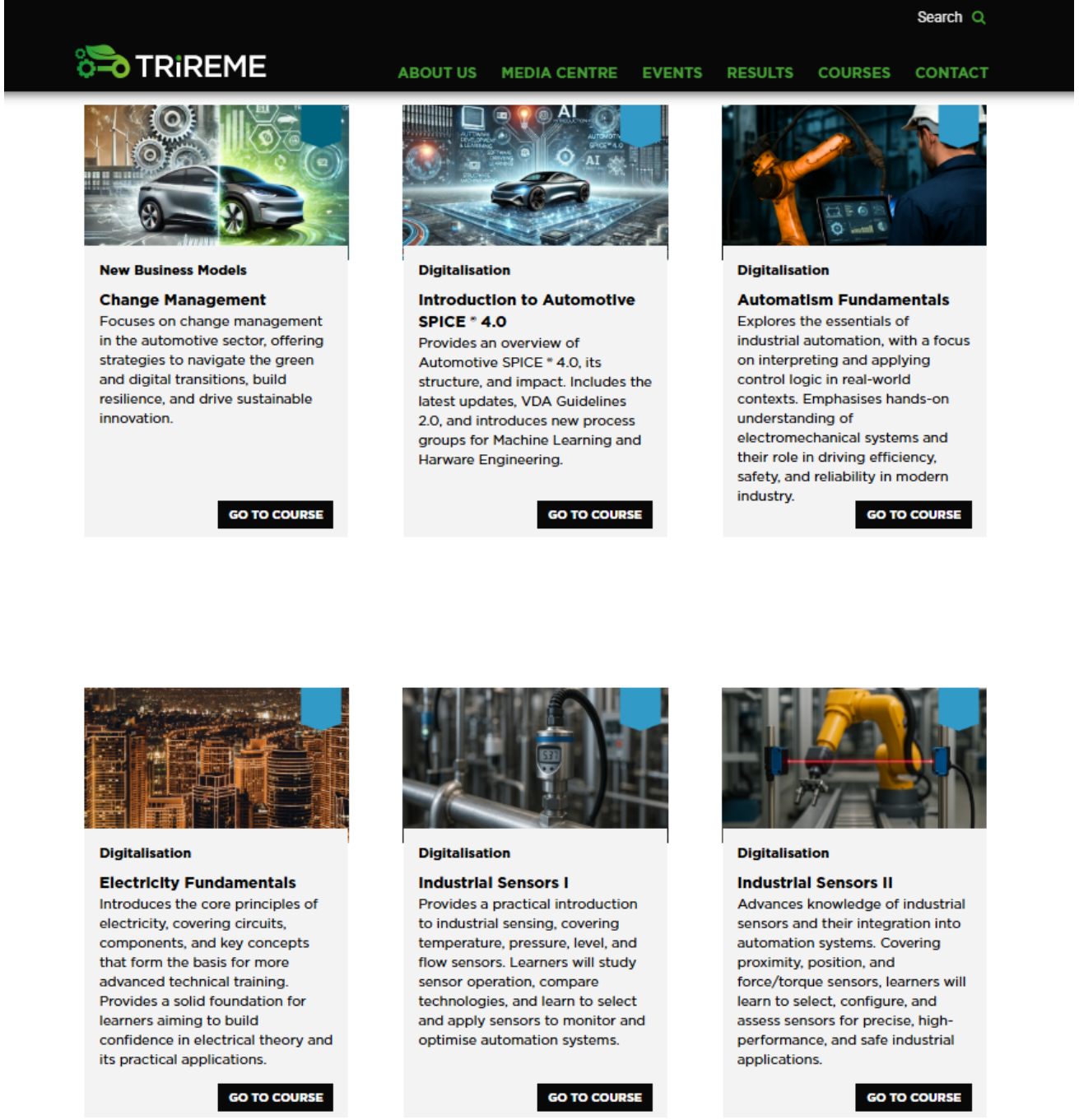

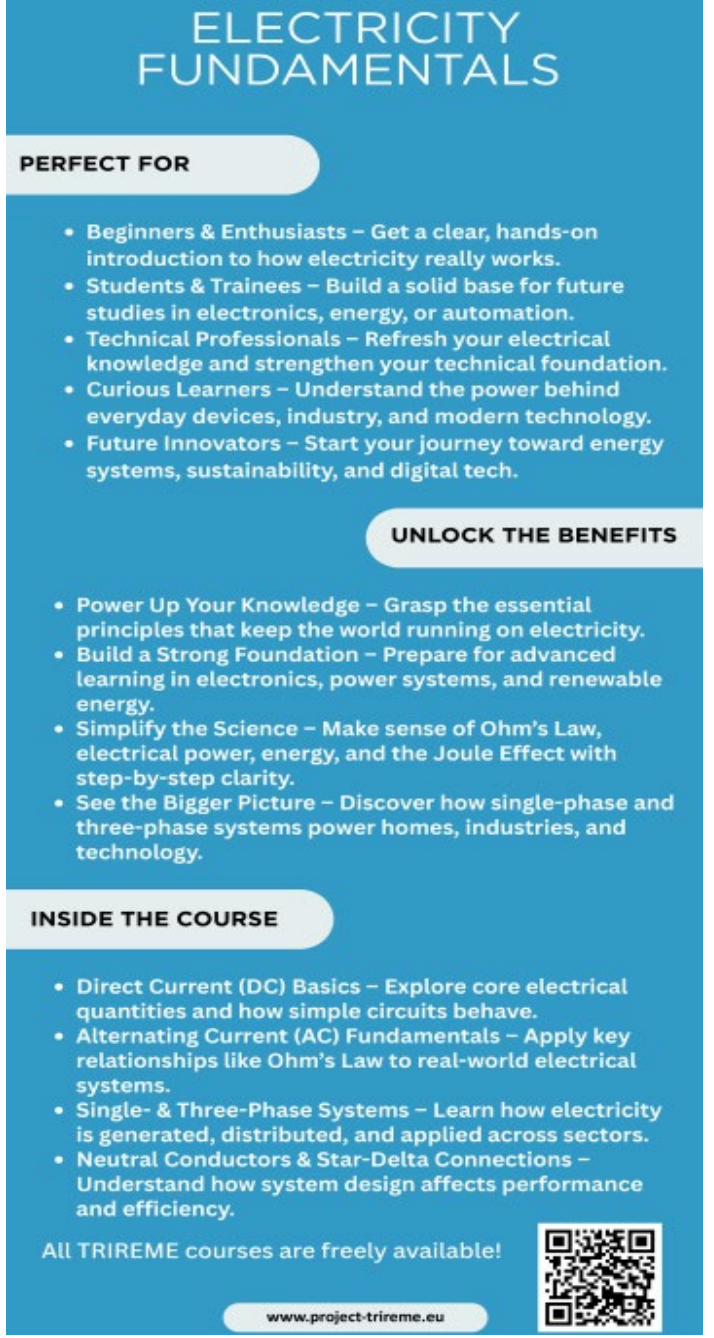

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