



Learner Centric Advanced Manufacturing Platform

D7.3 “Catálogo de cursos de formación para pymes y referencia comparativa”

WP7 Conexión Pyme - FP



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Autor/es	Eda Ipek Haritz Izagirre Iñigo Mujika Josu Riezu Samuel Nazzareno Monaco Sara Caballero
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GLOSARIO Y/O SIGLAS

5S: Método de organización del lugar de trabajo procedente de la fabricación ajustada.
ADMA: Proyecto ADMA Transformers EU - Centro Europeo de Apoyo a la Fabricación Avanzada.
AFIL: Associazione Fabbrica Intelligente Lombardia (Asociación de Fábricas Inteligentes de Lombardía).
AFM: Asociación Española de Fabricantes de Máquinas-herramienta, Accesorios, Componentes y Herramientas.
IA: Inteligencia Artificial.
BI: Inteligencia Empresarial.
CAD: diseño asistido por ordenador.
CAM: Fabricación Asistida por Ordenador.
CMQE: Campus des Métiers et des Qualifications d'Excellence (Centro de Excelencia para la Formación Profesional y las Cualificaciones).
CNC: Control Numérico por Ordenador.
CRM: Gestión de las Relaciones con los Clientes.
RSC: Responsabilidad Social Corporativa.
ERP: Planificación de Recursos Empresariales.
ESG: Medioambiental, Social y de Gobernanza.
UE: Unión Europea.
RR. HH.: Recursos Humanos.
TIC: Tecnologías de la Información y la Comunicación.
IoT: Internet de las Cosas.
TI: Tecnologías de la Información.
KIC: Empresa Intensiva en Conocimiento.
KPI: Indicador Clave de Rendimiento.
LCAMP: Plataforma de Fabricación Avanzada Centrada en el Alumno.
MADE: Centro de Competencia Industria 4.0.
MES: Sistema de Ejecución de la Fabricación.
MOOC: Curso de Formación Masivo en Línea.
I+D: Investigación y Desarrollo.
SaaS: Software como Servicio.
PYME: Pequeña y Mediana Empresa.
FP: Formación Profesional.



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RESUMEN EJECUTIVO

Este informe ofrece una visión general completa del panorama formativo diseñado para apoyar a las pymes en su transformación digital, organizativa y sostenible. Presenta un catálogo estructurado de 109 actividades formativas aportadas por socios de ocho países, cada una de ellas asignada a las áreas de transformación y los niveles de madurez de ADMA para facilitar la mejora de las competencias específicas. El informe incluye un análisis comparativo de los principales proveedores de formación internacionales. Estos elementos permiten al lector comprender claramente las oportunidades de formación existentes y cómo se ajustan a las necesidades identificadas en las evaluaciones de madurez de las pymes, lo que le ayuda a identificar claramente las oportunidades de formación más relevantes para las pymes y cómo pueden utilizarse para apoyar su proceso de transformación.

Este informe se centra en reforzar la conexión entre las pymes y el ecosistema de la educación y formación profesional (FP) mediante metodologías estructuradas, actividades de diagnóstico prácticas y un mapeo exhaustivo de las oportunidades de formación. El trabajo integra tres componentes clave: la metodología ADMA, el modelo de Fábrica de Aprendizaje Colaborativo (CLF) y las pruebas recopiladas a partir de análisis de pymes y planes de transformación.

La metodología ADMA ha servido de base para comprender la madurez digital, organizativa y relacionada con la sostenibilidad de las pymes. Los 59 análisis de pymes realizados en ocho países (País Vasco - España, Canadá, Francia, Alemania, Italia, Eslovenia, Suecia y Turquía) revelan puntos fuertes consistentes en la orientación al cliente y la organización centrada en las personas. Al mismo tiempo, identifican debilidades recurrentes en la fabricación inteligente (baja automatización y uso de datos en tiempo real), la fábrica digital (retos de integración de sistemas), la fábrica ecológica (prácticas de sostenibilidad desiguales) y la fábrica abierta orientada a la cadena de valor (cooperación externa limitada). Estos resultados proporcionan una dirección clara para priorizar las áreas de formación dentro de LCAMP.

Para abordar estas necesidades, el informe presenta un sistema de indexación dual que organiza las actividades de formación según las siete áreas de transformación de ADMA y cinco niveles de progresión de madurez, que van desde la concienciación inicial hasta la excelencia. Esta estructura garantiza que las pymes puedan identificar fácilmente las ofertas de formación relevantes para su etapa actual de desarrollo y planificar su evolución hacia modelos digitales y organizativos más avanzados.

Uno de los principales resultados de este trabajo es la creación de un catálogo de 109 actividades de formación alineadas con las transformaciones de ADMA. Estas oportunidades de formación proceden del País Vasco - España (31), Canadá (10), Francia (10), Alemania (9), Italia (18), Eslovenia (10), Suecia (10) y Turquía (11). Las siete áreas de transformación ADMA están representadas, con una cobertura especialmente importante en Tecnologías de Fabricación Avanzadas, Fábrica Digital y Fabricación Inteligente, precisamente las áreas en las que las pymes mostraron una mayor necesidad de mejora.

Además, se llevó a cabo un ejercicio de evaluación comparativa entre seis proveedores de formación internacionales líderes (Coursera, EIT Manufacturing, Fraunhofer-Gesellschaft, Mondragon University, Polimi Open Knowledge y Udemy). Estos proveedores ofrecen una amplia formación en las mismas áreas débiles de ADMA identificadas en los análisis de las pymes, lo que refuerza la relevancia de las decisiones estratégicas de LCAMP.

En general, este informe ofrece un catálogo de formación orientado a las pymes que apoya la transformación digital, la sostenibilidad y la innovación centrada en las personas. Al combinar



conocimientos diagnósticos, vías de madurez estructuradas, ofertas de formación práctica y mejores prácticas internacionales, LCAMP está en condiciones de ofrecer soluciones de aprendizaje que aceleran la competitividad de las pymes y preparan a la mano de obra para las exigencias de la Industria 4.0 y 5.0.

1. INTRODUCCIÓN

El trabajo realizado en el WP7 ha generado un valioso conocimiento sobre cómo conectar a las pymes con el ecosistema de la FP mediante metodologías estructuradas y actividades prácticas de implementación. La combinación de marcos conceptuales como ADMA y CLF, junto con la experiencia concreta en análisis de pymes y planes de transformación, ofrece una visión global tanto de las oportunidades como de los retos que plantea el avance hacia la Industria 4.0 y 5.0.

En esta sección se resumen los principales resultados obtenidos en informes anteriores, destacando la relevancia de la metodología ADMA como herramienta de diagnóstico y transformación, y las Fábricas de Aprendizaje Colaborativo como modelo educativo que tiende puentes entre la industria y la formación. Juntos, forman la base sobre la que se desarrollará el catálogo de formación.

Para que el catálogo de formación sea una herramienta práctica y estratégica para las pymes, es esencial organizar la amplia variedad de ofertas formativas disponibles de forma clara y estructurada. El sistema de indexación diseñado dentro de LCAMP sirve para este propósito, garantizando que cada curso de formación pueda vincularse fácilmente a las necesidades específicas de transformación de las empresas y a su nivel de madurez digital.

1.1. RESUMEN DE LOS INFORMES ANTERIORES DEL WP7

Dentro del proyecto LCAMP, existe una línea de trabajo dedicada a reforzar la conexión entre la educación y formación profesional (FP) y las pymes. Estas empresas están inmersas en procesos de transformación digital y, a través de la metodología ADMA, el sistema de FP puede proporcionarles herramientas y conocimientos que les ayuden a mejorar su competitividad y sostenibilidad.

Entre las actividades realizadas hasta ahora, cabe destacar la integración de la metodología ADMA en el marco del LCAMP a través de las Fábricas de Aprendizaje Colaborativo (CLF). Además, se han realizado varios análisis de pymes y se han desarrollado planes de implementación para apoyar sus procesos de transformación.

Metodología ADMA y fábrica de aprendizaje colaborativo

La metodología ADMA (Advanced Manufacturing Support Centre), promovida por la Comisión Europea y desarrollada en el marco del proyecto ADMA TranS4MErs, proporciona un marco para la transformación digital y sostenible de las pymes industriales. Se estructura en siete áreas clave:



- T1 - Tecnologías de fabricación avanzadas: análisis del estado actual de los dispositivos y la maquinaria de fabricación; centrándose en la visión de la empresa, el nivel de capacidades y el nivel de implementación;
- T2 - Fábrica digital: evaluación de cómo se implementa la tecnología digital para transformar el desarrollo de productos y/o procesos en productos, sistemas o servicios físicos; centrándose en la infraestructura habilitadora y las capacidades digitales;
- T3 - Fábrica ecológica: análisis del enfoque hacia la reducción de costes y riesgos y la eficiencia en el uso de materias primas, así como hacia el suministro y consumo de energía y el uso de fuentes renovables; centrándose en la gestión de recursos y el cumplimiento normativo y la innovación.
- T4 - Ingeniería centrada en el cliente de principio a fin: evaluar cómo las expectativas de los clientes, así como el diseño interfuncional e interdepartamental, podrían dar lugar a nuevos desarrollos y procesos; centrándose en la orientación al cliente y la propuesta de valor, y en procesos de ingeniería sólidos.
- T5 - Organización centrada en las personas: analizar si se da a los trabajadores autonomía y espacio para canalizar su talento, creatividad e iniciativas, y de qué manera, también mediante la evaluación continua/repetitiva de sus habilidades y la actualización de sus competencias; centrándose en el empleado individual, el equipo, el liderazgo y la organización interna.
- T6 - Fabricación inteligente: evaluar la combinación del uso inteligente de las capacidades de las personas, el uso inteligente de la tecnología y el despliegue de un sistema de producción (auto)aprendizaje; centrarse en la interacción hombre-máquina y en los procesos de planificación y control de la fabricación.
- T7 - Fábrica abierta orientada a la cadena de valor: análisis de la capacidad de la empresa para desarrollar productos, procesos de fabricación y servicios teniendo en cuenta toda la cadena de valor; centrándose en la cooperación y las asociaciones, así como en la experiencia externa y la gestión del conocimiento.

El modelo Collaborative Learning Factory (CLF), desarrollado dentro de LCAMP, describe entornos de aprendizaje que reproducen procesos industriales reales en centros de formación profesional. Se estructura en ocho dimensiones:

- Modelo operativo: los CLF requieren modelos operativos sólidos que abarquen aspectos financieros, de personal y temáticos. Es fundamental contar con una financiación adecuada, y se pueden explorar diversos modelos. El personal debe poseer competencias técnicas y didácticas.
- Objetivos y finalidad: los CLF prestan servicio tanto a estudiantes como a trabajadores, ofreciendo una experiencia de aprendizaje inmersiva y un desarrollo profesional continuo en fabricación avanzada.
- Proceso: el proceso de los CLF incluye cuatro etapas, diseño de productos, ingeniería de procesos, fabricación y gestión de la cadena de suministro, simulando escenarios del mundo real.
- Entorno: la configuración viene determinada por la infraestructura tecnológica, los tipos de usuarios y las competencias.
- Producto: el producto seleccionado influye en las competencias y las tecnologías.
- Didáctica: se centra en marcos de competencias estandarizados.
- Métricas: las métricas evalúan la eficacia, incluyendo el número de tecnologías de la Industria 4.0 implementadas, los desarrollos colaborativos y la satisfacción de los estudiantes.
- Colaboración: la colaboración entre los participantes es fundamental, ya que fomenta la innovación y el desarrollo de habilidades.



Tanto la metodología ADMA como el modelo CLF presentan conexiones relevantes que permiten transferir la lógica de madurez digital de las empresas al ámbito educativo, lo que permite crear itinerarios formativos que preparan a los estudiantes y trabajadores para los retos de la Industria 4.0 y 5.0.

Escaneos ADMA y Planes de Implementación

En el marco del proyecto LCAMP, se han realizado 59 análisis de pymes en ocho países (País Vasco - España, Canadá, Francia, Alemania, Italia, Eslovenia, Suecia y Turquía), junto con planes de implementación para empresas seleccionadas. Los resultados revelan una gran diversidad de niveles de madurez digital, pero también ponen de relieve tendencias comunes:

Puntos fuertes recurrentes:

- Ingeniería centrada en el cliente de principio a fin: orientación al cliente.
- Organización centrada en las personas.

Debilidades recurrentes:

- Fabricación inteligente: bajos niveles de automatización y uso limitado de datos en tiempo real.
- Fábrica digital: retos en la integración de sistemas y la conectividad.
- Fábrica abierta orientada a la cadena de valor: colaboración externa débil e innovación abierta limitada.
- Fábrica ecológica: sostenibilidad implementada de forma desigual.

Los planes de implementación incluyen acciones como la adopción del IoT y la sensorización, la automatización de procesos, el uso de Business Intelligence y gemelos digitales, la incorporación de prácticas de sostenibilidad y la introducción de programas de formación interna para reforzar las competencias digitales.

Implicaciones para el catálogo de formación

A partir de la información recopilada en informes anteriores, se han identificado varias prioridades de formación que servirán de guía para el desarrollo del catálogo de formación para pymes:

- Competencias en automatización y fabricación inteligente (robótica colaborativa, mantenimiento predictivo, sistemas de control y sensorización).
- Fábrica digital: integración de sistemas (ERP, MES, SCADA), gestión de datos, ciberseguridad.
- Sostenibilidad industrial: eficiencia energética, ecodiseño, economía circular.
- Competencias digitales transversales: análisis de datos, uso de la inteligencia artificial aplicada a la producción, herramientas digitales colaborativas.
- Habilidades organizativas: gestión del cambio, liderazgo digital, cultura de la innovación.

Los CLF y los centros de FP desempeñan un papel fundamental a la hora de ofrecer entornos de aprendizaje prácticos en los que se pueden desarrollar estas competencias en contextos muy similares a la realidad industrial.

En conclusión, la integración de los marcos ADMA y CLF con la evidencia práctica de los diagnósticos de las pymes justifica la necesidad de un catálogo de formación estructurado en



torno a las vías de madurez digital. Este catálogo debe centrarse en las áreas de menor madurez (fabricación inteligente, fábrica digital, fábrica ecológica y fábrica abierta orientada a la cadena de valor), al tiempo que refuerza los puntos fuertes existentes en la ingeniería centrada en el cliente de extremo a extremo y la organización centrada en las personas. De este modo, se apoyará a las pymes en su transición hacia modelos más digitales, sostenibles y centrados en las personas, en consonancia con los principios de la Industria 5.0.

1.2. CATEGORÍAS Y CLASIFICACIONES DE LAS FORMACIONES

Con el fin de proporcionar a las pymes un catálogo estructurado y práctico de oportunidades de formación, el proyecto ha diseñado un sistema de indexación dual. Este enfoque garantiza que las 109 formaciones recopiladas —desde el País Vasco - España (31), Canadá (10), Francia (10), Alemania (9), Italia (18), Eslovenia (10), Suecia (10) y Turquía (11)— se ajusten a las áreas de transformación estratégica definidas por la metodología ADMA y se sitúen dentro de una trayectoria de madurez clara que refleje el desarrollo progresivo de las competencias digitales, organizativas y de sostenibilidad.

Índice por áreas de transformación ADMA

El primer índice organiza todos los cursos de formación según las siete áreas de transformación ADMA, que definen las dimensiones críticas de la transformación industrial hacia la Industria 4.0 y la Industria 5.0. Estas áreas constituyen la columna vertebral del catálogo de formación:

- T1 - Tecnologías de fabricación avanzadas: uso de tecnologías de producción de última generación, robótica, fabricación aditiva, automatización y sistemas de control de calidad.
- T2 - Fábrica digital: integración de herramientas y plataformas digitales, como ERP, MES, SCADA, gemelos digitales y medidas de ciberseguridad, que permiten una producción conectada y basada en datos.
- T3 - Fábrica ecológica: estrategias para la fabricación sostenible, la eficiencia energética, la optimización de recursos, la economía circular y el diseño ecológico.
- T4 - Ingeniería centrada en el cliente de principio a fin: diseño de productos y procesos centrado en el cliente, integración de bucles de retroalimentación y personalización de soluciones.
- T5 - Organización centrada en las personas: cultura organizativa, empoderamiento de los empleados, liderazgo digital, desarrollo de habilidades y lugares de trabajo inclusivos.
- T6 - Fabricación inteligente: sistemas autónomos, mantenimiento predictivo, análisis avanzado, optimización basada en IA y planificación inteligente de la producción.
- T7 - Fábrica abierta orientada a la cadena de valor: colaboración en toda la cadena de valor, asociaciones, redes de innovación abierta y plataformas compartidas para el desarrollo conjunto.

La clasificación de los cursos de formación en estas siete áreas permite a las pymes y a los proveedores de formación identificar qué dimensiones de la transformación aborda un curso concreto. En muchos casos, un curso puede contribuir a más de un área.



Índice por niveles de madurez dentro de cada área de transformación

El segundo índice refina esta clasificación detallando, para cada área de ADMA, el nivel de madurez al que se dirige una formación determinada. El marco de madurez incluye cinco pasos progresivos, que van desde la concienciación básica hasta la transformación avanzada e integrada.

- Del nivel 0 al nivel 1: concienciación inicial. En esta fase, la formación ayuda a las empresas a reconocer la importancia de la transformación digital y la sostenibilidad. Implica conocimientos introductorios, alfabetización digital básica y la capacidad de comprender las oportunidades y los riesgos potenciales.
- Del nivel 1 al nivel 2: introducción estructurada. Las empresas pasan de la concienciación a la experimentación estructurada. La formación en este nivel permite a las pymes adoptar las primeras herramientas digitales u organizativas (por ejemplo, automatización sencilla, uso básico de ERP o prácticas introductorias de ecodiseño) y establecer procedimientos de mejora.
- Del nivel 2 al nivel 3: consolidación e integración. La formación apoya la integración de las tecnologías digitales y las prácticas de sostenibilidad en las operaciones diarias. Las empresas comienzan a consolidar prácticas como la supervisión automatizada de la producción, el uso de herramientas de BI, la gestión sistemática de la energía o los programas estructurados de desarrollo de los empleados.
- Del nivel 3 al nivel 4: implementación avanzada. La formación en esta etapa ayuda a las empresas a ampliar y optimizar sus sistemas. Esto incluye el mantenimiento predictivo mediante el uso del IoT y la IA, la integración multifuncional de los comentarios de los clientes, la conectividad completa entre ERP, MES y SCADA, y las redes de colaboración con proveedores y socios. La organización comienza a funcionar como una fábrica sostenible y digitalizada con indicadores clave de rendimiento (KPI) claros.
- Del nivel 4 al nivel 5: excelencia y liderazgo. En el nivel más alto de madurez, la formación prepara a las empresas para actuar como referentes en sus sectores. Las organizaciones en esta etapa implementan fábricas inteligentes avanzadas impulsadas por IA, alcanzan altos niveles de circularidad y sostenibilidad, establecen el liderazgo en la colaboración de la cadena de valor y sirven como referencia en modelos organizativos centrados en las personas.

Al vincular cada oportunidad de formación a una transición de madurez específica, las pymes pueden identificar fácilmente qué formaciones son más relevantes para su etapa actual y cómo pueden progresar paso a paso hacia niveles más altos de madurez digital y competitividad.

Valor añadido de la doble indexación

Este sistema de indexación de dos niveles garantiza tanto la alineación estratégica (a través de las áreas de transformación de ADMA) como la progresión práctica (a través de los niveles de madurez). El primer índice responde a la pregunta: “¿Qué área de transformación apoya esta formación?”. El segundo índice aborda: “¿En qué etapa de madurez tiene impacto esta formación?”.

Juntos, proporcionan a las pymes una hoja de ruta que vincula ofertas de formación específicas con su proceso de transformación digital. Esto no solo facilita la toma de decisiones informadas a la hora de seleccionar oportunidades de formación, sino que también ayuda a los proveedores de FP y a los responsables políticos a alinear sus estrategias educativas con las necesidades reales de la industria.



2. ÍNDICES DE LAS FORMACIONES

2.1. ÍNDICE GENERAL DE FORMACIONES IDENTIFICADAS

TRAINING COURSE	TRANSFORMATION AREA							Page
	Advanced Manufacturing Technologies	Digital Factory	Eco Factory	End-to-end Customer Focused Engineering	Human Centred Organization	Smart Manufacturing	Value Chain Oriented Open Factory	
3D Modeling		x						21
3D Printing and Additive Manufacturing	x	x						22
3D Scanning - Reverse Engineering	x	x						23
3D Scan (France)	x							24
3D Scan (Spain)	x	x				x		25
3D Verification. M-COSMOS	x	x				x		26
3 to 5 axis milling techniques with creo machining	x							27
5S Workplace Organization					x			28
ABB Robot Start-up	x	x				x		29
Additive Manufacturing, 3D Printing	x	x				x		30
Advanced Programming (Siemens S7 1500 PLC with TIA Portal)		x				x		31
Applied Computing Project				x				32
Applied Project Management Integration Project				x				33
AR assistive assembly station - Arkite	x	x						34
Artificial Intelligence		x						35
Artificial Intelligence Applied to Learning Factories	x	x		x		x		36
Artificial Vision Programming	x	x		x		x		37
Automation and Robotics		x						38
Basic Programming (PLC Siemens S7 1500 with TIA Portal)		x				x		39
Basics of Automation with PLC						x		40
Blockchain Technology and platforms for industry						x		41
CAM 5 Axis	x							42
CAM Basics	x							43
CAM NX (2 1/2 and 3 axis milling machine)	x	x				x		44
CAM of subtractive machining processes	x							45
CNC machining from CAM	x							46
CNC machine Operation Basics	x							47
CNC Waste Reduction Strategies			x					48
Collaborative Robot	x	x				x		49
Component inspection using a coordinate measuring machine	x							50
Connected Workers		x			x	x		51
Corporate sustainability basics			x					52
Cybersecurity		x						53
Cybersecurity in Industry		x						54
Development of an Environmental Responsibility and Circular Economy Plan			x		x			55
Design 4.0		x		x		x		56
Design for Additive Manufacturing	x							57
Design of Manufacturing	x							58
Digital Operation		x				x		59
Digital Transformation Pathway		x				x		60
Electrical Discharge Machining (EDM)	x	x						61
Electronic Assembly	x	x						62
Engineering Project Management				x				63
Ergonomics in Industry 5.0		x			x	x		64
Factory Logistics 4.0		x				x	x	65
Fanuc industrial robot programming	x							66
Free-form surface modeling	x							67
Functional Safety	x					x		68
Fundamentals of robotics	x	x						69



TRAINING COURSE	TRANSFORMATION AREA							Page
	Advanced Manufacturing Technologies	Digital Factory	Eco Factory	End-to-end Customer Focused Engineering	Human Centred Organization	Smart Manufacturing	Value Chain Oriented Open Factory	
Human-Centric Technologies & Ergonomic Innovation		x			x	x		70
Industrial communication	x					x		71
Industrial Robot Programming. Level 1 (ABB, FANUC, KUKA)	x	x		x		x		72
Industrial Robot Programming. Level 2 (ABB, FANUC, KUKA)	x	x		x		x		73
Industry 4.0 & 5.0 communication architecture	x					x		74
Installation and Maintenance of Industrial Automation Systems	x	x						75
Installation and maintenance of collaborative robots 'COBOTS'	x	x						76
Introduction to Carbon Footprint			x					77
Introduction to Collaborative Robotics		x			x	x		78
Internet of Things: Raspberry and Arduino	x	x			x			79
Introduction to Automation Systems	x					x		80
Introduction to Digital Twin Tech		x						81
Introduction to Robotics	x					x		82
Introduction to the Programming of UR Cobots	x					x		83
IoT	x					x		84
IoT sensor development and Iorawan network configuration						x		85
Lean Fundamental Micro-Credential	x							86
LEAN Introduction					x			87
Make 3D slicing settings						x		88
Manufacturing a part using 3D printing (with wire)	x							89
Manufacturing process design	x							90
Manufacturing processes 1	x							91
Manufacturing processes 2	x							92
Manual assembly techniques					x			93
Master in Digital Manufacturing		x				x		94
Method design concept	x					x	x	95
Measurement and control of physical variables	x							96
Operations Management	x							97
Performing a scientific research					x			98
Pneumatics basic training						x		99
Predictive Maintenance	x							100
Problem Solving					x			101
Process Automation with PLC, HMI, and Electro-Pneumatic Systems	x	x						102
Process Optimization via Advanced Analytics & AI	x	x				x		103
Process Simulation Systems, Digital Twin, Product Digital Twin	x	x				x		104
Project closing & Continuous Improvement				x				105
Project initiation and Charter development				x				106
PLM management: 3D Experience	x	x						107
Redesign of parts and assembly using CAD software	x							108
Reverse Engineering with 3D CAD: NX	x	x						109
Reverse Engineering with 3D CAD: Solid Edge	x	x						110
Risk and change management							x	111
Roadmap to Sustainability			x					112
Robot Programming Health and Security		x				x		113
Robotics and kinematics control	x					x		114
Robotics Laboratory	x					x		115
Simatic S7 SCL						x		116
SLS 3D Printing	x							117
Solidworks advanced part modeling						x		118
Statistical Process Control (SPC)		x				x		119
Subtractive manufacturing processes	x							120
Teamwork					x			121
Thinking innovatively					x			122
Towards Open and Generative Organizational Models					x			123
Understanding Environmental and Social Impacts			x					124
Using a Chemical Reactor	x							125
Waste treatment process			x					126
Workplace Organization & Standard Work				x	x	x		127
Writing a program to PLC						x		128
								129



2.2. ÍNDICES POR ÁREA DE TRANSFORMACIÓN DE ADMA

ÁREA DE TRANSFORMACIÓN 1: TECNOLOGÍAS DE FABRICACIÓN AVANZADAS

TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
3D Printing and Additive Manufacturing			x			22
3D Scanning - Reverse Engineering				x		23
3D Scan (France)				x		24
3D Scan (Spain)			x			25
3D Verification. M-COSMOS				x		26
3 to 5 axis milling techniques with creo machining					x	27
ABB Robot Start-up				x		29
Additive Manufacturing, 3D Printing				x		30
AR assistive assembly station - Arkite				x		34
Artificial Intelligence Applied to Learning Factories				x		36
Artificial Vision Programming				x		37
CAM 5 Axis				x		42
CAM Basics			x			43
CAM NX (2 1/2 and 3 axis milling machine)					x	44
CAM of subtractive machining processes				x		45
CNC machining from CAM				x		46
CNC machine Operation Basics		x				47
Collaborative Robot				x		49
Component inspection using a coordinate measuring machine				x		50
Design for Additive Manufacturing				x		57
Design of Manufacturing				x		58
Electrical Discharge Machining (EDM)				x		61
Electronic Assembly				x		62
Fanuc industrial robot programming			x			66
Free-form surface modeling				x		67
Functional Safety					x	68
Fundamentals of robotics				x		69



TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
Industrial communication					x	71
Industrial Robot Programming. Level 1 (ABB, FANUC, KUKA)				x		72
Industrial Robot Programming. Level 2 (ABB, FANUC, KUKA)					x	73
Industry 4.0 & 5.0 communication architecture					x	74
Installation and Maintenance of Industrial Automation Systems				x		75
Installation and maintenance of collaborative robots 'COBOTS'				x		76
Internet of Things: Raspberry and Arduino					x	79
Introduction to Automation Systems					x	80
Introduction to Robotics					x	82
Introduction to the Programming of UR Cobots			x			83
IoT					x	84
Lean Fundamental Micro-Credential				x		86
Manufacturing a part using 3D printing (with wire)				x		89
Manufacturing process design				x		90
Manufacturing processes 1				x		91
Manufacturing processes 2				x		92
Method design concept			x			95
Measurement and control of physical variables			x	x		96
Operations Management				x		97
Predictive Maintenance			x			100
Process Automation with PLC, HMI, and Electro-Pneumatic Systems				x		102
Process Optimization via Advanced Analytics & AI				x		103
Process Simulation Systems, Digital Twin, PLM management: 3D Experience				x		104
Redesign of parts and assembly using CAD software			x			108
Reverse Engineering with 3D CAD: NX				x		109
Reverse Engineering with 3D CAD: Solid Edge				x		110
Robotics and kinematics control					x	111
Robotics Laboratory					x	115
SLS 3D Printing			x			116
Subtractive manufacturing processes				x		118
Using a Chemical Reactor			x			121
						126



ÁREA DE TRANSFORMACIÓN 2: FÁBRICA DIGITAL

TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
3D Modeling				x		21
3D Printing and Additive Manufacturing			x			22
3D Scanning - Reverse Engineering				x		23
3D Scan (Spain)			x			25
3D Verification. M-COSMOS				x		26
ABB Robot Start-up				x		29
Additive Manufacturing, 3D Printing				x		30
Advanced Programming (Siemens S7 1500 PLC with TIA Portal)				x		31
AR assistive assembly station - Arkite				x		34
Artificial Intelligence		x				35
Artificial Intelligence Applied to Learning Factories				x		36
Artificial Vision Programming				x		37
Automation and Robotics			x			38
Basic Programming (PLC Siemens S7 1500 with TIA Portal)			x			39
CAM NX (2 1/2 and 3 axis milling machine)					x	44
Collaborative Robot				x		49
Connected Workers			x			51
Cybersecurity			x			53
Cybersecurity in Industry				x		54
Design 4.0				x		56
Digital Operation				x		59
Digital Transformation Pathway			x			60
Electrical Discharge Machining (EDM)				x		61
Electronic Assembly				x		62
Ergonomics in Industry 5.0			x			64
Factory Logistics 4.0				x		65
Fundamentals of robotics				x		69
Human-Centric Technologies & Ergonomic Innovation			x			70
Industrial Robot Programming. Level 1 (ABB, FANUC, KUKA)				x		72
Industrial Robot Programming. Level 2 (ABB, FANUC, KUKA)					x	73
Installation and Maintenance of Industrial Automation Systems				x		75
Installation and maintenance of collaborative robots 'COBOTS'				x		76
Introduction to Collaborative Robotics			x			78
Internet of Things: Raspberry and Arduino					x	79
Introduction to Digital Twin Tech			x			81
Master in Digital Manufacturing				x		94
Process Automation with PLC, HMI, and Electro-Pneumatic Systems				x		102
Process Optimization via Advanced Analytics & AI				x		103
Process Simulation Systems, Digital Twin,				x		104
Product Digital Twin				x		105
PLM management: 3D Experience				x		108
Reverse Engineering with 3D CAD: NX				x		110
Reverse Engineering with 3D CAD: Solid Edge				x		111
Robot Programming Health and Security				x		114
Statistical Process Control (SPC)				x		120



ÁREA DE TRANSFORMACIÓN 3: FÁBRICA ECOLÓGICA

TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
CNC Waste Reduction Strategies			x			48
Corporate sustainability basics				x		52
Development of an Environmental Responsibility and Circular Economy Plan					x	55
Introduction to Carbon Footprint				x		77
Roadmap to Sustainability				x		113
Understanding Environmental and Social Impacts			x			125
Waste treatment process			x			127

ÁREA DE TRANSFORMACIÓN 4: INGENIERÍA CENTRADA EN EL CLIENTE DE PRINCIPIO A FIN

TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
Applied Computing Project				x		32
Applied Project Management Integration Project				x		33
Artificial Intelligence Applied to Learning Factories				x		36
Artificial Vision Programming				x		37
Design 4.0				x		56
Engineering Project Management				x		63
Industrial Robot Programming. Level 1 (ABB, FANUC, KUKA)				x		72
Industrial Robot Programming. Level 2 (ABB, FANUC, KUKA)					x	73
Project closing & Continuous Improvement				x		106
Project initiation and Charter development				x		107
Workplace Organization & Standard Work			x			128

ÁREA DE TRANSFORMACIÓN 5: ORGANIZACIÓN CENTRADA EN LAS PERSONAS

TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
5S Workplace Organization			x			28
Connected Workers			x			51
Development of an Environmental Responsibility and Circular Economy Plan					x	55
Ergonomics in Industry 5.0			x			64
Human-Centric Technologies & Ergonomic Innovation			x			70
Introduction to Collaborative Robotics			x			78
Internet of Things: Raspberry and Arduino					x	79
LEAN Introduction			x			87
Manual assembly techniques			x			93
Performing a scientific research				x		98
Problem Solving				x		101
Teamwork					x	122
Thinking innovatively				x		123
Towards Open and Generative Organizational Models			x			124
Workplace Organization & Standard Work			x			128



ÁREA DE TRANSFORMACIÓN 6: FABRICACIÓN INTELIGENTE

TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
3D Scan (Spain)			x			25
3D Verification. M-COSMOS				x		26
ABB Robot Start-up				x		29
Additive Manufacturing, 3D Printing				x		30
Advanced Programming (Siemens S7 1500 PLC with TIA Portal)				x		31
Artificial Intelligence Applied to Learning Factories				x		36
Artificial Vision Programming				x		37
Basic Programming (PLC Siemens S7 1500 with TIA Portal)			x			39
Basics of Automation with PLC					x	40
Blockchain Technology and platforms for industry				x		41
CAM NX (2 1/2 and 3 axis milling machine)					x	44
Collaborative Robot				x		49
Connected Workers			x			51
Design 4.0				x		56
Digital Operation				x		59
Digital Transformation Pathway			x			60
Ergonomics in Industry 5.0			x			64
Factory Logistics 4.0				x		65
Functional Safety					x	68
Human-Centric Technologies & Ergonomic Innovation			x			70
Industrial communication					x	71
Industrial Robot Programming. Level 1 (ABB, FANUC, KUKA)				x		72
Industrial Robot Programming. Level 2 (ABB, FANUC, KUKA)					x	73
Industry 4.0 & 5.0 communication architecture					x	74
Introduction to Collaborative Robotics			x			78
Introduction to Automation Systems					x	80
Introduction to Robotics					x	82
Introduction to the Programming of UR Cobots			x			83
IoT					x	84
IoT sensor development and lorawan network configuration				x		85
Make 3D slicing settings				x		88
Master in Digital Manufacturing				x		94
Method design concept			x			95
Pneumatics basic training		x				99
Process Optimization via Advanced Analytics & AI				x		103
Process Simulation Systems, Digital Twin,				x		104
Product Digital Twin				x		105
Robot Programming Health and Security				x		114
Robotics and kinematics control					x	115
Robotics Laboratory					x	116
Simatic S7 SCL				x		117
Solidworks advanced part modeling				x		119
Statistical Process Control (SPC)				x		120
Workplace Organization & Standard Work			x			128
Writing a program to PLC				x		129



ÁREA DE TRANSFORMACIÓN 7: FÁBRICA ABIERTA ORIENTADA A LA CADENA DE VALOR

TRAINING COURSE	MATURITY LEVEL					Page
	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	
Factory Logistics 4.0				x		65
Method design concept			x			95
Risk and change management					x	112



3. FORMACIÓN PARA PYMES



3D MODELLING

ADMA TRANSFORMATION AREA

This course introduces the principles and techniques of 3D modelling for design, prototyping, animation, and production using industry-standard CAD and modelling software.

<https://www.oba.gov.tr/egitim/detay/blender-ile-3-boyutlu-modelleme-egitimi-kursu-682>

DIGITAL FACTORY

3D MODELLING

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D modelling	3D modelling	4

GENERAL INFORMATION

Course provider	GEBKIM VET
Country	Türkiye
Language	Turkish
Education Subject	This course introduces the principles and techniques of 3D modelling for design, prototyping, animation, and production using industry-standard CAD and modelling software.
Learner Profile	VET Students
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	30 Hours
Location	GEBKIM VET
Learning activities	Lectures, PBL, Team Based Mini Projects
Assessment Type	Continuous evaluation through practical assignments, Technical file submissions (model files, STL, documentation)
Entry requirement	Interest in design, production, animation, or engineering
Admission procedure	Online or in-person application submission

ADMA TRANSFORMATION AREA

This training aims to introduce students to additive manufacturing in Industry 4.0.

For this purpose, a theoretical introduction is provided to two of the most widely used 3D printing technologies for polymeric materials in today's industry, FDM and SLS technologies. The theoretical introduction is also complemented by practical 3D printing with the two technologies mentioned above.

<https://www.fpsanturtzilh.eus/inicio/estudios/cursos-de-especializacion/fabricacion-aditiva/>

Advanced Manufacturing
Technologies; Digital Factory

3D printing; additive
manufacturing

CURRENT MATURITY
LEVEL (1-5)

2



TARGET MATURITY
LEVEL (1-5)

3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D printing process	http://data.europa.eu/esco/skill/2afb2b59-c9a3-4cf3-b1dd-1a2fad51e583	2
Technical terminology	http://data.europa.eu/esco/skill/d8567009-7c6f-43fb-82fb-7154ed8ebca9	3
3D modelling	http://data.europa.eu/esco/skill/97965983-0da4-4902-9daf-d5cd2693ef73	3
Maintain additive manufacturing systems	http://data.europa.eu/esco/skill/3a699f1e-3803-4c1b-b6a8-6230cca92933	2

GENERAL INFORMATION

Course provider	Santurtzi LHII
Country	Spain
Language	Spanish
Education Subject	3D printing and additive manufacturing
Learner Profile	Students
Mode of Learning	In Person
EQF Level	4 and 5
Teaching Methodology	Theoretical and Practical
Learning Environment	3D Lab, Google Suite

INFORMATION ABOUT THE COURSE

Workload / Duration	60 Hours
Location	Santurtzi LHII
Learning activities	Basic knowledge of 3D printing FDM technology, materials and special features components of a 3d printer fdm. printing profiles in fdm. errores comunes en impresión fdm common mistakes in fdm printing main components of a sls printer sls printing workflow
Entry requirement	English adequate level Maturity. Responsibility at personal work Ability to work as part of a team Good level of computer user skills
Admission procedure	Curriculum and personal interview

3D Scanning – Reverse Engineering

This course delves into the process of 3D digitization and reverse engineering, focusing on converting physical parts into digital models. Participants will learn how to digitize components by scanning them and transforming the resulting faceted body (STL) files into usable 3D models, whether in a solid or surface environment.

<https://www.hernanilanh.eus/>

ADMA TRANSFORMATION AREA

Advanced Manufacturing
Technologies, Digital Factory

Reverse engineering, designing,
scanning

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Use 3D scanning techniques	https://esco.ec.europa.eu/en/skill/6b878b85-f321-4a14-92e1-34466d787b68	4
Perform reverse engineering	https://esco.ec.europa.eu/en/skill/f2e0e8f6-3566-46fc-aaf2-9ec116d62724	4
Create 3D models	https://esco.ec.europa.eu/en/skill/15216e6f-2f7c-4411-abe7-90cc2730c4ce	4
Use computer-aided design (CAD) software	https://esco.ec.europa.eu/en/skill/45a4f4e3-0e48-4df9-97d7-ec2d8bc7de8e	4

GENERAL INFORMATION

Course provider	Hernani LH
Country	Basque Country/ Spain
Language	Spanish
Learner Profile	People who are looking to acquire or deepen skills in 3D digitization, reverse engineering processes, and related technologies such as Product Designers, Additive Manufacturing professionals and Quality Control specialists.
Mode of Learning	In Person
Credential Type	Microcredential Course
EQF Level	EQF 5
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Start Date – End Date	14/10/2024 - 24/10/2024
Workload / Duration	24 hours
Price	Free
Location	Hernani, Basque Country

3D Scan

ADMA TRANSFORMATION AREA

Scanning a part and reconstructing a digital model of it to enable further design, analysis, or manufacturing processes.

<https://community.lcamp.eu/catalog-item/3d-scan/>

Advanced Manufacturing
Technologies

3D scanning, reverse engineering,
CAD modeling, digital model
creation.

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Reverse engineering	http://data.europa.eu/esco/skill/8fdf4273-d8ce-47a2-b461-45cb1282ef36	3
Use CAD software	http://data.europa.eu/esco/skill/b34e2ba1-9080-48c9-9b42-ee9192a4d3f1	3
Manage data	http://data.europa.eu/esco/skill/9ff9db9d-d14b-426e-83f3-e7449af6c79f	2
Industrial design	http://data.europa.eu/esco/skill/efacdaad-ab73-4056-bee3-4eb34b458bf6	3

GENERAL INFORMATION

Course provider	Lycée La Découverte
Country	France
Language	French
Education Subject	3D Scanning and Reverse Engineering
Learner Profile	EQF 5 students
Mode of Learning	Online / Hybrid / In Person
Credential Type	ECTS
EQF Level	EQF 5
Teaching Methodology	Theoretical & Practical
Learning Environment	VET centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	2025-01-28 2025-01-29
Workload / Duration	8 Hours
Location	Lycée La Découverte Decazeville France
Learning activities	Theoretical course, project and practical work
Entry requirement	EQF4 diploma
Admission procedure	Registration - Parcoursup

3D SCAN

ADMA TRANSFORMATION AREA

This course provides participants with essential knowledge of different 3D scanning techniques. Learners will acquire practical skills to generate 3D mesh models from real objects and will learn how to edit and repair scanned meshes for further use in digital processes.

Advanced Manufacturing technologies, Digital Factory, Smart Manufacturing

3D Scanning, Mesh Editing

CURRENT MATURITY
LEVEL (1-5)

2



TARGET MATURITY
LEVEL (1-5)

3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D body scanning technologies	http://data.europa.eu/esco/skill/9bc3b9ae-50d8-4a32-857e-8cf8d9b4ba8e	2
create 3D environments	http://data.europa.eu/esco/skill/0620ecd1-e4b1-4dfa-972b-38a93e5ebd9d	2

GENERAL INFORMATION

Course provider	IMH Campus
Country	Spain
Language	English / Spanish
Education Subject	Contents: Types of scanning, Preparation of the environment and part for scanning, Scanning with Kinect, Scanning with EinScan using fixed table, Handheld scanning with EinScan, Mesh editing and repair, Practical exercises
Mode of Learning	In Person
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	15 Hours
Location	IMH Campus

3D VERIFICATION. M-COSMOS

ADMA TRANSFORMATION AREA

This course is designed to equip participants with essential skills for accurately measuring and verifying the dimensional integrity of manufactured parts using advanced Coordinate Measuring Machines (CMM).

<https://community.lcamp.eu/catalog-item/three-dimensional-verification-m-cosmos/>

Advanced Manufacturing technologies, Digital Factory, Smart Manufacturing

Metrology Software

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Operate precision measuring equipment	http://data.europa.eu/esco/skill/42c25baf-ccb3-47d9-a872-bb2ceb615538	3
Verify product specifications	http://data.europa.eu/esco/skill/6ab7c99f-a430-419c-a881-8ef945230e4d	2
Calibrate engines	http://data.europa.eu/esco/skill/0ae61df3-c50a-459d-a912-b5423bfb1a5a	4

GENERAL INFORMATION

Course provider	Miguel Altuna LH
Country	Spain
Language	Basque
Learner Profile	Quality control technician, metrology engineer, or manufacturing technician with basic knowledge of metrology, seeking to enhance their skills in 3D verification using CMM equipment.
Mode of Learning	In Person
Credential Type	Microcredential Course
EQF Level	EQF 5
Teaching Methodology	Theoretical / Practical

INFORMATION ABOUT THE COURSE

Workload / Duration	30 Hours
Location	Miguel Altuna LH

3 TO 5-AXIS MILLING TECHNIQUES WITH CREO MACHINING

This course is designed for anyone who wants to learn how to use Creo for milling and drilling in toolmaking, mechanical engineering, and related fields. You will learn how to configure the Creo environment for successful milling operations.

<https://ti.audax.si/tecaji/tehnike-3-do-5-osnega-frezanja-s-creo-machining-98?prijava=1&idtecaji=98&idtermin=16041>

ADMA TRANSFORMATION AREA

Advance manufacturing technologies

CNC Milling, Creo Parametric, 3-axis, 4-axis, 5-axis

CURRENT
MATURITY
LEVEL 4



TARGET
MATURITY
LEVEL 5

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Use computer-aided design software (CAD)	http://data.europa.eu/esco/skill/b34e2ba1-9080-48c9-9b42-ee9192a4d3f1	4
Technical drawings	http://data.europa.eu/esco/skill/59ea80e1-463a-4dba-82c6-d0b6d577d532	3

GENERAL INFORMATION

Course provider	Audax d. O. O.
Country	Slovenia
Language	Slovenian
Education Subject	Defining raw material and cutting tools, creating milling sequences, drilling cycles
Learner Profile	adult
Mode of Learning	In Person
Credential Type	Certificat
EQF Level	EQF 5
Teaching Methodology	Practical training, solution solving
Learning Environment	Educational lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	16/09/2025 – 20/09/2025
Workload / Duration	4 days
Schedule information	4 days training
Location	Ljubljana
Learning activities	Creating and configuration, practical training
Assessment Type	Practical test
Entry requirement	Recommended Prerequisites: Completion of the <i>Creo Parametric Basics</i> course and at least 200 hours of hands-on practice with Creo software."

5S Workplace Organization

ADMA TRANSFORMATION AREA

This training provides knowledge and hands on training in structure the workplace for efficiency and security, all within the scope of 5S.

<https://community.lcamp.eu/catalog-item/production-philosophy/>

Human Centred Organisation

5S, LEAN, TPS, Production Philosophy

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Continuous Improvement Philosophies	http://data.europa.eu/esco/skill/0550431f-9c8b-4204-9c45-59bc5feacf06	3
Lean project manager	http://data.europa.eu/esco/skill/da6393d5-a53c-4863-abc7-51f36281d74e	2

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	Production Philosophy
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical, Practical, Problem solving
Learning Environment	Classroom, Workshop

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Theoretical and practical training
Assessment Type	Theoretical and practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

ABB Robot Start-up

ADMA TRANSFORMATION AREA

Technicians will get knowledge starting-up a robot cell. The technician is being self-sufficient. Achieve knowledge starting up robot units: ABB robot

<https://www.imh.eus/en>

Advanced Manufacturing Technologies, Digital Factory, Smart Manufacturing Engineering

Robotics, ABB, automation

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Install industrial robots	https://esco.ec.europa.eu/en/skill/f4a2eb3a-e7d6-44da-b84f-4e9e0e360f19	3
Commission industrial robots	https://esco.ec.europa.eu/en/skill/b275f6ec-3f94-42c8-9941-3272a3a33250	4
Program industrial robots	https://esco.ec.europa.eu/en/skill/5bd8b06f-3d47-4a55-bf17-77321ae5f294	4
Perform robot cell testing	https://esco.ec.europa.eu/en/skill/337d1928-03d5-4baf-8b71-c92df4b512b1	3

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country/ Spain
Language	Spanish
Mode of Learning	In-Person
Credential Type	Microcredential Course
EQF Level	4
Teaching Methodology	Theoretical / Practical

INFORMATION ABOUT THE COURSE

Workload / Duration	8 hours
Location	Elgoibar, Basque Country

Additive manufacturing, 3D Printing

The aim of this training is to provide information on the different existing additive manufacturing technologies and their main uses.

It also provides training for printing parts on FDM (Fused Deposition Modeling) printers. Aimed at both individuals and companies who want to get started in the world of additive manufacturing as well as users with basic knowledge of FDM who want to deepen their knowledge.

<https://www.imh.eus/en>

ADMA TRANSFORMATION AREA

Advanced Manufacturing Technologies, Digital Factory, Smart Manufacturing Engineering

3D printing, additive manufacturing

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Apply additive manufacturing technologies	https://esco.ec.europa.eu/en/skill/7d196022-d931-4cd9-b7c3-2b2a3cfcc9e9	3
Operate 3D printers	https://esco.ec.europa.eu/en/skill/33af5dd7-22b6-41a0-844f-5e0cb19a5ae7	4
Select additive manufacturing processes	https://esco.ec.europa.eu/en/skill/7bcb02fc-4477-4a9a-b5c0-7d3eb9c56d89	4

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country/ Spain
Language	Spanish
Mode of Learning	In-Person
Credential Type	Microcredential Course
EQF Level	4
Teaching Methodology	Theoretical / Practical

INFORMATION ABOUT THE COURSE

Workload / Duration	20 hours
Location	Elgoibar, Basque Country

The world of industrial automation is constantly evolving, and staying up to date with the latest technologies and techniques is essential for any professional in the field.

The advanced course on SIMATIC S7-1500 | TIA Portal (Level II) is your gateway to becoming an expert in Siemens PLC programming and its integration with TIA Portal.

This course is designed to provide you with a hands-on and enriching learning experience, enabling you to master the skills necessary to operate and program the Siemens SIMATIC S7-1500 programmable logic controller.

<https://www.lhusurbil.eus/web/Default.aspx?lng=EU>

ADMA TRANSFORMATION AREA

Digital Factory, Smart Manufacturing

Robotics, programming, automation

CURRENT
MATURITY (1-5):
3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Program programmable logic controllers (PLCs)	https://esco.ec.europa.eu/en/skill/1f407276-34e6-4e45-a861-1d3bb3cfc40	4
Use industrial automation software	https://esco.ec.europa.eu/en/skill/693964d2-64a4-4d8a-bcb9-f5f20c02e2fd	4
Operate programmable logic controllers (PLCs)	https://esco.ec.europa.eu/en/skill/07d9e442-bc5d-4635-8232-fdb80d9d11f0	4
Perform industrial automation	https://esco.ec.europa.eu/en/skill/8586e6f7-4e9f-47c4-bfef-91f70eec0933	4
Configure programmable logic controllers	https://esco.ec.europa.eu/en/skill/05eeb62c-2fd1-4bd1-8a91-fd8b4cfa1e4f	4

GENERAL INFORMATION

Course provider	CIFP Usurbil LHII
Country	Basque Country/ Spain
Language	Spanish
Learner Profile	This course is designed for industrial automation professionals, technicians, unemployed individuals, and workers with prior experience in PLC programming who seek advanced skills in Siemens SIMATIC S7-1500 and TIA Portal integration
Mode of Learning	In Person
Credential Type	Microcredential Course
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	35 hours
Price	Free
Location	Usurbil, Basque Country

ICS-199 Applied Computing Project

ADMA TRANSFORMATION AREA

In a collaborative environment, learn the process of defining, designing, developing, and implement simple yet impactful web application. Small teams leverage collaboration and version control tools while navigating the challenges of project management. This course emphasizes continuous web integration and thorough technical documentation.

[ICS 199 - Applied Computing Project - Modern Campus Catalog™](#)

END-TO-END CUSTOMER-
FOCUSED ENGINEERING

Application Development

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Computer Science	http://data.europa.eu/esco/skill/7b5cce4d-c7fe-4119-b48f-70aa05391787	4
Web Programming	http://data.europa.eu/esco/skill/69bbd53f-fbb0-4476-b4b2-ef7844464e28	4
Project Management	http://data.europa.eu/esco/skill/7111b95d-0ce3-441a-9d92-4c75d05c4388	4

GENERAL INFORMATION

Course provider	Camosun College
Country	Canada
Language	English
Education Subject	Information and Computer Systems Technology
Learner Profile	College Students
Mode of Learning	Online
Credential Type	Micro-Credential
EQF Level	4
Teaching Methodology	Practical
Learning Environment	In Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	Four-month term
Workload / Duration	175 Hours
Price	\$ 1,124.76 CAD
Location	Camosun College
Learning activities	Lectures, labs, and group work
Assessment Type	Group work and project development
Entry requirement	Prerequisite college courses
Admission procedure	Apply via Information and Computer Systems degree program

APMC 505V – Applied Project Management Integration Project

ADMA TRANSFORMATION AREA

END-TO-END CUSTOMER-
FOCUSED ENGINEERING

APPLIED PROJECT MANAGEMENT

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

This is the capstone course in the Applied Project Management Certificate program. It is a comprehensive evaluation of the skills and knowledge developed throughout the first 5 courses in the program. You will be evaluated in two ways, with an integration project and a knowledge exam. Those successful in passing both components for a combined grade of C or better will be granted their certificate.

[APMC 505V Applied Project Management Integration Project](#)

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
S4.1 – Developing objectives and strategies	management skills	4
S4.2 – Organising, planning, and scheduling work and activities	management skills	4
S4.4 – performing administrative actions	management skills	4
S4.9 – making decisions	management skills	4

GENERAL INFORMATION

Course provider	Camosun College / ProSIT
Country	Canada
Language	English
Education Subject	Business
Learner Profile	College Students
Mode of Learning	Online
Credential Type	College Certificate
EQF Level	4
Teaching Methodology	Theoretical
Learning Environment	Online

INFORMATION ABOUT THE COURSE

Start Date – End Date	Self-Paced
Workload / Duration	Self-Paced
Price	\$969.00 CAD
Location	Camosun College
Learning activities	Lectures and analysis
Assessment Type	Exams
Entry requirement	Must be enrolled in Applied Project Management Certificate program
Admission procedure	Enroll as part of program above

AR assistive assembly station - Arkite

ADMA TRANSFORMATION AREA

Advanced Manufacturing
Technologies, Digital Factory

Robot, AR, mechatronics,
assembly

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

This course explores the use of Augmented Reality (AR) in smart manufacturing through the Arkite platform. Participants will learn to program step-by-step assembly instructions and apply Lean principles by working on the assembly of the LCAMP robot. The course emphasizes error reduction, process guidance, and increased efficiency on the shop floor.

<https://www.maltuna.eus/en/>

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Apply lean manufacturing principles	https://esco.ec.europa.eu/en/skill/f36c7b39-2c01-4f28-9e9a-3a8bc8ecbfa6	4
Assemble components	https://esco.ec.europa.eu/en/skill/4c680d8d-36f6-49fd-a23f-e36e4e032162	4
Use augmented reality software	https://esco.ec.europa.eu/en/skill/4a37f3a3-bbb1-4ff0-9472-7ce4ebf5ff07	4
Program machine operations	https://esco.ec.europa.eu/en/skill/bb0b759e-ff60-4696-a146-b5c74c73f8bc	3
Follow safety procedures in industrial contexts	https://esco.ec.europa.eu/en/skill/7f9e180e-800d-4e2d-8eb9-265d487edb9d	4

GENERAL INFORMATION

Course provider	Miguel Altuna LHII
Country	Basque Country, Spain
Language	English
Education Subject	Industrial Automation and Robotics, Production Programming in Mechanical Manufacturing, Industrial mechatronics
Learner Profile	Students EQF5, Workers
Mode of Learning	Online / Hybrid / In Person: In person
EQF Level	EQF5
Teaching Methodology	Theoretical / Practical / Practical in CLF: Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	ECTS / Hours / Days / Weeks: 10 hours
Price	0€
Location	Bergara, Miguel Altuna LHII
Assessment Type	Project
Entry requirement	EQF5 level

Artificial Intelligence

ADMA TRANSFORMATION AREA

This course introduces learners to the fundamentals of Artificial Intelligence (AI) and its applications in modern technology and industry. It explores key concepts such as machine learning, data processing, and intelligent decision-making systems. Learners will understand how AI models are developed and used to solve real-world problems, automate processes, and support innovation across sectors.

<https://3tindustry40training.eu/course/view.php?id=10>

Digital Factory

IT, Artificial Intelligence

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 2

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Manage IT security compliances	http://data.europa.eu/esco/skill/06358891-8424-43c5-891e-d40f226bef40	1
Use IT tools	http://data.europa.eu/esco/skill/f632251a-4078-4546-b19f-7ef528d08325	2
Principles of Artificial Intelligence	http://data.europa.eu/esco/skill/e465a154-93f7-4973-9ce1-31659fe16dd2	2

GENERAL INFORMATION

Course provider	3TIndustry 4.0
Country	France, Spain and Germany
Language	English
Education Subject	Artificial Intelligence , IT
Mode of Learning	Online
Credential Type	None
EQF Level	Not applicable
Teaching Methodology	Theoretical
Learning Environment	E Learning

INFORMATION ABOUT THE COURSE

Start Date – End Date	Not applicable
Workload / Duration	3 Hours
Price	Free
Location	Online
Learning activities	Theoretical
Assessment Type	Quiz
Entry requirement	None
Admission procedure	Registration to the platform

ARTIFICIAL INTELLIGENCE APPLIED TO LEARNING FACTORY

ADMA TRANSFORMATION AREA

This course provides a practical introduction to Artificial Intelligence (AI) and Machine Learning applied to Learning Factory environments. The fundamentals of Machine Learning, data preprocessing, supervised and unsupervised learning techniques will be addressed. Through practical examples, participants will learn how to implement AI models.

Advanced Manufacturing Technologies;
Digital Factory; Smart Manufacturing;
End-to-end Customer Focused

Artificial Intelligence – Machine
Learning

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Principles of artificial intelligence	http://data.europa.eu/esco/skill/e465a154-93f7-4973-9ce1-31659fe16dd2	3
Machine Learning	http://data.europa.eu/esco/skill/3a2d5b45-56e4-4f5a-a55a-4a4a65afdc43	3
Predictive maintenance	http://data.europa.eu/esco/skill/7d913551-e17a-40ba-baf7-48d0c3b12e50	2
Analyse production processes for improvement	http://data.europa.eu/esco/skill/f1b5800e-b763-4740-9586-3fef30568e81	2

GENERAL INFORMATION

Course provider	FP Santurtzi LH
Country	Basque Country - Spain
Language	Spanish
Education Subject	Artificial Intelligence (AI). Machine Learning
Learner Profile	Professionals looking to implement AI solutions in manufacturing, automation and quality control processes.
Mode of Learning	Online
EQF Level	4
Teaching Methodology	Theoretical / Practical
Learning Environment	Moodle

INFORMATION ABOUT THE COURSE

Workload / Duration	40 Hours – 4 Weeks
Learning activities	TU1. Understand the fundamental principles of Machine Learning and its application in industrial environments. TU2. Preprocess and analyze data for decision making. TU3. Apply supervised learning techniques. TU4. Implement unsupervised learning models for pattern detection.
Entry requirement	English adequate level Maturity Responsibility at personal work Ability to work as part of a team Good level of computer user skills
Admission procedure	Curriculum + personal interview

Artificial Vision Programming

ADMA TRANSFORMATION AREA

Apply Artificial Vision system to improve the automation. The objectives of the course are: Know the structure of an artificial vision system, learn how to create the machine vision program, learn how to run the program on a physical station.

Advanced Manufacturing Technologies;
Digital Factory; Smart Manufacturing;
End-to-end Customer Focused

Programming, artificial, vision,
automation

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Algorithms	http://data.europa.eu/esco/skill/54924a2c-daca-40d3-9716-4b38ceb04f38	2
Industrial software	http://data.europa.eu/esco/skill/41ec47dd-08b3-464a-9c45-c706f3e74467	2
Use automatic programming	http://data.europa.eu/esco/skill/7d10fcb2-b368-48ab-996b-7c9fafcf68ed	2
Integrate system components	http://data.europa.eu/esco/skill/ed8de897-adbe-4f0e-b4d2-534953e64c72	2
Software and applications development and analysis	http://data.europa.eu/esco/skill/ed8de897-adbe-4f0e-b4d2-534953e64c72	2

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country / Spain
Language	English / Spanish
Education Subject	Participants will have access to the Sherlock7 machine vision software license during the course, for the development of the following points: - Types of lighting, lenses and cameras. - Image capture with different shooting methods. - Image processing. Preprocessing. - Image analysis and pattern search. - Calibration of the images and taking measurements. - Execution of the program in real time.
Mode of Learning	In Person

INFORMATION ABOUT THE COURSE

Start Date – End Date	To define
Workload / Duration	12 Hours
Location	IMH CAMPUS (Elgoibar)
Entry requirement	No requirements. It is required a computer with an internet connection and an email address.

Aimed at those who work in and/or manage production lines that have inspection systems using artificial vision cameras.

Automation and Robotics – Siemens PLC, TIA Portal

You'll learn the fundamental principles of PLC operation, master the basics of programming in the TIA Portal environment, and gain practical experience with actual Siemens devices during this training. The course is designed for beginners and anyone looking to refresh their knowledge, so no prior experience is required. You'll take your first steps toward understanding automated systems in a pleasant and supportive environment.

<https://src-edih.rc-nm.si/izobrazevanje/avtomatizacija-in-robotika-siemens-plc-tia-portal/>

ADMA TRANSFORMATION AREA

Digital factory

Siemens, PLC, TIA Portal, automatization

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Industrial software	http://data.europa.eu/esco/skill/41ec47dd-08b3-464a-9c45-c706f3e74467	2

GENERAL INFORMATION

Course provider	Razvojni center Novo mesto d.o.o.
Country	Slovenia
Language	Slovenian
Education Subject	Automation and Robotics
Learner Profile	Adult, employees
Mode of Learning	In Person
Credential Type	Paper based
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	Educational lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	16/09/2025
Workload / Duration	4 hours
Schedule information	9.00-12.00
Price	2000 (full price for companies)
Location	Podbreznik 15, 8000 Novo mesto
Learning activities	Practical exercise, problem solving
Assessment Type	Practical task
Entry requirement	Basic knowledge of Electrical Engineering

Basic Programming (PLC Siemens S7 1500 with TIA Portal)

The world of industrial automation is constantly evolving, and keeping up with the latest technology and techniques is essential for any professional in the field.

The SIMATIC S7-1500 is one of the most widely used PLCs in Industry 4.0 thanks to its performance, flexibility and networking capabilities.

Knowing this system will open doors to numerous opportunities in the field of industrial automation.

In addition, knowledge of TIA Portal, a user interface designed for intuitive operation of all SIMATIC applications and controllers, will enable you to work more efficiently and effectively.

<https://www.lhusurbil.eus/web/Default.aspx?lng=EU>

ADMA TRANSFORMATION AREA

Digital Factory, Smart Manufacturing

Robotics, programming, automation

CURRENT
MATURITY (1-5)
LEVEL: 2



TARGET
MATURITY
LEVEL (1-5): 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Program programmable logic controllers (PLCs)	https://esco.ec.europa.eu/en/skill/1f407276-34e6-4e45-a861-1d3bb3cfc40	3
Use industrial automation software	https://esco.ec.europa.eu/en/skill/693964d2-64a4-4d8a-bcb9-f5f20c02e2fd	3
Operate programmable logic controllers (PLCs)	https://esco.ec.europa.eu/en/skill/07d9e442-bc5d-4635-8232-fdb80d9d11f0	3
Perform industrial automation	https://esco.ec.europa.eu/en/skill/8586e6f7-4e9f-47c4-bfef-91f70eec0933	3
Configure programmable logic controllers	https://esco.ec.europa.eu/en/skill/05eeb62c-2fd1-4bd1-8a91-fd8b4cfa1e4f	3

GENERAL INFORMATION

Course provider	CIFP Usurbil LHII
Country	Basque Country/ Spain
Language	Spanish
Learner Profile	Unemployed individuals, Industrial automation technicians, mechatronics professionals seeking to acquire foundational skills in PLC programming and automation using Siemens S7 1500 and TIA Portal.
Mode of Learning	In Person
Credential Type	Microcredential Course
EQF Level	EQF 5
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	30 hours
Price	Free
Location	Usurbil, Basque Country

BASICS OF AUTOMATION WITH PLC

ADMA TRANSFORMATION AREA

Provide participants with knowledge about configuration of PLC automation and programming hardware, advantages of using PLC in process automation, optimal selection of PLC and extension modules for automation of a specific process, the basic functions of PLC programming, PLC programming on the example of a practical task (basic combination and stepper control).

https://www.tscmb.si/wp-content/uploads/2023/04/OSNOVE_AVTOMATIZACIJE_s_PLK.pdf

Smart Manufacturing

Automation, Programming, PLC, Process Control, Industry 4.0

CURRENT
MATURITY
LEVEL 4



TARGET
MATURITY
LEVEL 5

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Programmable logic controller	http://data.europa.eu/esco/skill/6468e5fb-f3be-4025-87be-4b6556755c61	2
Operate automated process control	http://data.europa.eu/esco/skill/0a0532c2-ee60-4410-8e07-70e4d69370ec	4
Set up automotive robot	http://data.europa.eu/esco/skill/e975b791-b488-4935-be44-06f2f9a443bb	4

GENERAL INFORMATION

Course provider	TŠC Maribor
Country	Slovenia
Language	Slovenian
Education Subject	PLC (Programmable logic controller)
Learner Profile	students, workers
Mode of Learning	In Person
Credential Type	Paper based
EQF Level	5
Teaching Methodology	Theoretical / Practical
Learning Environment	School laboratory

INFORMATION ABOUT THE COURSE

Start Date – End Date	24/02/2025 – 03/03/2025
Workload / Duration	4h/day (24 hours total)
Schedule information	https://www.tscmb.si/wp-content/uploads/2025/01/VABILO_USPOSABLJANJE_avomatizacija_POMLAD_2025.pdf
Price	400,00 EUR + VAT
Location	Zolajeva ulica 12, 2000 Maribor, Slovenia
Learning activities	Lecture, exercise, discussion, laboratory work
Assessment Type	Project or problem-based learning – test practical problem-solving skills
Entry requirement	Professionals, engineers and development technologists who are engaged in process automation and want to improve their competencies in the field of application of PLC in process automation, and persons who want to raise their knowledge for personal development and improve their competitiveness in the labour market.
Admission procedure	https://www.tscmb.si/wp-content/uploads/2023/03/PRIJAVNICA_za_institucionalna-usposabljanja-1.pdf

BLOCKCHAIN TECHNOLOGY AND PLATFORMS FOR INDUSTRY

ADMA TRANSFORMATION AREA

You will learn the key advantages as well as the critical performance, security, and cost limitations of blockchain solutions in the IoT domain. Participants will become familiar with ecosystems for developing and deploying decentralized applications and gain the ability to realistically assess opportunities and select the appropriate approach for implementing blockchain-based IoT solutions in their field.

<https://ict-academy.si/usposabljanje/osnove-tehnologije-blokovnih-verig-in-platform-za-industrijo/>

Smart manufacturing

Distributed Ledger Technology (DLT),
Blockchain, IoT, Decentralized Applications

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Internet of Things	http://data.europa.eu/esco/skill/f049d050-12da-4e40-813a-2b5eb6df6b51	4
Blockchain platforms	http://data.europa.eu/esco/skill/9035afc4-5317-455d-ab60-f32e2ecc6bfc	4

GENERAL INFORMATION

Course provider	University of Ljubljana Faculty of electrical engineering
Country	Slovenia
Language	Slovenian
Education Subject	This educational subject explores the expectations versus reality of blockchain's role in IoT, covering its use as a backend system, device authentication, and decentralized industrial applications. It also examines blockchain network architectures, performance optimization, IoT-integrated solution designs, and security frameworks—including smart contracts—for industrial use cases.
Learner Profile	Adult
Mode of Learning	In Person
Credential Type	Paper based
EQF Level	EQF 5, 6
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Start Date – End Date	On demand
Workload / Duration	8 hours
Price	400,00 EUR + VAT
Location	Ljubljana
Learning activities	Practical exercise, training, problem solving
Assessment Type	Practical test
Entry requirement	Advance knowledge in IT

CAM 5-Axis

ADMA TRANSFORMATION AREA

This training is an introduction to 5-Axis milling from CAM using Siemens NX. Taking this training, good knowledge in Siemens NX should already exist.

<https://community.lcamp.eu/catalog-item/cad-specialization/>

Advanced Manufacturing
Technologies

CAM, Siemens NX, CNC

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
CAM Software	http://data.europa.eu/esco/skill/27065048-bca8-4b0a-891a-b192b9ceadfd	3
Program a CNC controller	http://data.europa.eu/esco/skill/bf942c60-8539-4951-83ee-63f770da1cb8	3

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	CAD-Specialization
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical, Practical, Problem solving
Learning Environment	Classroom, Workshop

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Theoretical and practical training, CAD/ CAM, Machining
Assessment Type	Practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

Computer Aided Manufacturing (CAM) Basics

ADMA TRANSFORMATION AREA

This training provides the basics in CAM using Siemens NX. How to go from a CAD model into creating toolpaths for CNC-processing.

<https://community.lcamp.eu/catalog-item/cad-specialization/>

Advanced Manufacturing
Technologies

CAM, Siemens NX, CNC

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
CAM Software	http://data.europa.eu/esco/skill/27065048-bca8-4b0a-891a-b192b9ceadfd	2
Program a CNC controller	http://data.europa.eu/esco/skill/bf942c60-8539-4951-83ee-63f770da1cb8	2

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	CAD-Specialization
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical, Practical, Problem solving
Learning Environment	Classroom, Workshop

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Theoretical and practical training, CAD/ CAM, Machining
Assessment Type	Practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

CAM NX (2 1/2 AND 3 AXIS MILLING MACHINE)

ADMA TRANSFORMATION AREA

This course focuses on equipping participants with the essential skills to program and operate 2- and 3-axis milling machines using Siemens NX software.

<https://community.lcamp.eu/catalog-item/cam-nx-2-1-2-and-3-axis-milling-machine/>

Advanced Manufacturing Technologies; Digital Factory; Smart Manufacturing

CAM Programming

CURRENT MATURITY
LEVEL (1-5)

4



TARGET MATURITY
LEVEL (1-5)

5

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Tend a CNC milling machine	http://data.europa.eu/esco/skill/4cb58ef4-67a9-4bea-a743-2c83ebd60e79	4
Program CNC controller	http://data.europa.eu/esco/skill/bf942c60-8539-4951-83ee-63f770da1cb8	4
Use CAM software	http://data.europa.eu/esco/skill/7a757fa5-9a6f-43ab-9e66-f8f4dba1ffcb	4

GENERAL INFORMATION

Course provider	Miguel Altuna LH
Country	Spain
Language	Spanish
Learner Profile	CNC operator, machinist, or manufacturing technician with basic knowledge of CNC operations and CAD software, looking to enhance their CAM skills for efficient machining.
Mode of Learning	In Person
Credential Type	Microcredential Course
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	40 Hours
Location	Miguel Altuna LH

CAM of subtractive machining processes

ADMA TRANSFORMATION AREA

Design of the manufacturing process of a subtractive manufacturing process by numerical simulation with CATIA V5. Students will learn to plan machining operations, generate tool paths, select cutting tools, and optimize processes through numerical simulation, combining efficiency, precision, and safety in industrial production.

<https://community.lcamp.eu/catalog-item/computer-aided-manufacturing-cam-of-subtractive-machining-processes/>

Advanced Manufacturing Technologies

Machining processes, digital tools, simulation

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
CAM software	http://data.europa.eu/esco/skill/27065048-bca8-4b0a-891a-b192b9ceadfd	3
Machine tools	http://data.europa.eu/esco/skill/f5084a43-42c9-4bbb-b47c-b3029cf8381d	3
Run simulations	http://data.europa.eu/esco/skill/a432ffcd-b58d-4417-836c-ea3282b626ca	2
Manufacturing processes	http://data.europa.eu/esco/skill/3786b61f-f22e-48d1-af8d-ad4c354534db	3

GENERAL INFORMATION

Course provider	Lycée La Découverte
Country	France
Language	French
Education Subject	Machining processes
Learner Profile	Students in EQF 5
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	5
Teaching Methodology	Theoretical & Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	2025-02-03 2025—02-05
Workload / Duration	15 Hours
Location	Lycée La Découverte Decazeville France
Learning activities	Theoretical courses and practical work
Entry requirement	EQF 4 diploma
Admission procedure	Registration - Parcoursup

CNC machining from CAM

ADMA TRANSFORMATION AREA

This training provides knowledge in Post-processing a set-up from CAM, using Siemens NX and machining of the part, using CNC machines such as Milling and Turning machines.

<https://community.lcamp.eu/catalog-item/cad-specialization/>

Advanced Manufacturing Technologies

CNC, CAM, Post-processing, machining

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Program a CNC controller	http://data.europa.eu/esco/skill/bf942c60-8539-4951-83ee-63f770da1cb8	2
Tend CNC milling machine	http://data.europa.eu/esco/skill/4cb58ef4-67a9-4bea-a743-2c83ebd60e79	2
CAM Software	http://data.europa.eu/esco/skill/27065048-bca8-4b0a-891a-b192b9ceadfd	2

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	CAD-Specialization, Industrial production methods
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical, Practical
Learning Environment	Workshop

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Practical training in CNC turning and milling machine, CAM
Assessment Type	Practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

CNC-machine Operation Basics

ADMA TRANSFORMATION AREA

This training provides an introduction to operating a CNC-machine, including safety and basic settings.

<https://www.cng.se/te4-gymnasieingenj%C3%B6r>

Advanced Manufacturing
Technologies

CNC, machine operating, PPE

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 2

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Tend CNC milling machine	http://data.europa.eu/esco/skill/4cb58ef4-67a9-4bea-a743-2c83ebd60e79	1
Program a CNC controller	http://data.europa.eu/esco/skill/bf942c60-8539-4951-83ee-63f770da1cb8	1

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	Industrial production methods
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Practical
Learning Environment	Workshop

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Practical training in CNC turning machine and CNC milling machine
Assessment Type	Practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

CNC Waste Reduction Strategies

ADMA TRANSFORMATION AREA

This training provides the basic practical methods to reduce waste and inefficiency in CNC-machining, using CAM Siemens NX.

<https://community.lcamp.eu/catalog-item/production-philosophy/>

ECO Factory

CAM, Siemens NX, CNC, LEAN

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
CAM Software	http://data.europa.eu/esco/skill/27065048-bca8-4b0a-891a-b192b9ceadfd	3
Tend CNC milling machine	http://data.europa.eu/esco/skill/4cb58ef4-67a9-4bea-a743-2c83ebd60e79	2
Continuous improvement philosophies	http://data.europa.eu/esco/skill/0550431f-9c8b-4204-9c45-59bc5feacf06	2

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	Production Philosophy
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical, Practical
Learning Environment	Classroom, Workshop

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Theoretical and practical training, CAD/ CAM, Machining
Assessment Type	Practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

Collaborative Robot

ADMA TRANSFORMATION AREA

Using collaborative robots improve the production, risks and reduce production time. Get better work conditions. Make easy collaborative robot installations. Learn safety rules. Installation repair/changes. Insert a collaborative robot in the production.

<https://www.imh.eus/en>

Advanced Manufacturing Technologies, Digital Factory, Smart Manufacturing Engineering

Cobot, automation, robotics

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Install collaborative robots	https://esco.ec.europa.eu/en/skill/ed9290f6-f3a7-4bc7-9f5e-9e26a30e69a4	3
Ensure safety in collaborative robotics	https://esco.ec.europa.eu/en/skill/6e19de27-3693-4d3a-9484-5ef53b360b01	4
Perform maintenance on collaborative robots	https://esco.ec.europa.eu/en/skill/f8451baf-8c85-465b-b9cf-17fd315f77a7	4
Integrate collaborative robots into production lines	https://esco.ec.europa.eu/en/skill/d5e0f8d5-1380-4c89-bf78-8d1cf8a83c0c	3

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country/ Spain
Language	English, Spanish
Mode of Learning	In-Person
Credential Type	Microcredential Course
EQF Level	4
Teaching Methodology	Theoretical / Practical

INFORMATION ABOUT THE COURSE

Workload / Duration	24 hours
Location	Elgoibar, Basque Country

Component inspection using a coordinate measuring machine

ADMA TRANSFORMATION AREA

Operate a three-dimensional measuring machine and carry out an inspection programme on the same machine. Participants will learn to set up and calibrate the CMM, program inspection routines, measure parts, and analyze results according to engineering standards.

<https://community.lcamp.eu/catalog-item/component-inspection-using-a-coordinate-measuring-machine-cmm/>

Advanced Manufacturing Technologies

Metrology, inspection programme, quality control, tolerances

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Metrology	http://data.europa.eu/esco/skill/a181e89d-44ae-40e7-8d37-177071237c74	3
Adjust measuring machines	http://data.europa.eu/esco/skill/236c446a-f4ff-4893-850a-0d93250c551f	2
Conduct quality control analysis	http://data.europa.eu/esco/skill/41a3240f-58ba-44e2-a688-edeb21ea5c16	2
Interpret geometric dimensions and tolerances	http://data.europa.eu/esco/skill/e3688cae-7a28-4405-88b5-6b87179e0d76	3

GENERAL INFORMATION

Course provider	Lycée La Découverte
Country	France
Language	French
Education Subject	Metrology
Learner Profile	Learners EQF 5
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	5
Teaching Methodology	Theoretical & Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	2025-02-17 2025-02-18
Workload / Duration	7 Hours
Location	Lycée La Découverte Deazeville France
Learning activities	Theoretical classes and practical work
Entry requirement	EQF 4 diploma
Admission procedure	Registration - Parcoursup

Connected Workers

ADMA TRANSFORMATION AREA

Equip participants to design and manage “Connected Worker” solutions in an Industry 5.0 context, leveraging wearables, IoT sensors, AR/VR, mobile apps and dashboards for real-time posture, health and performance monitoring, on-the-job training and operator-machine collaboration.

<https://www.smarttvalley.it/manufacturing/>

Human-Centred Organisation;
Smart Manufacturing; Digital
Factory

Connected Worker · Wearables · IoT sensor integration · Real-time
KPI dashboards · AR/VR training · Mobile decision-support apps ·
Operator performance analysis · Well-being monitoring · Cobot
collaboration

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Human-robot interaction	http://data.europa.eu/esco/skill/9136cbf1-7916-4f1c-bc9a-0318ee1d6016	2
Analyze operator performance and well-being data	http://data.europa.eu/esco/skill/5d204ec8-981b-4405-9a82-0b1cb21ca9d3	3
Introduce XR/VR and mobile applications for on-the-job training	http://data.europa.eu/esco/skill/S1.3.3	2
Integrate wearable and IoT sensor data for worker monitoring	http://data.europa.eu/esco/skill/8a753714-9a19-4418-9b37-77e79d72c705	3

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Design and management of “Connected Worker” solutions in an Industry 5.0 context
Learner Profile	Digital-transformation leads, HSE specialists, line managers, ergonomists
Mode of Learning	In-Person/Hybrid
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, Campus Smartt Valley KIIS

INFORMATION ABOUT THE COURSE

Workload / Duration	3 days (24h) – approx
Price	Depending on time schedule and location
Location	Learning Factory, Smartt Valley
Learning activities	Connected-Worker prototype demo + data-analysis report
Assessment Type	Multiple choice assessment costumized on client needs + situational interview
Entry requirement	Basic familiarity with industrial data systems;

The course’s content, schedule and location can be adapted to the needs of the recipients.

CORPORATE SUSTAINABILITY BASICS

ADMA TRANSFORMATION AREA

This introductory course provides a comprehensive overview of corporate sustainability, equipping participants with the fundamental knowledge and tools necessary to understand and implement sustainability strategies in the corporate world. The course explores the key principles of environmental, social, and governance (ESG) frameworks, sustainable business models, and how companies can balance profitability with positive societal and environmental impacts.

<https://community.lcamp.eu/catalog-item/gebkim-oiz-corporate-sustainability-basics/>

ECO FACTORY

ECO-EFFICIENT PRODUCTION

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Corporate sustainability	Corporate sustainability	4
Promote sustainability	Promote sustainability	4

GENERAL INFORMATION

Course provider	GEBKIM OIZ
Country	Türkiye
Language	Turkish
Education Subject	This course introduces learners to the foundations of corporate sustainability, covering environmental, social, and governance (ESG) principles, sustainability reporting, green business strategies, and regulatory frameworks relevant to modern organizations.
Learner Profile	VET Students
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	20 Hours
Location	GEBKIM OIZ
Learning activities	Lectures, Practices
Assessment Type	Quizzes and mid-term evaluations, Exam
Entry requirement	Interest in
Admission procedure	Online or in-person application submission

Cybersecurity

ADMA TRANSFORMATION AREA

This course introduces learners to the fundamentals of cybersecurity and digital protection. It covers key concepts such as data security, network protection, threat detection, and risk management. Learners will explore common cyber threats and vulnerabilities, understand how to safeguard systems and information

<https://3tindustry40training.eu/course/view.php?id=14>

Digital Factory

Cybersecurity, ICT, digital technologies

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Cyber security	http://data.europa.eu/esco/skill/8088750d-8388-4170-a76f-48354c469c44	2
ICT security legislation	http://data.europa.eu/esco/skill/7814e88f-c133-4c3b-b27f-857afa145d42	1
Implement ICT safety policies	http://data.europa.eu/esco/skill/14d1e367-3efe-4ec5-86ae-eca48710ee4e	1

GENERAL INFORMATION

Course provider	3TIndustry
Country	France Spain and Germany
Language	English
Education Subject	ICT
Mode of Learning	Online
Credential Type	None
EQF Level	None
Teaching Methodology	Theoretical
Learning Environment	E learning

INFORMATION ABOUT THE COURSE

Start Date – End Date	Non applicable
Workload / Duration	3 Hours
Price	Free
Location	Online
Learning activities	Theoretical
Assessment Type	Quiz
Entry requirement	None
Admission procedure	Registration to the platform

Cybersecurity in industry

ADMA TRANSFORMATION AREA

Training service for security technologies and trust in digital system. The weak point of digital transformation when it does not contemplate the “security by design” principles nor does it comply with protective measures in depth.

Digital Factory

Cyber Threat Management;
Defense in Depth

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
implement ICT security policies	http://data.europa.eu/esco/skill/14d1e367-3efe-4ec5-86ae-eca48710ee4e	2
handle cybersecurity incidents	http://data.europa.eu/esco/skill/8181aa4c-42bc-4036-a3d2-5cb6bbb34239	3
perform risk analysis	http://data.europa.eu/esco/skill/1dd23dba-dd00-45ab-abf4-642902538317	3

GENERAL INFORMATION

Course provider	TECNALIA RESEARCH & INNOVATION
Country	Spain
Language	English, Spanish
Education Subject	Tecnalia experience in cybersecurity. Development of proof of concept and solutions based on privacy or traceability technologies. Tools and methods to ensure safety & security from the early stages of design. Technologies for controlling and safeguarding the security of systems, data, and networks. Management of security risks in critical systems. With this, we offer new applications in the following areas: Distributed Ledger Technologies: Blockchain Distributed Ledgers. Security, privacy and protection by design. Identity/privacy management solutions. Control, Protection and Risk Management. Artificial Intelligence for cybersecurity (e.g. Adversarial ML). Cyber Ranges and Attack Simulations. Quantum Security / Post-Quantum Cryptography. Compliance within new cybersecurity scenarios.
Learner Profile	Introduction and advanced
Mode of Learning	Hybrid
Credential Type	Training programme
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	4 Hours
Location	TECNALIA RESEARCH & INNOVATION

Development of an Environmental Responsibility and Circular Economy Plan

ADMA TRANSFORMATION AREA

The objective of an Environmental Responsibility Plan is to define a set of guidelines for any company or organization to help protect the environment by reducing the impact of their actions on the natural surroundings and being highly aware of the importance of environmental care in all their activities.

<https://www.lhusurbil.eus/web/Default.aspx?lng=EU>

Eco Factory, Human Centred Organization

Environment, green company, organization

CURRENT
MATURITY (1-5)
LEVEL: 4



TARGET
MATURITY
LEVEL (1-5): 5

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Develop environmental policy	https://esco.ec.europa.eu/en/skill/c0df7ca4-2953-4e2d-a6cd-e82692c19da1	3
Apply environmental legislation	https://esco.ec.europa.eu/en/skill/9a7ec89e-5003-4933-a1a1-18132578032e	4
Promote environmental awareness	https://esco.ec.europa.eu/en/skill/79dd84f6-b429-4bc0-9381-c1697dc99f47	4
Implement environmental management systems	https://esco.ec.europa.eu/en/skill/9cb6f95c-8f18-4c69-b745-f1eaf5409a90	3
Assess environmental impact	https://esco.ec.europa.eu/en/skill/3e3d17b0-13f7-4dd9-94ff-cd6e164bd9f0	4

GENERAL INFORMATION

Course provider	CIFP Usurbil LHII
Country	Basque Country/ Spain
Language	Spanish
Learner Profile	Unemployees and employees from various sectors interested in environmental management, and individuals seeking to enhance their understanding of environmental impact reduction strategies within organizations.
Mode of Learning	In Person
Credential Type	Microcredential Course
EQF Level	EQF 5
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	21 hours
Price	Free
Location	Usurbil, Basque Country

Design 4.0

ADMA TRANSFORMATION AREA

The course will present technologies and approaches typical of the new way of understanding product design and development, from modern approaches for life cycle management (PLM) to virtual and augmented reality in the context of product development. At the same time application examples from different industrial sectors will be presented.

<https://www.made-cc.eu/en/servizio/training-skills/>

Digital Factory, End-to-end
Customer Focused Engineering,
Smart Manufacturing

Product Design and Simulation,
Augmented and Virtual Reality

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Work with virtual learning environments	http://data.europa.eu/esco/skill/b78f324d-e16c-43f8-97d2-50d3a7cd1fb3	2
Run simulations	http://data.europa.eu/esco/skill/a432ffcd-b58d-4417-836c-ea3282b626ca	2

GENERAL INFORMATION

Course provider	MADE Competence Center Industry 4.0
Country	Italy
Language	Italian
Education Subject	Product Design, Industry 4.0, Engineering
Learner Profile	Workers, Engineers, Design Professionals
Mode of Learning	Online / Hybrid / In Person
Credential Type	Microcredential
EQF Level	EQF3
Teaching Methodology	Practical
Learning Environment	Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	TBD
Workload / Duration	4 hours
Schedule information	The course presents technologies and approaches typical of the new view of product design and development, from modern life-cycle management (PLM) to virtual and augmented reality in the product development context. Application examples from a range of industrial sectors are presented in conjunction with this.
Price	450 EUR
Location	Milan, Italy
Learning activities	Hands-on labs, case studies, technology demonstrations
Assessment Type	Final test and evaluation
Entry requirement	Basic understanding of product design and industrial processes
Admission procedure	By filling up online module - Formare competenze - Made

Design for Additive Manufacturing (DfAM)

ADMA TRANSFORMATION AREA

This training provides insights into how to design parts optimized for 3D printing, focusing on material efficiency, functionality and manufacturability. Part of the course CAD – Specialization.

<https://community.lcamp.eu/catalog-item/cad-specialization/>

Advanced Manufacturing Technologies

CAD, Additive Manufacturing, 3D-printing

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
CAD Software	http://data.europa.eu/esco/skill/a2b5dcf3-5b6a-453d-876c-cff540c0faf1	3
3D Printing process	http://data.europa.eu/esco/skill/2afb2b59-c9a3-4cf3-b1dd-1a2fad51e583	3

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	CAD-Specialization
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical , Practical, problem solving
Learning Environment	Classroom, Educational Lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Theoretical and practical training, CAD and 3D Printing
Assessment Type	Practical Test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

ECET-292 Design of Manufacturing

ADMA TRANSFORMATION AREA

ADVANCED MANUFACTURING

Manufacturing Design

CURRENT
MATURITY
LEVEL 2

TARGET
MATURITY
LEVEL 4

Students will study material that emphasizes the relationship of electronic design and manufacturing, including an introduction to CAD/CAM, Resource Management, Thermal Management and various standards. They will also examine design methodology for the various materials and equipment used in the manufacture of electronic products.

[ECET 292 - Design for Manufacturing - Modern Campus Catalog™](#)

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
K072 Manufacturing and Processing	http://data.europa.eu/esco/iscsed-f/072	4
K0710 Engineering and Engineering Trades not further defined	http://data.europa.eu/esco/iscsed-f/070	4

GENERAL INFORMATION

Course provider	Camosun College
Country	Canada
Language	English
Education Subject	Electronics & Computer Engineering Technology
Learner Profile	College Students
Mode of Learning	In Person
Credential Type	College Diploma
EQF Level	4
Teaching Methodology	Practical
Learning Environment	In Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	Four-month term
Workload / Duration	75 Hours
Price	\$749.84 CAD
Location	Camosun College
Learning activities	Lectures, analysis, and direct experience
Assessment Type	Papers / Exams / Physical Tests
Entry requirement	Requires prerequisite course from Camosun College
Admission procedure	Apply as part of Camosun electronics and computer engineering degree

Digital Operation

ADMA TRANSFORMATION AREA

The course aims to introduce participants to the two industrial production paradigms (Lean production and Industry 4.0) by integrating them. In order to optimize the transition to Industry 4.0, identifying the processes to be followed, the resources to be allocated, and the investments to be made, it is essential to adopt a management and production method that minimizes costs and waste.

<https://www.made-cc.eu/en/servizio/training-skills/>

Digital Factory, Smart Manufacturing

Industrial Engineering, Operations management, Artificial Intelligence

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Optimise production	http://data.europa.eu/esco/skill/798d427e-51b3-4cd4-8b24-1357015e9ae7	3
Operations management	http://data.europa.eu/esco/skill/2d140a3a-45a6-4248-80dd-b3760ebc9cc6	3

GENERAL INFORMATION

Course provider	MADE Competence Center Industry 4.0
Country	Italy
Language	Italian
Education Subject	Lean production and Industry 4.0
Learner Profile	Quality managers, Production managers, Programmers, Production directors, Department heads, Function managers
Mode of Learning	Online / Hybrid / In Person
Credential Type	Microcredential
EQF Level	EQF4
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom

INFORMATION ABOUT THE COURSE

Workload / Duration	6 Hours
Schedule information	At the end of the course, learners experience digital factory application examples first-hand, with a special focus on Digital Twinning process and logistics. A focus on maximum participant-lecturer interaction during the lessons with a marked operational focus in teaching methods on real business context experiences.
Price	450 EUR
Location	Milan, Italy
Learning activities	Introduction to production process planning and control; digital twinning for process simulation; AR/VR solutions to support industrial processes; MES as an enabling technology for real-time production control; elements of Lean 4.0; IoT: from smart product to industrial process control and monitoring; product quality and traceability
Assessment Type	Final test and evaluation
Entry requirement	Managers, SME entrepreneurs
Admission procedure	By filling up online module - Formare competenze - Made

Digital Transformation pathway

ADMA TRANSFORMATION AREA

The Digital Transformation pathway is a training programme on digital technologies with lectures and industrial visits with the objective to explain new technologies and their impact on the company development.

<https://www.made-cc.eu/it/corso/percorso-digital-transformation/>

Digital Factory, Smart Manufacturing

Industry 4.0 and 5.0, Open Innovation, Circular Economy

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Keep up with digital transformation of industrial processes	http://data.europa.eu/esco/skill/0458f6a0-cb54-4ff5-a543-b2c5354e17c0	3
Data extraction, transformation and loading tools	http://data.europa.eu/esco/skill/9d0d89be-bffa-4393-b6f6-8d05bea49051	2

GENERAL INFORMATION

Course provider	MADE Competence Center Industry 4.0
Country	Italy
Language	Italian
Education Subject	Industry 4.0
Learner Profile	Managers, entrepreneurs and professionals
Mode of Learning	Online + company visits
Credential Type	Microcredential
EQF Level	EQF4
Teaching Methodology	Practical
Learning Environment	Online

INFORMATION ABOUT THE COURSE

Start Date – End Date	30 September 2025
Workload / Duration	4 hours
Price	1000 EUR
Location	Milan, Italy
Learning activities	Module 1 - Trends in manufacturing Module 2 - Analysis, costs and benefits of introducing new technologies Module 3 - Open Innovation Module 4 - What it means to be a Data Driven Company Module 5 - What it means to be a sustainable company
Assessment Type	No formal exam or graded assessment. Participation-based evaluation
Entry requirement	No prior coding or deep technical expertise required, but a basic understanding of business or operations is probably expected
Admission procedure	By filling up online module - Formare competenze - Made

Electrical Discharging Machining (EDM) processes

ADMA TRANSFORMATION AREA

This intensive hands-on course introduces learners to Electrical Discharge Machining (EDM) technology, with a special focus on tool and die manufacturing, CAD design using SolidWorks, and machine programming. Participants will explore the fundamentals of stamping die and mold theory, and apply their knowledge in a real workshop environment using the ONA AV-35 EDM machine and Teksoft CAM software.

Through practical projects, students will learn to interpret technical drawings, model components in 3D CAD, and prepare EDM operations from setup to execution. This includes aligning the workpiece, setting offsets, and executing wire and die-sinking EDM processes.

Digital Factory, Advanced Manufacturing Technologies

EDM, CAD, CAM, Solidworks, programming

CURRENT MATURITY
LEVEL (1-5)

3

TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Tend spark erosion machine	http://data.europa.eu/esco/skill/347162b5-d136-4791-b2a5-392f37a5d1c0	3
Technical drawings	http://data.europa.eu/esco/skill/59ea80e1-463a-4dba-82c6-d0b6d577d532	2
Operate precision machinery	http://data.europa.eu/esco/skill/d8045ecd-22f3-4711-bb51-58969d9f28c7	2
Use CAM software	http://data.europa.eu/esco/skill/7a757fa5-9a6f-43ab-9e66-f8f4dba1ffcb	3

GENERAL INFORMATION

Course provider	CIFP Armeria eskola LHII
Country	Basque Country – Spain
Language	English
Education Subject	Machining
Learner Profile	Mechanical students
Mode of Learning	In Person
EQF Level	4/5
Teaching Methodology	Practical in CLF
Learning Environment	Workshop

INFORMATION ABOUT THE COURSE

Workload / Duration	60 Hours
Location	CIFP Armeria eskola LHII
Learning activities	EDM Theory ONA AV35 Machine Operation Stamping and Die Theory SolidWorks Design CAM Programming for EDM
Assessment Type	Final project
Entry requirement	Enrolment in mechanical cycle EQF4/5

Electronic Assembly of the LCAMP Robot: Soldering Components, Motor Driver Regulation, and DC-DC Converters

This course provides a deep understanding of stepper motors, including their operation, applications, driver regulation, DC-DC regulator parameterization, and practical soldering techniques. It integrates these concepts with the Industrial Automation and Robotics curriculum.

<https://www.maltuna.eus/es/>

ADMA TRANSFORMATION AREA

Advanced Manufacturing Technologies, Digital Factory

Electronic welding, electronics, robotics

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Maintain electric motors	https://esco.ec.europa.eu/en/skill/f1914a84-4cf8-4ea4-b8f6-96736a3e5703	3
Apply principles of motor control	https://esco.ec.europa.eu/en/skill/7b00e5e6-94c0-4bd1-b663-b7f7a5a77cbb	4
Integrate electrical components into control systems	https://esco.ec.europa.eu/en/skill/40a9bc3e-46d3-4c3c-8f15-2e49e05fbb14	3
Install electronic control equipment	https://esco.ec.europa.eu/en/skill/36ae938d-183e-4c1b-bc12-4fdc57d4a9f1	4

GENERAL INFORMATION

Course provider	Miguel Altuna LHII
Country	Basque Country, Spain
Language	Basque
Education Subject	Industrial Automation and Robotics
Learner Profile	Engineering students, automation technicians, robotic enthusiasts
Mode of Learning	In Person
Credential Type	Certification of Completion
EQF Level	EQF4-5
Teaching Methodology	Practical in CLF
Learning Environment	CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	15 hours
Schedule information	During the hours of the courses Power Systems and Measurement and Regulation Systems
Price	0€
Location	Bergara, Miguel Altuna LHII
Learning activities	Theoretical lessons, practical soldering exercises, stepper motor control experiments, Arduino integration workshops.
Assessment Type	Teaching demonstrations, lesson plan evaluations, peer reviews
Entry requirement	First-year students of Robotics and Industrial Automation.

FULL LEARNING OUTCOMES

1. Understand the working principles of stepper motors and their role in industrial automation.
2. Identify different types of stepper motors and their applications.
3. Learn to regulate and configure stepper motor drivers for optimal performance.
4. Explore the importance of DC-DC regulators and their parameterization.
5. Develop practical skills in soldering for assembling and repairing motor control circuits.
6. Integrate stepper motor applications into automation and robotics systems.

ECET-291 Engineering Project Management

ADMA TRANSFORMATION AREA

Students are introduced to engineering project management and budgeting techniques, as well as strategies for effective project teamwork. They will also study engineering standards, the effect of engineering on the environment, professional responsibility, and engineering ethics.

[ECET 291 - Engineering Project Management - Modern Campus Catalog™](#)

END-TO-END CUSTOMER-
FOCUSED ENGINEERING

Project Management

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
S4.0 Management Skills	http://data.europa.eu/esco/skill/c1a13ee0-b00d-4cfa-a22c-20d284e398b0	4
S4.3 Allocating and Controlling Resources	http://data.europa.eu/esco/skill/9827c329-3492-4e8d-852c-da0894228ff6	4
K0710 Engineering and Engineering Trades not further defined	http://data.europa.eu/esco/iscde-f/070	4

GENERAL INFORMATION

Course provider	Camosun College
Country	Canada
Language	English
Education Subject	Electronics & Computer Engineering Technology
Learner Profile	College Students
Mode of Learning	Online
Credential Type	Micro-Credential
EQF Level	4
Teaching Methodology	Practical
Learning Environment	In Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	Four-month term
Workload / Duration	175 Hours
Price	\$374.92 CAD
Location	Camosun College
Learning activities	Lectures, labs, and group work
Assessment Type	Group work and project development
Entry requirement	Prerequisite college courses
Admission procedure	Apply via Electronics & Computer Engineering Technology program

Ergonomics in Industry 5.0

This course provides an in-depth overview of ISO 11228/11226 standards and ergonomic risk mapping, hands-on training with EAWS calculation methods to quantify the risk of biomechanical overload, and a deep dive into the Ergo-MTM methodology via the TiCon Base, EAWS, Takt modules. Participants will learn to assess and optimize work postures, forces and repetitive tasks in Industry 5.0 environments.

<https://www.smarttvalley.it/manufacturing/>

ADMA TRANSFORMATION AREA

Human-Centred Organisation;
Smart Manufacturing; Digital
Factory

Ergonomic risk mapping · ISO 11228 · ISO 11226 · EAWS (Ergonomic Assessment Work-sheet) · Ergo-MTM methodology · TiCon Base · TiCon EAWS · TiCon Takt · Biomechanical load assessment · Repetitive task analysis

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Follow safety precautions in work practices	http://data.europa.eu/esco/skill/d2d9051a-10e1-41c5-9cfb-bbdc58016176	2
Analyse ergonomics in different workplaces	http://data.europa.eu/esco/skill/a2e4fe18-b65d-46c2-8bee-d81fad8cd53b	3
Plan manufacturing process	http://data.europa.eu/esco/skill/7d0f33ea-e724-4d77-8b75-ee4fe66bb9ba	3
Perform ergonomic risk assessments	http://data.europa.eu/esco/skill/d3a0f1fd-3a6e-452c-84a2-dc594b403a18	3

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Ergonomics: introduction to ISO/CEN Standards; EAWS calculation method for a comprehensive ergonomic assessment of work postures, forces and repetitive tasks in Industry 5.0 environments; introduction to Ergo-MTM model (TiCon)
Learner Profile	Ergonomists, HSE specialists, process engineers, safety managers
Mode of Learning	In-Person/Hybrid
Credential Type	Certificate
EQF Level	5-6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, Experience lab with workstations, Campus Smartt Valley Ergo-Lab

INFORMATION ABOUT THE COURSE

Workload / Duration	8 days – approx
Price	Depending on time schedule and location
Location	Learning Factory, Smartt Valley
Learning activities	ISO-standard lectures, EAWS scoring theory and examples, TiCon-guided simulations, group risk-mapping exercises
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	Familiarity with basic ergonomic concepts

The course's content, schedule and location can be adapted to the needs of the recipients.

Factory Logistics 4.0

ADMA TRANSFORMATION AREA

Explore the enabling technologies of Factory Logistics 4.0—IoT/RFID for real-time traceability, AGVs/AMRs for automated material handling, Digital Twins for flow simulation, and Advanced Analytics/AI for demand forecasting and inventory optimization, integrated with MES/WMS/ERP to synchronize production and supply chain. Hands-on cases illustrate “just-in-time” delivery and uptime improvement.

<https://www.smarttvalley.it/manufacturing/>

Value Chain-Oriented Open
Factory; Smart Manufacturing;
Digital Factory

RFID & IoT traceability · AGVs & AMRs · Digital Twin simulation ·
Advanced Analytics & AI forecasting · MES/WMS/ERP integration ·
Cross-departmental interoperability · Flow optimization

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Deploy IoT and RFID systems for real-time asset tracking	http://data.europa.eu/esco/skill/9136cbf1-7916-4f1c-bc9a-0318ee1d6016	3
Build and validate Digital Twin models for logistics flow simulation	http://data.europa.eu/esco/skill/737f8895-46df-4283-8f38-13f3f0fc3b77	4
Apply advanced analytics and AI for demand forecasting and inventory optimization	http://data.europa.eu/esco/skill/8dcbcabbe-09f7-4d11-940d-125af57bbc40	4
Integrate MES, WMS and ERP systems to synchronize production and supply chain	http://data.europa.eu/esco/skill/8a753714-9a19-4418-9b37-77e79d72c705	3

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Enabling technologies of Factory Logistics 4.0
Learner Profile	Logistics engineers, operations managers, supply-chain analysts, automation specialists
Mode of Learning	In-Person/Hybrid
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, Campus Smartt Valley KIIS

INFORMATION ABOUT THE COURSE

Workload / Duration	3 days (24h) – approx
Price	Depending on time schedule and location
Location	Learning Factory, Smartt Valley
Learning activities	RFID tagging exercises, AGV route planning, Digital Twin flow builds, AI-forecasting case studies
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	Basic logistics concepts and familiarity with ERP/WMS systems

The course’s content, schedule and location can be adapted to the needs of the recipients.

FANUC INDUSTRIAL ROBOT PROGRAMMING

ADMA TRANSFORMATION AREA

Participants learn how to work safely with an industrial robot, learn about the structure of an industrial robotic system and know how to program a robot for a selected robotic application.

https://www.tscmb.si/wp-content/uploads/2023/04/OPIS_PROGRAMA-Programiranje_Fanuc_robota-TSC_MB.pdf

Advanced Manufacturing

Robotic components, PLC integration, Automation, Robotics

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Robotics	http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40	2
Robotic Components	http://data.europa.eu/esco/skill/7a950986-27fe-4b6c-adf3-88f211e77019	3
Maintain Robotic Equipment	http://data.europa.eu/esco/skill/7341904f-5913-470c-8c53-bc832df248ec	3

GENERAL INFORMATION

Course provider	TŠC Maribor
Country	Slovenia
Language	Slovenian
Education Subject	Automation
Learner Profile	Students, workers
Mode of Learning	In Person
Credential Type	Paper based
EQF Level	5
Teaching Methodology	Theoretical / Practical
Learning Environment	School laboratory

INFORMATION ABOUT THE COURSE

Start Date – End Date	24/02/2025 – 07/03/2025
Workload / Duration	40 Hours
Price	420,00 EUR + VAT
Location	Zolajeva ulica 12, 2000 Maribor, Slovenia
Learning activities	Lecture, exercise, discussion, laboratory work
Assessment Type	Self-assessment learning diaries or portfolios – test reflection skills
Entry requirement	https://www.tscmb.si/wp-content/uploads/2025/01/VABILO_USPOSABLJANJE_ROBOTIKA_POMLAD_2025.pdf
Admission procedure	https://www.tscmb.si/wp-content/uploads/2023/03/PRIJAVNICA_za_institucionalna-usposabljanja-1.pdf

FREE-FORM SURFACE MODELING

The Free-form Surface Modeling course is an upgrade to the Creo Parametric Fundamentals course and serves as a starting point for fast and efficient work with complex surface models for every designer of products and devices with demanding shapes.

<https://ti.audax.si/tecaji/modeliranje-prostih-povrsin-96?prijava=1&idtecaji=96&idtermin=16553>

ADMA TRANSFORMATION AREA

Advance manufacturing technologies

Surface Design, Curve Modeling, Solid Modeling

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D modelling	http://data.europa.eu/esco/skill/97965983-0da4-4902-9daf-d5cd2693ef73	3
Apply reverse engineering	http://data.europa.eu/esco/skill/a7a14be2-78b5-4b4a-ba77-2658285e2756	4

GENERAL INFORMATION

Course provider	Audax d. O. O.
Country	Slovenia
Language	Slovenian
Education Subject	Curve Modeling, Surface Creation (Extrude, Revolve, Fill, Sweep, Blend, Boundary Blend, Rotational Blend, Swept Blend, Variable Section Sweep)
Learner Profile	adult
Mode of Learning	In Person
Credential Type	Certificat
EQF Level	EQF 5
Teaching Methodology	Practical training, solution solving
Learning Environment	Educational lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	01/10/2025 – 03/10/2025
Workload / Duration	2 days
Schedule information	2 days training
Location	Ljubljana
Learning activities	Creating and configuration, practical training
Assessment Type	Practical test
Entry requirement	Creo Parametric Fundamentals Course and prior independent practical work with Creo software.

Functional Safety

ADMA TRANSFORMATION AREA

MC 2322 Functional Safety

Part of the lecture T4WIW9014

Learning Outcome: The various aspects of safety in machinery (e.g. the Machinery Directive, SIL, Performance Level, CE, etc.).

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Safety, machinery

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Functional Safety
Learner Profile	A-levels
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Lecture
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.10.25 – 31.12.25
Workload / Duration	2 ECTS / 50h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO skills

Safety engineering

<http://data.europa.eu/esco/skill/47d491a9-f7c0-4b13-a10f-983d3aa0113e>

Selected teaching units are explored in greater depth in the laboratory.

Automation systems – laboratory:

- Automation components (e.g. industrial robots or machine tools).
- Modular production systems (e.g. learning factories).

FUNDAMENTALS OF ROBOTICS

The Fundamentals of Robotics course provides a comprehensive introduction to the principles, technologies, and applications of robotics in modern industries. Designed for learners seeking to understand the core components of robotic systems.

<https://community.lcamp.eu/catalog-item/fundamentals-of-robotics/>

ADMA TRANSFORMATION AREA

Advanced Manufacturing Technologies, Digital Factory

Application of robotics to industrial processes

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Set up automotive robot	http://data.europa.eu/esco/skill/e975b791-b488-4935-be44-06f2f9a443bb	2
Maintain control systems for automated equipment	http://data.europa.eu/esco/skill/df12fd50-55dc-4cfd-a021-818880668789	3
Human-robot collaboration	http://data.europa.eu/esco/skill/0f5374e3-0b9b-4b16-af7a-49654ce0bb15	3

GENERAL INFORMATION

Course provider	Miguel Altuna LH
Country	Spain
Language	Spanish
Education Subject	Historical background of robotics Morfology of the robot Mathematical Tools for Spatial Localization Robot Kinematics Kinematic Control Robot Programming Criteria for the Implementation of an Industrial Robot Industrial application
Learner Profile	Unemployed individuals,CNC operators, machinist, or manufacturing technicians with basic knowledge of CNC operations and CAD software.
Mode of Learning	In Person
Credential Type	Microcredential course
EQF Level	EQF 4
Teaching Methodology	Theoretical and Practical

INFORMATION ABOUT THE COURSE

Workload / Duration	50 hours
Location	Miguel Altuna LH

ADMA TRANSFORMATION AREA

Deepen knowledge of emerging technologies for improving human-machine interaction in industrial workplaces, with a focus on ergonomics, well-being, and productivity. Provide tools to integrate digital and wearable solutions in an Industry 5.0 approach, maintaining the centrality of the human in production processes.

<https://www.smarttvalley.it/manufacturing/>

Human-Centred Organisation;
Smart Manufacturing; Digital
Factory

Immersive simulation · Digital Twin ergonomics · AR/VR workstation design · Wearable posture monitoring · Biomechanical stress analysis · Exoskeleton applications · Human-centric integration · Cobot-operator collaboration

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Digital modelling technologies	http://data.europa.eu/esco/skill/737f8895-46df-4283-8f38-13f3f0fc3b77	3
Supervise worker safety	http://data.europa.eu/esco/skill/5d204ec8-981b-4405-9a82-0b1cb21ca9d3	3
Integrate human-centric technologies into standard workflows	http://data.europa.eu/esco/skill/33c8742f-fc91-433b-8d3f-3238f7e3018f	3
Perform ergonomic risk assessments	http://data.europa.eu/esco/skill/d3a0f1fd-3a6e-452c-84a2-dc594b403a18	3

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Improvement of human-machine interaction in industrial workplaces; integration of digital and wearable solutions in an Industry 5.0 approach
Learner Profile	Ergonomists, HSE specialists, automation and digital-transformation managers
Mode of Learning	In-Person/Hybrid
Credential Type	Certificate
EQF Level	5-6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, Experience lab with workstations, Campus Smartt Valley KIIS and Ergo-Lab

INFORMATION ABOUT THE COURSE

Workload / Duration	3 days (24 h) – approx
Price	Depending on time schedule and location
Location	Smartt Valley
Learning activities	AR/VR ergonomics workshop, wearable-sensor and device presentation, exoskeleton introduction
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	Familiarity with basic ergonomic concepts

The course's content, schedule and location can be adapted to the needs of the recipients.

ADMA TRANSFORMATION AREA

MC 2323 Industrial Communication

Part of the lecture T4WIW9014

Learning Outcome: Automation components include robots, networks, industrial communication systems (e.g. CoDeSys and SCADA), and programming systems.

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Automation, robots, systems

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Industrial Communication
Learner Profile	A-Levels
Mode of Learning	In Person / Lab
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Lecture
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.10.25 – 31.12.25
Workload / Duration	2 ECTS / 50h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO skills

Apply technical communication skills

<http://data.europa.eu/esco/skill/c32ad607-0c4d-4e34-b73f-668298f7bf13>

Selected teaching units are explored in greater depth in the laboratory.

Automation systems – laboratory:

- Automation components (e.g. industrial robots or machine tools).
- Modular production systems (e.g. learning factories).

Industry 4.0 & 5.0 communication architecture

ADMA TRANSFORMATION AREA

MC 2324 Industry 4.0 & 5.0 communication architecture

Part of the lecture T4WIW9014

Learning Outcome: automation concepts (HMI, OPC-UA, MQTT, MESA, ISA95, VDI5600)

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Automation

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Industry 4.0 & 5.0 communication architecture
Learner Profile	A-Levels
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Lecture / Lab
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.10.25 – 31.12.25
Workload / Duration	2 ECTS / 50h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO skills

Automation technology

<http://data.europa.eu/esco/skill/f4a6e9f7-5cff-46c0-894c-59c20bb78694>

Information architecture

<http://data.europa.eu/esco/skill/1bba98a7-92b9-450b-9235-e0c905f8f3c4>

Selected teaching units are explored in greater depth in the laboratory.

Automation systems – laboratory:

- Automation components (e.g. industrial robots or machine tools).
- Modular production systems (e.g. learning factories).

INTRODUCTION TO CARBON FOOTPRINT

This course provides a basic understanding of what a carbon footprint is, why it matters, and how individuals and industries can measure and reduce their carbon emissions. Students will explore the environmental impact of carbon emissions and learn simple, actionable strategies for lowering their carbon footprint. Topics include energy efficiency, renewable energy, waste reduction, and everyday practices that contribute to carbon reduction. By the end of the course, students will be equipped to take meaningful steps toward reducing their carbon impact.

<https://community.lcamp.eu/catalog-item/gebkim-oiz-introduction-to-carbon-footprint/>

ADMA TRANSFORMATION AREA

ECO FACTORY

ENVIRONMENTALLY FRIENDLY
OPERATIONS

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Advise on carbon emissions reduction	Advise on carbon emissions reduction	4
Promote sustainability	Promote sustainability	4

GENERAL INFORMATION

Course provider	GEBKIM OIZ
Country	Türkiye
Language	Turkish
Education Subject	This course introduces the concept of carbon footprint, covering how greenhouse gas emissions are calculated, sources of emissions, and strategies for reduction in personal, corporate, and industrial contexts. It promotes awareness and action toward climate responsibility.
Learner Profile	VET Students
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	20 Hours
Location	GEBKIM OIZ
Learning activities	Lectures, Practices
Assessment Type	Quizzes and mid-term evaluations, Carbon footprint calculation tasks
Entry requirement	Interest in climate, sustainability, or environmental issues
Admission procedure	Online or in-person application submission

Introduction to Collaborative Robotics

ADMA TRANSFORMATION AREA

Provide basic knowledge of collaborative-robotics principles, standards and applications, with a focus on safety, basic programming and human-robot integration in production processes.

<https://www.smarttvalley.it/manufacturing/>

Human-Centred Organisation;
Smart Manufacturing; Digital
Factory

Industrial robotics · Collaborative robots (cobots) · ISO 10218-1/2 ·
ISO/TS 15066 · Human-robot collaboration · Force sensing ·
Machine vision · Cobot programming · Risk assessment

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Human-robot interaction	http://data.europa.eu/esco/skill/9136cbf1-7916-4f1c-bc9a-0318ee1d6016	2
Interpret collaborative-robotics paradigm	http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40	2
Configure and program collaborative robots	http://data.europa.eu/esco/skill/abf982c1-6b59-4572-a38c-97d3a6869af4	3
Integrate new products in manufacturing	http://data.europa.eu/esco/skill/8a753714-9a19-4418-9b37-77e79d72c705	3

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Collaborative-robotics principles, standards and applications
Learner Profile	Automation engineers, safety officers, production managers, robotics technicians
Mode of Learning	In-Person/Hybrid
Credential Type	Certificate
EQF Level	5-6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, Campus Smartt Valley KIIS

INFORMATION ABOUT THE COURSE

Workload / Duration	8 days – approx
Price	Depending on time schedule and location
Location	Learning Factory, Smartt Valley
Learning activities	Introduction to industrial collaborative robotics and Safety regulations; Enabling sensors and technologies; Cobot programming principles and risk assessment and feasibility analysis
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	Basic knowledge of automation; no prior cobot experience required

The course's content, schedule and location can be adapted to the needs of the recipients.

Installation and Maintenance of Industrial Automation Systems

ADMA TRANSFORMATION AREA

Through this course, the student will learn to assemble and maintain regulation and control systems in industrial installations, applying the required techniques and procedures in each case, ensuring quality standards, complying with the company's occupational and environmental risk prevention plans, and adhering to the applicable regulations in force.

<https://community.lcamp.eu/catalog-item/installation-and-maintenance-of-industrial-automation-systems/>

Digital Factory, Advanced Manufacturing Technologies

Automation, maintenance

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Install automation components	http://data.europa.eu/esco/skill/818c2b89-1335-4443-ada7-e1046862e273	3
Maintain industrial equipment	http://data.europa.eu/esco/skill/3e4cdaee-740c-4754-9135-466362bbd22e	3
Read technical datasheet	http://data.europa.eu/esco/skill/651675ef-d203-4ba9-bde0-c4fb8a2f3ef3	2
Perform maintenance on installed equipment	http://data.europa.eu/esco/skill/79aa4ec0-399d-432e-aae8-7a390ce89bcc	2

GENERAL INFORMATION

Course provider	CIFP ZORNOTZA LHII
Country	Basque Country / Spain
Language	Spanish
Education Subject	Installation of equipment and elements of industrial automation systems. Commissioning of industrial automation systems. Prevention of occupational and environmental hazards in the assembly and maintenance of industrial automation systems. Preventive maintenance of industrial automation systems Fault diagnosis and corrective maintenance of industrial automation systems
Learner Profile	Individuals interested in working as maintenance technicians in the field of industrial automation.
Mode of Learning	In Person
Credential Type	Microcredential Course - Professional Certificate (Level 2)
EQF Level	4
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	390 Hours
Location	CIFP ZORNOTZA LHII - Zornotza (Basque Country)
Entry requirement	Title of Bachiller / Certificate of professionalism of level 2 or level 1 of the same family and professional area / Academic requirement of access to the higher VET degree or pass the corresponding entrance tests / Entrance test to the university for older than 25 years and/or of 45 years / In accordance with the regulations, training knowledge or professional knowledge sufficient to take the training with advantage.

Installation and maintenance of collaborative robots 'COBOTS'

ADMA TRANSFORMATION AREA

The course is designed to provide participants with a comprehensive understanding of the installation, operation, and maintenance of collaborative robots, commonly known as cobots. As automation technologies continue to evolve, cobots have become essential in enhancing productivity and efficiency across various industries by working alongside human operators safely and effectively.

<https://community.lcamp.eu/catalog-item/installation-and-maintenance-of-collaborative-robots-cobots/>

Digital Factory, Advanced Manufacturing Technologies

Robot, cobot, automation

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Robotics	http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40	3
Assemble robots	http://data.europa.eu/esco/skill/7ffae77a-93ce-40a3-af99-fae5729e8b15	3
Maintain robotic equipment	http://data.europa.eu/esco/skill/7341904f-5913-470c-8c53-bc832df248ec	3
Manage health and safety standards	http://data.europa.eu/esco/skill/44e2c4c4-9fd2-42d4-a133-d81360ded4bc	3

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	BASQUE COUNTRY – SPAIN
Language	SPANISH
Education Subject	Integrate and maintain collaborative robots “COBOTS” in automated installations, in conditions of quality and safety for people, machines and the environment.
Learner Profile	People who wish to acquire knowledge of programming, integration and maintenance of Cobots collaborative robots.
Mode of Learning	Online
Credential type	Microcredential
EQF Level	5

INFORMATION ABOUT THE COURSE

Workload / Duration	12 Hours
Price	190€
Location	Elgoibar (Spain)

Internet of Things: Raspberry and Arduino

ADMA TRANSFORMATION AREA

In recent years, IoT has become one of the most important technologies of the 21st century. Now that we can connect everyday objects to the Internet through embedded devices, seamless communication between people, processes and things is possible.

<https://www.lhusurbil.eus/web/Default.aspx?lng=EU>

Advanced Manufacturing Technologies, Digital Factory, Human Centred Organization

IoT, automation, machine communication

CURRENT
MATURITY (1-5)
: 4



TARGET
MATURITY
LEVEL (1-5): 5

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Apply internet of things (IoT)	https://esco.ec.europa.eu/en/skill/e4b32a5b-989b-4a62-a4e3-24371f3fe3ac	4
Integrate embedded systems	https://esco.ec.europa.eu/en/skill/8b9a8bb7-3f7a-43e1-bc7e-ec1e4eaa7e8e	5
Implement machine to machine communication	https://esco.ec.europa.eu/en/skill/6b27e8da-8895-4b45-a9de-8f9c949f7eac	5
Work with smart devices	https://esco.ec.europa.eu/en/skill/bcbf2c6e-b1df-4424-89c4-2372bda7f327	4

GENERAL INFORMATION

Course provider	CIFP Usurbil LHII
Country	Basque Country/ Spain
Language	Spanish
Learner Profile	Unemployees and professionals seeking to enhance their skills in networking and programming, and individuals looking to gain practical experience with Raspberry Pi and related technologies.
Mode of Learning	In Person
Credential Type	Microcredential Course
EQF Level	EQF 5
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	100 hours
Price	Free
Location	Usurbil, Basque Country

Introduction to Automation Systems

ADMA TRANSFORMATION AREA

MC 2321 Introduction to Automation Systems

Part of the lecture T4WIW9014

Learning Outcome: Automation fundamentals (definitions, standards for implementation). Analysis of technical systems (system description and approach).

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Automation, technical systems

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Introduction to Automation Systems
Learner Profile	A-Levels
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Lecture
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.10.25 – 31.12.25
Workload / Duration	1 ECTS / 25h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO skills

Automation technology

<http://data.europa.eu/esco/skill/f4a6e9f7-5cff-46c0-894c-59c20bb78694>

Introduction to Digital Twin Technology

ADMA TRANSFORMATION AREA

This training provides basic knowledge in how digital copies from physical systems are used for simulates and optimization.

<https://community.lcamp.eu/catalog-item/production-philosophy/>

Digital Factory

Digital Twins

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Digital Twin Technology	http://data.europa.eu/esco/skill/737f8895-46df-4283-8f38-13f3f0fc3b77	2
Digital Systems	http://data.europa.eu/esco/skill/397da142-ab35-48fe-b154-7c38f447adfb	2

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	Production Philosophy
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical, Practical
Learning Environment	Classroom, Educational Lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Theoretical practice and practical training in software
Assessment Type	Practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

Introduction to Robotics

ADMA TRANSFORMATION AREA

MC 2334 Introduction to Robotics

Part of the lecture T3M30306

Learning Outcome: Robotics systems and industrial robots.

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Robotics, industrial robots

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Introduction to Robotics
Learner Profile	A-Level
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Lecture
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.01.26 – 01.04.26
Workload / Duration	1 ECTS / 25h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO Skills

Robotics

<http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40>

Robotic components

<http://data.europa.eu/esco/skill/7a950986-27fe-4b6c-adf3-88f211e77019>

INTRODUCTION OF THE PROGRAMMING OF UR COBOTS

The Introduction to the Programming of UR Cobots course provides learners with foundational skills to configure, calibrate, and program Universal Robots collaborative robots. Participants will use the PolyScope interface to develop simple programs, execute basic movements, and perform pick & place operations with tools and sensors. The training focuses on practical, hands-on tasks to ensure participants can confidently operate UR cobots in real industrial environments.

ADMA TRANSFORMATION AREA

Advanced Manufacturing
Technologies, Smart
Manufacturing

Automatization

CURRENT MATURITY
LEVEL (1-5)

2



TARGET MATURITY
LEVEL (1-5)

3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
working with computers	http://data.europa.eu/esco/skill/39499028-35bf-4d69-9275-fb98902ed88b	2
programming computer systems	http://data.europa.eu/esco/skill/d6e4373a-ef2c-4b64-9dc6-4140846f6609	2
maintain robotic equipment	http://data.europa.eu/esco/skill/7341904f-5913-470c-8c53-bc832df248ec	2

GENERAL INFORMATION

Course provider	Tolosaldea LHII
Country	Spain
Language	English
Education Subject	Robotics
Learner Profile	VET workers
Mode of Learning	In Person
EQF Level	4
Teaching Methodology	Practical
Learning Environment	Vocational learning classroom

INFORMATION ABOUT THE COURSE

Workload / Duration	2 Days
Location	Tolosaldea LHII
Learning activities	Lectures, guided practises and demonstrations.
Assessment Type	Exercises/practical assignments
Entry requirement	Electricity or Electronics Vocational Training Program or Engineering.

Industrial Robot Programming. Level 1 (ABB, FANUC, KUKA)

ADMA TRANSFORMATION AREA

Using robots improve the production and reduce time. It helps getting better work conditions. The objectives of the course are: Achieve robotics knowledges, Know robot safety, I/O, Calibration, Condition comands, Wait comands.

Advanced Manufacturing Technologies /
Digital Factory / Smart Manufacturing /
End-to-end Customer Focused
Engineering

Robot, programming, ABB,
FANUC, KUKA, AUTOMATIZATION

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Robotics	http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40	2
Operate industrial equipment	http://data.europa.eu/esco/skill/7c632656-361e-4db1-8d69-b9f85d6be0d0	2
Use automatic programming	http://data.europa.eu/esco/skill/7d10fcb2-b368-48ab-996b-7c9fafcf68ed	2
Manage health and safety standards	http://data.europa.eu/esco/skill/44e2c4c4-9fd2-42d4-a133-d81360ded4bc	3
Interpret technical texts	http://data.europa.eu/esco/skill/85c11255-469f-41bd-a6d1-382bc4a87783	2

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country / Spain
Language	English / Spanish
Education Subject	Introduction to industrial robots. Basic operation of the robot. Navigation through the programming unit. Program structure. Editing and execution of the program.
Mode of Learning	In Person

INFORMATION ABOUT THE COURSE

Workload / Duration	24 Hours
Location	IMH CAMPUS (Elgoibar)

Industrial Robot Programming. Level 2 (ABB, FANUC, KUKA)

ADMA TRANSFORMATION AREA

Using robots improve the production and reduce time. It helps getting better work conditions.

The objectives of the course are: To know how to program an industrial robot, to perform any automation process, to program interruption routines, to train the attendees to program industrial robots from the operator.

Advanced Manufacturing Technologies /
Digital Factory / Smart Manufacturing /
End-to-end Customer Focused
Engineering

ROBOT, PROGRAMMING, ABB,
FANUC, KUKA, AUTOMATIZATION

CURRENT MATURITY
LEVEL (1-5)

4



TARGET MATURITY
LEVEL (1-5)

5

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Robotics	http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40	3
Operate industrial equipment	http://data.europa.eu/esco/skill/7c632656-361e-4db1-8d69-b9f85d6be0d0	3
Use automatic programming	http://data.europa.eu/esco/skill/7d10fcb2-b368-48ab-996b-7c9fafcf68ed	3
Manage health and safety standards	http://data.europa.eu/esco/skill/44e2c4c4-9fd2-42d4-a133-d81360ded4bc	4
Interpret technical texts	http://data.europa.eu/esco/skill/85c11255-469f-41bd-a6d1-382bc4a87783	3

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country / Spain
Language	English / Spanish
Education Subject	Data type structures. Program flow instructions. Advanced movement instructions. Time control. Interrupt routines. Creation of forbidden zones.
Mode of Learning	In Person

INFORMATION ABOUT THE COURSE

Workload / Duration	25 Hours
Location	IMH CAMPUS (Elgoibar)
Entry requirement	Industrial Robot Programming course (level 1) completed or similar knowledge

Internet of Things (IoT)

ADMA TRANSFORMATION AREA

MC 2325 Internet of Things (IoT)

Part of the lecture T4WIW9014

Learning Outcome: Current topics in automation, including the latest developments and trends in the field (e.g. IoT).

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Automation

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	IoT
Learner Profile	A-Level
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Lecture
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.10.25 – 31.12.25
Workload / Duration	2 ECTS / 50h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO skills

Internet of Things

<http://data.europa.eu/esco/skill/f049d050-12da-4e40-813a-2b5eb6df6b51>

IoT SENSOR DEVELOPMENT AND LORAWAN NETWORK CONFIGURATION

ADMA TRANSFORMATION AREA

The program presents the basic concepts of developing connected IoT devices for smart cities and the use of modern low-power wireless LoRaWAN technology.

<https://ict-academy.si/usposabljanje/razvoj-senzorja-iot-in-konfiguracija-omrezja-lorawan/>

Smart manufacturing

IoT, LPWAN Technologies, Sensor Configuration, Data Visualization

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Internet of Things	http://data.europa.eu/esco/skill/f049d050-12da-4e40-813a-2b5eb6df6b51	4
Information and communication technologies (icts)	http://data.europa.eu/esco/iscsd-f/06	4

GENERAL INFORMATION

Course provider	University of Ljubljana Faculty of electrical engineering
Country	Slovenia
Language	Slovenian
Education Subject	This educational content covers the fundamentals of IoT devices for smart cities, explores low-power wireless communication technologies like LPWAN (LTE-M, NB-IoT, LoRaWAN, SigFox), and guides through the process of building, configuring, and deploying IoT sensor systems, including server setup and data analysis.
Learner Profile	Adult
Mode of Learning	In Person
Credential Type	Paper based
EQF Level	EQF 5, 6
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Start Date – End Date	On demand
Workload / Duration	8 hours
Price	400,00 EUR + VAT
Location	Ljubljana
Learning activities	Practical exercise, training, problem solving
Assessment Type	Practical test
Entry requirement	Advance knowledge in IT

MCRO-250V Lean Fundamental Micro-Credential

ADMA TRANSFORMATION AREA

ADVANCED MANUFACTURING

Lean Business Operations

CURRENT
MATURITY
LEVEL 2

TARGET
MATURITY
LEVEL 4

Lean is an organizational philosophy, and an approach to business, that develops people through respect, training and engagement to facilitate problem solving that drives innovation and productivity. Though Lean methodologies are already common in fields such as manufacturing and supply chain management, every field from healthcare to construction can benefit from this philosophy.

[MCRO 250V Lean Fundamentals Micro-Credential](#)

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
0413 - Lean project management	http://data.europa.eu/esco/skill/da6393d5-a53c-4863-abc7-51f36281d74e	4

GENERAL INFORMATION

Course provider	Camosun College / ProSIT
Country	Canada
Language	English
Education Subject	Business
Learner Profile	College Students
Mode of Learning	Online
Credential Type	Micro-Credential
EQF Level	3
Teaching Methodology	Theoretical
Learning Environment	Online

INFORMATION ABOUT THE COURSE

Start Date – End Date	Self-paced, maximum length one year
Workload / Duration	One Year
Price	\$40.00 CAD
Location	Camosun College
Learning activities	Lectures and analysis
Assessment Type	Exams
Entry requirement	None
Admission procedure	Apply online; no prerequisites

LEAN Introduction

ADMA TRANSFORMATION AREA

This training is an introduction to LEAN. It provides basic principles like value flows, waste, Kaizen.

<https://community.lcamp.eu/catalog-item/production-philosophy/>

Human Centred Organisation

LEAN, TPS, 5S, Kaizen

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 2

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Continuous improvement philosophies	http://data.europa.eu/esco/skill/0550431f-9c8b-4204-9c45-59bc5feacf06	2

GENERAL INFORMATION

Course provider	Curt Nicolín Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	Production Philosophy
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Theoretical, Practical
Learning Environment	Classroom, Educational Lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Theoretical and practical training
Assessment Type	Theoretical and practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

MAKE 3D SLICING SETTINGS

ADMA TRANSFORMATION AREA

Making flow, speed, extrusion width settings in 3d slicing programs.

<https://community.lcamp.eu/catalog-item/make-3d-slicing-settings/>

SMART MANUFACTURING

SMART PROTOTYPING

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D printing process	3D printing process	4

GENERAL INFORMATION

Course provider	GEBKIM VET
Country	Türkiye
Language	Turkish
Education Subject	This course teaches learners how to prepare and optimize 3D models for printing by using slicing software. It covers layer settings, infill, support structures, temperature control, and material-specific configurations to ensure high-quality additive manufacturing output.
Learner Profile	VET Students
Mode of Learning	Online / Hybrid / In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	30 Hours
Location	GEBKIM VET
Learning activities	Lectures, Practices, Lab Work
Assessment Type	Practical slicing tasks and print project, Peer and instructor evaluation of slicing quality
Entry requirement	Basic computer skills and interest in digital design or manufacturing
Admission procedure	Online or in-person application submission

Manufacturing a part using 3D printing (with wire)

ADMA TRANSFORMATION AREA

Using a computer equipped with CAD software and 3D printing software, learners must process files and prepare the necessary file for optimal 3D printing of a part. Learners will develop skills to process CAD files, optimize part geometry, and generate 3D printing-ready files, ensuring accuracy, efficiency, and print quality.

<https://decouverte.mon-ent-occitanie.fr/>

Advanced Manufacturing
Technologies

CAD, 3D printing

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Use CAD software	http://data.europa.eu/esco/skill/b34e2ba1-9080-48c9-9b42-ee9192a4d3f1	3
3D modelling	http://data.europa.eu/esco/skill/97965983-0da4-4902-9daf-d5cd2693ef73	3

GENERAL INFORMATION

Course provider	La Découverte
Country	France
Language	French
Education Subject	Manufacturing engineering
Learner Profile	EQF 4
Mode of Learning	In Person
Credential Type	Baccalaureate
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	September 2025
Workload / Duration	3 Hours
Location	Lycée La Découverte Decazeville France

Manufacturing process design

ADMA TRANSFORMATION AREA

Design the manufacturing process by machining the chassis plates of the LCAMP CLF's robot

<https://decouverte.mon-ent-occitanie.fr/presentation-du-lycee/nos-filieres/bts-erom-18018.htm>

Advanced Manufacturing Technologies

Manufacturing process, LCAMP robot, CLF

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Planning production processes	http://data.europa.eu/esco/skill/e6eeb84c-ad99-42e2-b883-e6ce338aef59	3
Select material to process	http://data.europa.eu/esco/skill/d55e3866-3ec1-4bbb-b946-2c16696d0dcb	3
Use CAM software	http://data.europa.eu/esco/skill/7a757fa5-9a6f-43ab-9e66-f8f4dba1ffcb	3
Assembling and fabricating products	http://data.europa.eu/esco/skill/b8e142fe-e508-42b1-b037-efebcef3a7	3
Control production	http://data.europa.eu/esco/skill/feceacee-d425-4e73-821a-02dfb85084db	2

GENERAL INFORMATION

Course provider	Lycée La Découverte
Country	France
Language	French
Education Subject	Manufacturing processes
Learner Profile	Learners EQF 5 involved in LCAMP's CLF i BTS CPRP
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	5
Teaching Methodology	Practical in CLF
Learning Environment	CLF

INFORMATION ABOUT THE COURSE

Start Date – End Date	Decembre 2025 – January 2026
Workload / Duration	2 months
Location	Lycée La Découverte Decazeville France
Learning activities	Manufacturing process design course + Practical work (design and implement the manufacturing process of the chassis
Assessment Type	Summative assesent : manufacturing document and oal presentation of the manufacturing process
Admission procedure	Be registered in theBTS CPRP programme

MENG-141 Manufacturing Processes 1

ADMA TRANSFORMATION AREA

ADVANCED MANUFACTURING

Manufacturing Tools

CURRENT
MATURITY
LEVEL 2

TARGET
MATURITY
LEVEL 4

Students will be introduced to manufacturing processes and basic measuring tools. The safe and effective use of common manufacturing tools is emphasized. Students then work with machine and hand tools to manufacture a project set by the instructor. Only open to students in the Mechanical Engineering Technology and Mechanical Engineering Technology Access programs.

[MENG 141 - Manufacturing Processes 1 - Modern Campus Catalog™](#)

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
K072 Manufacturing and Processing	http://data.europa.eu/esco/iscsed-f/072	4
K071 Engineering and Engineering Trades	http://data.europa.eu/esco/iscsed-f/071	4

GENERAL INFORMATION

Course provider	Camosun College
Country	Canada
Language	English
Education Subject	Mechanical Engineering
Learner Profile	College Students
Mode of Learning	In Person
Credential Type	College Diploma
EQF Level	4
Teaching Methodology	Practical
Learning Environment	In Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	Four-month term
Workload / Duration	75 Hours
Price	\$562.38 CAD
Location	Camosun College
Learning activities	Lectures, analysis, and direct experience
Assessment Type	Papers / Exams / Physical Tests
Entry requirement	Requires prerequisite course from Camosun College
Admission procedure	Apply as part of Camosun mechanical engineering degree

MENG-141 Manufacturing Processes 2

ADMA TRANSFORMATION AREA

ADVANCED MANUFACTURING

Manufacturing Processes

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

Students will be introduced to automated machine tools including CNC lathes and milling machines. Using software, students will specify tools, set speeds and feeds and generate toolpaths to create machined parts. Work holding methods and tool selection will be reviewed. Use of laser cutter and 3D printing will also be explored. Only open to students in the Mechanical Engineering Technology program.

[MENG 244 - Manufacturing Processes 2/CAM - Modern Campus Catalog™](#)

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
K071 – Engineering and Engineering Trades	http://data.europa.eu/esco/iscd-f/071	4
S5.7.0 – Operate Machine Tools	http://data.europa.eu/esco/skill/f5750c05-7b15-4e0b-8591-f9a1bb95aaac	4

GENERAL INFORMATION

Course provider	Camosun College
Country	Canada
Language	English
Education Subject	Mechanical Engineering
Learner Profile	College Students
Mode of Learning	In Person
Credential Type	College Diploma
EQF Level	4
Teaching Methodology	Practical
Learning Environment	In Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	Four-month term
Workload / Duration	75 Hours
Price	\$551.34 CAD
Location	Camosun College
Learning activities	Lectures, analysis, and direct experience
Assessment Type	Papers / Exams / Physical Tests
Entry requirement	Requires prerequisite course from Camosun College
Admission procedure	Apply as part of Camosun mechanical engineering degree

MANUAL ASSEMBLY TECHNIQUES

ADMA TRANSFORMATION AREA

This course focuses on the fundamental skills required for manual assembly in industrial and manufacturing environments. It covers essential techniques, tools, and best practices for assembling mechanical and electronic components by hand.

https://lcamp.eu/wp-content/uploads/sites/53/2025/05/PPT_LFs-in-partners-labs2025_LCAMP-3.pdf (slide 38)

HUMAN-CENTERED
ORGANIZATION

ERGONOMIC PRACTICES AND
SAFETY FOCUS

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Apply Assembly Techniques	Apply Assembly Techniques	4

GENERAL INFORMATION

Course provider	GEBKIM VET
Country	Türkiye
Language	Turkish
Learner Profile	VET Students
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	12 Hours
Location	GEBKIM VET
Learning activities	Lecture, exercise, discussion, laboratory work
Assessment Type	Self-assessment learning diaries or portfolios – test reflection skills
Entry requirement	Basic mechanical or technical skills, Manual dexterity and visual-motor coordination
Admission procedure	Online or in-person application submission

ADMA TRANSFORMATION AREA

The Dual University Master's Degree in Digital Manufacturing responds to the new reality of companies within the framework of Industry 4.0, in which companies need professionals with a global vision of the Digital Factory, mastery of the associated technologies and capacity to lead the changes that the new industrial revolution implies in business models.

Digital Factory, Smart Manufacturing

Industry 4.0

CURRENT MATURITY
LEVEL (1-5)
3



TARGET MATURITY
LEVEL (1-5)
4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Internet of Things	http://data.europa.eu/esco/skill/f049d050-12da-4e40-813a-2b5eb6df6b51	3
Analyse Big Data	http://data.europa.eu/esco/skill/47a49cd6-097d-457a-9f7b-c290c14930d5	2
Perform data Mining	http://data.europa.eu/esco/skill/4216e465-7baa-4884-a241-54b197bb9278	2
Run simulations	http://data.europa.eu/esco/skill/4216e465-7baa-4884-a241-54b197bb9278	3

GENERAL INFORMATION

Course provider	IMH Campus
Country	Spain
Language	Spanish/English
Education Subject	Multidisciplinary training and preparation to provide solutions to the challenges posed by the different technologies of Industry 4.0 from a global perspective.
Learner Profile	Graduates in engineering or related fields. Who wish to broaden their skills and training in the area of Digital Manufacturing. Working professionals who wish to promote towards 5.0 profiles. Who wish to specialise in order to lead digitalisation projects within their own company.
Mode of Learning	In Person
Credential Type	Master's degree
Teaching Methodology	Dual

INFORMATION ABOUT THE COURSE

Workload / Duration	2250 Hours
Price	12700 €
Location	ELGOIBARKO INGENIARITZA DUALAREN ESKOLA (UPV/EHU) / IDEKO (Elgoibar) / TECNALIA (Donostia eta Zamudio) / VICOMTECH (Donostia) / TEKNIKER (Eibar)
Learning activities	Comprehensive Engineering Solutions / Systemic Organizational Processes / Research Methodology and Project /Leadership for New Business Models / Data Mining, Big Data, and AI / Applied Industrial Robotics / Industrial Technologies / Connected Industrial Systems

MDC – Method Design Concept

Methods Design Concept (MDC) is an industrial-engineering methodology for redesigning production processes, aimed at boosting productivity (Method, Performance, Utilisation) and, in turn, company profitability. The course equips participants with practical tools to calculate and realise concrete improvements along the production flow.

<https://www.smarttvalley.it/manufacturing/>

ADMA TRANSFORMATION AREA

Advanced Manufacturing Technologies; Smart Manufacturing; Value-Chain-Oriented Open Factory

MDC; SMED; Changeover standardisation; IED; OED; Time study & motion analysis; KPI monitoring; Process optimisation

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Planning production processes	http://data.europa.eu/esco/skill/e6eeb84c-ad99-42e2-b883-e6ce338aef59	3
Quality and cycle time optimisation	http://data.europa.eu/esco/skill/3b3b7373-220a-4287-87cf-e24a208b63c6	2
Design changeover processes using SMED standards	http://data.europa.eu/esco/skill/7af76a2b-6bba-4350-9bfa-980e50c98481	3
Monitor productivity KPIs	http://data.europa.eu/esco/skill/8dcbcabbe-09f7-4d11-940d-125af57bbc40	2

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Redesign and improvement of production processes
Learner Profile	Process manager, Management engineer, team leader
Mode of Learning	Hybrid
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, Experience lab with workstations

INFORMATION ABOUT THE COURSE

Workload / Duration	ECTS / Hours / Days / Weeks
Schedule information	3 days (24 h) – approx.
Price	Depending on time schedule and location
Location	Learning Factory, Smartt Valley
Learning activities	Lectures, SMED lab exercises
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	Basic Lean-manufacturing and production-process knowledge

The course's content, schedule and location can be adapted to the needs of the recipients.

MEASUREMENT AND CONTROL OF PHYSICAL VARIABLES

ADMA TRANSFORMATION AREA

Measures and controls pressure, temperature, flow, level.

<https://community.lcamp.eu/catalog-item/measurement-and-control-of-physical-variables/>

ADVANCED MANUFACTURING
TECHNOLOGIES

SMART SENSORS

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Use measurement instruments	Use measurement instruments	4

GENERAL INFORMATION

Course provider	GEBKIM VET
Country	Türkiye
Language	Turkish
Education Subject	This course focuses on the measurement, monitoring, and control of key physical variables such as temperature, pressure, flow, level, and speed in industrial systems using sensors, transducers, and control devices.
Learner Profile	VET Students
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	80 Hours
Location	GEBKIM VET
Learning activities	Lectures, Practices, Lab Work
Assessment Type	Lab performance, Design and implementation of a control system
Entry requirement	Motivation for working in technical and industrial settings
Admission procedure	Online or in-person application submission

BUS 232 – Operations Management

ADMA TRANSFORMATION AREA

ADVANCED MANUFACTURING

OPERATIONS MANAGEMENT

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

This course provides a detailed look at Operations Management and its practical application to service and manufacturing operations. Numerous cases and off-campus tours are used. Topics include: supply chain management, forecasting, location selection, allocating resources, designing work systems, capacity planning, scheduling, quality management, inventory control and transportation.

[BUS 232 - Operations Management - Modern Campus Catalog™](#)

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
S1.2 Liasing and Network	http://data.europa.eu/esco/skill/b76cd1e5-d5e7-464a-b7bb-4164d3616452	4
S2.1.0 Conducting studies, investigations and examinations	http://data.europa.eu/esco/skill/8fde007e-ea4c-48c2-84c5-752834acd31d	4
S4.0 – Management Skills	http://data.europa.eu/esco/skill/c1a13ee0-b00d-4cfa-a22c-20d284e398b0	4

GENERAL INFORMATION

Course provider	Camosun College
Country	Canada
Language	English
Education Subject	Business
Learner Profile	College Students
Mode of Learning	In Person
Credential Type	College Diploma
EQF Level	4
Teaching Methodology	Theoretical
Learning Environment	In Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	Four-month term
Workload / Duration	45 Hours
Price	\$290.25 CAD
Location	Camosun College
Learning activities	Lectures, case studies, and analysis
Assessment Type	Papers / Exams / Case Studies
Entry requirement	Requires prerequisite course from recognized post-secondary institution
Admission procedure	Apply as part of Camosun business degree

PERFORMING A SCIENTIFIC RESEARCH

ADMA TRANSFORMATION AREA

The course's aim is to gain, correct or improve knowledge about phenomena by using scientific methods and techniques, based on empirical or measurable observations.

<https://community.lcamp.eu/catalog-item/gebkim-vet-performing-a-scientific-research/>

HUMAN-CENTERED
ORGANIZATION

SOCIAL IMPACT

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Perform scientific research	Perform scientific research	4

GENERAL INFORMATION

Course provider	KPDoNE
Country	Türkiye
Language	Turkish
Education Subject	This course introduces students to the principles and methods of scientific research, including how to design, conduct, document, and present a research study using systematic inquiry and academic ethics.
Learner Profile	VET Students and Teachers
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	42 Hours
Location	KPDoNE
Learning activities	Defining research problems and hypotheses, Data collection (observation, experiment, survey), Data analysis (basic statistics, charts)
Assessment Type	Individual or group research project, Oral or visual presentation
Entry requirement	Interest in inquiry, analysis, and technical/scientific communication
Admission procedure	Online or in-person application submission

PNEUMATICS BASIC TRAINING

ADMA TRANSFORMATION AREA

Course short description (+ URL): Acquire the physical foundations of pneumatics, understand the operation of pneumatic components, design pneumatic control systems, operate pneumatic components, maintain pneumatic systems.

https://www.tscmb.si/wp-content/uploads/2023/09/STRUKTURA-PNEVMATIKA_osnovni-seminar.pdf

Smart manufacturing

Pneumatics, Industrial Automation, control components

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 2

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Pneumatics	http://data.europa.eu/esco/skill/bf419e00-8548-491a-a06f-d72ab439df2f	2
Install pneumatic systems	http://data.europa.eu/esco/skill/82da5835-1759-4eeb-9d58-a834ee80384e	2

GENERAL INFORMATION

Course provider	TŠC Maribor
Country	Slovenia
Language	Slovenian
Education Subject	Engineering
Learner Profile	Students, workers
Mode of Learning	In Person
Credential Type	Paper based
EQF Level	5
Teaching Methodology	Theoretical / Practical
Learning Environment	School laboratory

INFORMATION ABOUT THE COURSE

Start Date – End Date	March, April, May 2025
Workload / Duration	4h/day, 2 times a week (24 hours total)
Price	380,00 EUR + VAT (incl. welder certification)
Location	Zolajeva ulica 12, 2000 Maribor, Slovenia
Learning activities	Lecture, exercise, discussion, laboratory work
Assessment Type	Self-assessment learning diaries or portfolios – test reflection skills
Entry requirement	Persons who design, construct and manufacture devices with pneumatic components and service and maintain pneumatic systems, and persons who wish to increase their knowledge for their personal development and improve their competitiveness in the labor market.
Admission procedure	https://www.tscmb.si/wp-content/uploads/2025/02/VABILO_PNEVMATIKA_OSNOVNI_februar_2025.pdf

Predictive maintenance

ADMA TRANSFORMATION AREA

This course provides the foundational understanding of predictive maintenance and its role in modern industry. Learners are introduced to the basic principles of condition monitoring, data collection, and analysis used to anticipate equipment failures.

<https://3tindustry40training.eu/course/view.php?id=5>

Advanced Manufacturing
Technologies

Maintenance

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Maintenance and repair	http://data.europa.eu/esco/skill/6cb9c23b-e3bc-4917-b588-26c4cef9d920	1
Build predictive models	http://data.europa.eu/esco/skill/38d49d88-9069-467b-b29e-3cae739bdd4d	1

GENERAL INFORMATION

Course provider	3TIndustry 4.0
Country	France, Spain and Germany
Language	English
Education Subject	Maintenance
Mode of Learning	Online
Credential Type	None
EQF Level	None
Teaching Methodology	Theoretical
Learning Environment	E Learning

INFORMATION ABOUT THE COURSE

Start Date – End Date	Not applicable
Workload / Duration	3 Hours
Price	Free
Location	Online
Learning activities	Theoretical
Assessment Type	Quiz
Entry requirement	None
Admission procedure	Registration to the platform

Problem Solving

ADMA TRANSFORMATION AREA

The course offers the opportunity to explore and enhance your creative potential, while learning to balance divergent and convergent thinking in a dynamic and effective way.

You will also gain hands-on experience with tools and techniques designed to help you generate creative ideas and develop innovative solutions to real-world challenges.

<https://www.rolld.com/academy-offering/>

Human Centred Organization

Teamwork

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Solving problems	http://data.europa.eu/esco/skill/S1.9.0	4

GENERAL INFORMATION

Course provider	Rold Academy
Country	Italy
Language	Italian (but it can also be delivered in English)
Education Subject	Problem Solving
Learner Profile	Roles involved in business organization (HR, Managers, Area Managers, Team Leaders)
Mode of Learning	In Person
Credential Type	Certificate
EQF Level	5
Teaching Methodology	Theoretical and Practical
Learning Environment	MIND (Milan Innovation District), but it can also be arranged at company premises

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to requests
Workload / Duration	8 hours (4h per day)
Schedule information	Possibility to arrange specific courses
Price	800 €
Location	Milan (Italy)
Learning activities	Understanding the process of Applied Creativity and Creative Problem Solving (CPS) and how to use it to overcome creative challenges Experiencing the dynamic balance between divergent and convergent thinking, and learn how to apply it to achieve creative outcomes Being able to identify personal traits (Creative Thinking Preferences) and environmental factors (Creative Environment), as well as behaviors and attitudes that can enhance or inhibit creativity
Assessment Type	Questionnaire
Entry requirement	No entry requirement
Admission procedure	Interview

Course schedules and content can be customized, and additional follow-up meetings and continuous learning activities activities can be planned.

Process Automation with PLC, HMI and electro pneumatic systems

ADMA TRANSFORMATION AREA

This intensive training module focuses on the automation of industrial processes using PLCs, HMIs, and electropneumatic systems. The course combines theoretical lessons, hands-on workshops, and real-life challenges to develop technical skills in programming, commissioning, and troubleshooting automated systems. Participants will work in international teams to control FESTO stations, apply GRAFCET and KOP programming, and complete a challenge-based project simulating real industrial tasks. The module promotes collaborative learning and includes cultural activities to enrich the international experience.

Digital Factory, Advanced Manufacturing Technologies

Automation, PLC, HMI, electropneumatic

CURRENT MATURITY
LEVEL (1-5)

3



TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Programmable logic controller	http://data.europa.eu/esco/skill/6468e5fb-f3be-4025-87be-4b6556755c61	3
Use automatic programming	http://data.europa.eu/esco/skill/7d10fcb2-b368-48ab-996b-7c9fafcf68ed	3
Install automation components	http://data.europa.eu/esco/skill/818c2b89-1335-4443-ada7-e1046862e273	3
Human-robot collaboration	http://data.europa.eu/esco/skill/0f5374e3-0b9b-4b16-af7a-49654ce0bb15	2

GENERAL INFORMATION

Course provider	CIFP Armeria eskola LHII
Country	Basque country – Spain
Language	English
Education Subject	PLC programming
Learner Profile	Automation students
Mode of Learning	In Person
EQF Level	4/5
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Workshop

INFORMATION ABOUT THE COURSE

Workload / Duration	60 Hours
Location	CIFP Armeria eskola LHII
Learning activities	Identify and wire PLC inputs and outputs, including PNP/NPN configurations. Sequential control, design and simulate GRAFCET diagrams for basic automation sequences. Use TIA Portal, program PLCs with ladder logic (KOP). Simulate and debug programs, practicing fault detection, signal tracing, and testing system behavior in manual and automatic modes. Work on FESTO workstations, creating I/O tables, GRAFCET diagrams, and full PLC programs.
Assessment Type	Final project
Entry requirement	Enrolment in automation cycle EQF 4/5

This course delivers a thorough grounding in advanced data-analysis and AI methods (Process Mining, Machine Learning, Predictive/Prescriptive Analytics, RPA and dashboards) to optimize processes across production, supply chain, maintenance and customer service. Participants will learn to deploy digital tools for real-time KPI monitoring and rapid issue detection.

<https://www.smarttvalley.it/manufacturing/>

ADMA TRANSFORMATION AREA

Digital Factory; Advanced Manufacturing Technologies; Smart Manufacturing

Business process mapping · Process Mining · Machine Learning · Predictive Maintenance · Prescriptive Analytics · Demand Forecasting · RPA & Hyperautomation · Dashboards & Real-time KPI monitoring · IoT sensor integration

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Analyse and map business processes	http://data.europa.eu/esco/skill/56042303-972b-41be-9310-58467599ff7e	3
Use advanced data-analysis and mining tools	http://data.europa.eu/esco/skill/4216e465-7baa-4884-a241-54b197bb9278	2
Develop predictive and prescriptive models	http://data.europa.eu/esco/skill/e2887d71-8ff4-4188-9926-22bdaefa7713	4
Build interactive dashboards for real-time KPI monitoring	http://data.europa.eu/esco/skill/8dcbcabbe-09f7-4d11-940d-125af57bbc40	3

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Process Optimization via Advanced Data Analytics & AI
Learner Profile	Data analysts, process-improvement specialists, operations managers, digital transformation leads
Mode of Learning	Hybrid/ In-person
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, IT lab

INFORMATION ABOUT THE COURSE

Workload / Duration	4 days (32 h) – approx.
Price	Depending on time schedule and location
Location	Learning Factory, Smartt Valley
Learning activities	Process mapping exercises, Process Mining case studies, ML model builds, dashboard creation workshops
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	Basic statistics

The course's content, schedule and location can be adapted to the needs of the recipients.

This course enables professionals to design and deploy Digital Twin systems by integrating IoT sensors, dynamic process models, and advanced analytics for real-time monitoring, simulation, and optimization of physical assets. It also demonstrates how AR/VR technologies enhance operator training, hazard detection, and field operations to boost quality, safety, and time-to-market.

<https://www.smarttvalley.it/manufacturing/>

ADMA TRANSFORMATION AREA

Digital Factory; Advanced Manufacturing Technologies; Smart Manufacturing

Digital Twin · IoT integration · Real-time simulation · Advanced analytics · AR/VR training · Hazard detection · Operator support systems · Process optimization

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Digital modelling technologies	http://data.europa.eu/esco/skill/737f8895-46df-4283-8f38-13f3f0fc3b77	3
Integrate IoT sensor data for process monitoring	http://data.europa.eu/esco/skill/46ec0033-3c71-415e-bcff-b065675ba2dc	3
Apply advanced process simulation and analytics	http://data.europa.eu/esco/skill/b9e451f5-a62f-4a16-a229-255fa5c222a5	4
Design and implement AR/VR training environments	http://data.europa.eu/esco/skill/0620ecd1-e4b1-4dfa-972b-38a93e5ebd9d	3

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Process Simulation Systems, Digital Twin, AR/VR
Learner Profile	Industry automation engineers, maintenance managers, digital transformation specialists
Mode of Learning	Hybrid/In-persons
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, IT lab with VR solutions, Experience lab with XR-equipped workstations, Campus Smartt Valley KIIS

INFORMATION ABOUT THE COURSE

Workload / Duration	3 days (18 h) – approx.
Price	Depending on time schedule and location
Location	Smartt Valley
Learning activities	Lectures, simulation labs, AR/VR scenario exercises
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	Basic knowledge of IoT, production processes; familiarity with digital analytics

The course's content, schedule and location can be adapted to the needs of the recipients.

Product Digital Twin

ADMA TRANSFORMATION AREA

The course offers an intensive, dynamic learning experience on the strength of the Competence Centre demonstration areas, integrating theory and practice and team project work at the end of the course. The approach is multidisciplinary, collaborative, experiential and concrete.

<https://www.made-cc.eu/en/servizio/training-skills/>

Digital Factory, Smart Manufacturing

Digitalisation, design, automation

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D Modelling	http://data.europa.eu/esco/skill/97965983-0da4-4902-9daf-d5cd2693ef73	2
Run simulations	http://data.europa.eu/esco/skill/a432ffcd-b58d-4417-836c-ea3282b626ca	3

GENERAL INFORMATION

Course provider	MADE Competence Center Industry 4.0
Country	Italy
Language	Italian
Education Subject	Digital Twin, Product Lifecycle, Industry 4.0
Learner Profile	Engineers, Technical Designers, Workers in product development roles
Mode of Learning	Online / Hybrid / In Person
Credential Type	Microcredential
EQF Level	EQF3
Teaching Methodology	Practical
Learning Environment	Classroom

INFORMATION ABOUT THE COURSE

Workload / Duration	6 hours
Price	450 EUR
Location	Milan, Italy / online
Learning activities	Workshops, simulation labs, technology tours
Assessment Type	Group exercises and applied project evaluation
Entry requirement	Familiarity with CAD/PLM and industrial design processes
Admission procedure	By filling up online module - Formare competenze - Made

APMC 504V – Project Closing & Continuous Improvement

ADMA TRANSFORMATION AREA

Learn the close out procedures for an individual phase or completed project. You will work through an administrative closure, financial closure and transfer to operations, using the lessons learned review process for continuous improvement. Also, you will explore the Organizational Project Management Maturity Model (OPM3)[®] and how to set up a Project Management Office.

[APMC 504V Project Closing & Continuous Improvement](#)

END-TO-END CUSTOMER-
FOCUSED ENGINEERING

APPLIED PROJECT MANAGEMENT

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
S4.2 Organising, Planning, and Scheduling Work and Activities	management skills	4
S4.4 Performing administrative activities	management skills	4
S4.9 Decision-Making	management skills	4

GENERAL INFORMATION

Course provider	Camosun College / ProSIT
Country	Canada
Language	English
Education Subject	Business
Learner Profile	College Students
Mode of Learning	Online
Credential Type	College Certificate
EQF Level	4
Teaching Methodology	Theoretical
Learning Environment	Online

INFORMATION ABOUT THE COURSE

Start Date – End Date	Self-Paced
Workload / Duration	Self-Paced
Price	\$487.47 CAD
Location	Camosun College
Learning activities	Lectures and analysis
Assessment Type	Exams
Entry requirement	Must be enrolled in Applied Project Management Certificate program
Admission procedure	Enroll as part of program above

APMC 500V – Project Initiation and Charter Development

ADMA TRANSFORMATION AREA

Learn the fundamentals of project management for organizations including project selection and start up methods. Gain practical experience defining specific project needs and developing a project charter that provides the correct level of detail for your situation.

[APMC 500V Project Initiation & Charter Development](#)

END-TO-END CUSTOMER-
FOCUSED ENGINEERING

APPLIED PROJECT MANAGEMENT

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
S4.2 Organising, Planning, and Scheduling Work and Activities	management skills	4
S4.4 Performing administrative activities	management skills	4
S4.9 Decision-Making	management skills	4

GENERAL INFORMATION

Course provider	Camosun College / ProSIT
Country	Canada
Language	English
Education Subject	Business
Learner Profile	College Students
Mode of Learning	Online
Credential Type	College Certificate
EQF Level	3
Teaching Methodology	Theoretical
Learning Environment	Online

INFORMATION ABOUT THE COURSE

Start Date – End Date	Self-Paced
Workload / Duration	Self-Paced
Price	\$487.47 CAD
Location	Camosun College
Learning activities	Lectures and analysis
Assessment Type	Exams
Entry requirement	Must be enrolled in Applied Project Management Certificate program
Admission procedure	Enroll as part of program above

PLM management: 3D experience

This course introduces the fundamentals of Product Lifecycle Management (PLM) using Dassault Systèmes 3DEXPERIENCE platform. Based on the practical case of the LCAMP robot development, participants will learn basic PLM management and how to manage design data in a collaborative and efficient way.

<https://www.maltuna.eus/en/>

ADMA TRANSFORMATION AREA

Advanced Manufacturing Technologies, Digital Factory

PLC, automation, robotics

CURRENT
MATURITY (1-5):
3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Apply product lifecycle management (PLM)	https://esco.ec.europa.eu/en/skill/c8399675-1d86-4d67-8004-97b37ef36f39	3
Manage data for product development	https://esco.ec.europa.eu/en/skill/3a34535a-f2ef-441e-8a00-fd7e95d4e60d	4
Collaborate in engineering processes	https://esco.ec.europa.eu/en/skill/44db4045-b91a-459e-9384-9f5280fbc230	4
Use computer-aided software (CAD, CAM, CAE)	https://esco.ec.europa.eu/en/skill/61a19164-7277-4d3b-931d-2779a7de18f6	4

GENERAL INFORMATION

Course provider	Miguel Altuna LHII
Country	Basque Country, Spain
Language	English
Education Subject	Higher Technician in Mechanical Manufacture Design
Learner Profile	students EQF5, workers
Mode of Learning	In Person
EQF Level	EQF5
Teaching Methodology	Practical in CLF
Learning Environment	CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	10 hours
Price	0€
Location	Bergara, Miguel Altuna LHII
Assessment Type	Project
Entry requirement	EQF5 level

Redesign of parts and assembly using CAD software

ADMA TRANSFORMATION AREA

Advanced Manufacturing
Technologies

CAD software, Redesign

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

Using a computer equipped with CAD software, learners must modify existing parts and assemblies to facilitate the manufacturing of certain components, improve the assembly of specific sets, and enhance performance. Participants will develop skills in redesigning components, adjusting assemblies for better fit and function, and applying engineering principles to optimize designs.

<https://decouverte.mon-ent-occitanie.fr/presentation-du-lycee/nos-filieres/>

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
CAD software	http://data.europa.eu/esco/skill/a2b5dcf3-5b6a-453d-876c-cff540c0faf1	3
Industrial design	http://data.europa.eu/esco/skill/efacdaad-ab73-4056-bee3-4eb34b458bf6	3
Engineering principles	http://data.europa.eu/esco/skill/209a5498-3449-4689-8ed9-bd08cab4fd78	3

GENERAL INFORMATION

Course provider	Lycée La Découverte
Country	France
Language	French
Education Subject	Design engineering
Learner Profile	Learners EQF4
Mode of Learning	In Person
Credential Type	Baccalaureate
EQF Level	4
Teaching Methodology	Theoretical & Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	September 2025
Workload / Duration	6 Hours
Location	Lycée La Découverte Decazeville France
Learning activities	Theoretical classes and practical work

Reverse Engineering with 3D CAD: NX

ADMA TRANSFORMATION AREA

Practical exercises using the CAD program demonstrate the work process of reverse engineering and its applications. Suitable for CAD software users who want to learn about the reverse engineering process with NX.

<https://www.imh.eus/en>

Advanced Manufacturing
Technologies, Digital Factory

3D modeling, reverse engineering,
solid edge

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Perform reverse engineering	https://esco.ec.europa.eu/en/skill/0d7f5b15-9b59-4cd6-b8fd-bb5f390234d5	3
Use computer-aided design software (CAD)	https://esco.ec.europa.eu/en/skill/ba1e95b2-7e99-4ec5-8d51-8cb13e4f74e2	4
Create 3D models	https://esco.ec.europa.eu/en/skill/33265b4d-92c7-4532-b1de-fd42c3e049b4	4
Interpret technical drawings	https://esco.ec.europa.eu/en/skill/f387a644-d24b-4d83-b948-80e4f43c5130	3

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country/ Spain
Language	English, Spanish
Mode of Learning	In-Person
Credential Type	Microcredential Course
EQF Level	3
Teaching Methodology	Theoretical / Practical

INFORMATION ABOUT THE COURSE

Workload / Duration	15 hours
Location	Elgoibar, Basque Country

SERVICE / TOOL DESCRIPTION

1. General concepts.
2. Tools for repairing the scanned file.
3. Methods for reverse engineering.
4. Directly fast modeling of surfaces.
5. Color classification method
6. Extract curves and create surfaces
7. Boundary curve projection method.

Reverse Engineering with 3D CAD: Solid Edge

Practical exercises using the CAD program demonstrate the work process of reverse engineering and its applications. Suitable for CAD software users who want to learn about the reverse engineering process with Solid Edge.

<https://www.imh.eus/en>

ADMA TRANSFORMATION AREA

Advanced Manufacturing
Technologies, Digital Factory

3D modeling, reverse engineering,
solid edge

CURRENT
MATURITY (1-5)
LEVEL: 3



TARGET
MATURITY
LEVEL (1-5): 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Perform reverse engineering	https://esco.ec.europa.eu/en/skill/0d7f5b15-9b59-4cd6-b8fd-bb5f390234d5	3
Use computer-aided design software (CAD)	https://esco.ec.europa.eu/en/skill/ba1e95b2-7e99-4ec5-8d51-8cb13e4f74e2	4
Create 3D models	https://esco.ec.europa.eu/en/skill/33265b4d-92c7-4532-b1de-fd42c3e049b4	4
Interpret technical drawings	https://esco.ec.europa.eu/en/skill/f387a644-d24b-4d83-b948-80e4f43c5130	3

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country/ Spain
Language	English, Spanish
Mode of Learning	In-Person
Credential Type	Microcredential Course
EQF Level	3
Teaching Methodology	Theoretical / Practical

INFORMATION ABOUT THE COURSE

Workload / Duration	15 hours
Location	Elgoibar, Basque Country

SERVICE / TOOL DESCRIPTION

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2. Tools for repairing the scanned file.
3. Methods for reverse engineering.
4. Directly fast modeling of surfaces.
5. Color classification method
6. Extract curves and create surfaces
7. Boundary curve projection method.

Risk and change management

Risk and change management

Part of the lecture T4WIW9146

Learning Outcome: Learning psychology / Decision-making / Organisational culture / Personality description / Motivation / Group dynamics / Stress and coping

<https://www.heidenheim.dhbw.de/en/home>

ADMA TRANSFORMATION AREA

Value Chain Oriented Open
Factory

Psychology, organisation,
decision, management

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Understanding behaviour: psychological foundations for organisation and decision-making
Learner Profile	A-Level
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Theoretical / Practical
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.10.25 – 31.12.25
Workload / Duration	1 ECTS /30h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO Skills

Apply change management

<http://data.europa.eu/esco/skill/3c03ee71-4a23-448f-b79e-81fd75d27dca>

Risk management

<http://data.europa.eu/esco/skill/6eff134b-e34f-4d6e-a6e8-5e47cf2228d0>

Roadmap to Sustainability

ADMA TRANSFORMATION AREA

The course aims at supporting management and key personnel in acquiring the necessary skills for integrating sustainability practices into the company. Participants will be able to (i) Identify existing activities aligned with ESG principles, (ii) Effectively engage internal and external stakeholders, (iii) Analyze challenges and opportunities through the IRO approach (Impacts, Risks, Opportunities), (iv) define ESG strategy.

<https://www.rolld.com/academy-offering/>

Eco Factory

Environmental impact:
improvement strategies

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Promote sustainable management	http://data.europa.eu/esco/skill/6742977a-aa00-4c8c-9861-898b0373907e	4

GENERAL INFORMATION

Course provider	Rold Academy
Country	Italy
Language	Italian (but it can also be delivered in English)
Education Subject	Strategies for integrating sustainability practices in an SME
Learner Profile	Roles involved in business organization (HR, Managers, Area Managers)
Mode of Learning	In Person
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical and Practical
Learning Environment	MIND (Milan Innovation District), but it can also be arranged at company premises

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to requests
Workload / Duration	16 hours (4h per day)
Schedule information	Possibility to arrange specific courses
Price	1600 €
Location	Milan (Italy)
Learning activities	Mapping of existing activities and analysis of the company context Analysis of case studies and industry benchmarks (with a focus on SMEs and the supply chain) Interactive Workshop: Identification of Impacts, Risks, and Opportunities (IRO) Stakeholder Engagement: Defining key actors and engagement methods (internal and external – customers, suppliers, communities, etc.) Definition of Priority Actions based on relevance, feasibility, and impact Drafting of a Strategic Sustainability Plan (with focus on objectives, indicators, roles, and communication methods)
Assessment Type	Questionnaire
Entry requirement	No entry requirement
Admission procedure	Interview

Course schedules and content can be customized, and additional follow-up meetings and continuous learning activities activities can be planned.

Robot programming health and security

The focus of this course is operator safety. Technology's impact on occupational health and safety is explored together with ways technology can best be used to mitigate occupational injury and/or illness, where possible, synergically with productivity.

<https://www.made-cc.eu/it/corso/salute-e-sicurezza-nella-fabbrica-4-0-vr-ar-robotica-collaborativa-esoscheletri/>

ADMA TRANSFORMATION AREA

Digital Factory, Smart Manufacturing

Operator assistance systems, Collaborative robotics, Virtual design

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Occupational health	http://data.europa.eu/esco/skill/d5e39a53-4f54-4d5f-9df3-b49664c9559d	2
Robotics	http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40	2
Emergent technologies	http://data.europa.eu/esco/skill/42cb7669-c371-4903-9c0b-13db67b2e4bb	2

GENERAL INFORMATION

Course provider	MADE Competence Center Industry 4.0
Country	Italy
Language	Italian
Education Subject	Industry 4.0
Learner Profile	Operational-technical: entrepreneurs, Departmental Workers, Maintenance workers, HR, Programmers, ICT experts
Mode of Learning	Online / Hybrid / In Person
Credential Type	Microcredential
EQF Level	EQF3
Teaching Methodology	Practical
Learning Environment	Classroom

INFORMATION ABOUT THE COURSE

Start Date – End Date	22 October 2025
Workload / Duration	8 hours
Price	1000 EUR
Location	Milan, Italy
Learning activities	Participant-lecturer interaction during the lessons with a marked operational focus in teaching methods on real business context experience
Assessment Type	No formal exam or graded assessment. Participation-based evaluation
Entry requirement	No prior coding or deep technical expertise required, but a basic understanding of business or operations is probably expected
Admission procedure	By filling up online module - Formare competenze - Made

Robotics Kinematics and Control

ADMA TRANSFORMATION AREA

MC 2335 Robotics and Kinematics Control

Part of the lecture T3M30306

Learning Outcome: Kinematics and interpolation. Robot and process control. The use of robot systems (with case studies involving technical and economic analyses).

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Kinematics, interpolation, robot, systems

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Robotics and Kinematics Control
Learner Profile	A-Level
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Lecture
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.01.26 – 01.04.26
Workload / Duration	2 ECTS / 50h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO Skills

Human-robot collaboration

<http://data.europa.eu/esco/skill/0f5374e3-0b9b-4b16-af7a-49654ce0bb15>

Robotics Laboratory

ADMA TRANSFORMATION AREA

MC 2336 Robotics Laboratory

Part of the lecture T3M30306

Learning Outcome: Laboratory robotics. Case studies on programming various robotic systems in a laboratory environment.

<https://www.heidenheim.dhbw.de/en/home>

Advanced Manufacturing, Smart Manufacturing

Robotics, system, laboratory

CURRENT
MATURITY (1-5)
LEVEL 4



TARGET
MATURITY
LEVEL (1-5)
LEVEL 5

GENERAL INFORMATION

Course provider	DHBW Heidenheim
Country	Germany
Language	German
Education Subject	Robotics Laboratory
Learner Profile	A-Level
Mode of Learning	Laboratory
Credential Type	ECTS
EQF Level	EQF6
Teaching Methodology	Laboratory
Learning Environment	HVET Centre

INFORMATION ABOUT THE COURSE

Start Date – End Date	01.01.26 – 01.04.26
Workload / Duration	2 ECTS / 50h
Location	DHBW Heidenheim (Baden-Wuerttemberg Cooperative State University)

ESCO Skills

Set up automotive robot

<http://data.europa.eu/esco/skill/e975b791-b488-4935-be44-06f2f9a443bb>

Robotics

<http://data.europa.eu/esco/skill/e87ec79a-c9ff-46f5-84fa-7a0f394cdf40>

SIMATIC S7 SCL

ADMA TRANSFORMATION AREA

This course covers the advanced Structured Control Language (SCL) programming, which is increasingly replacing traditional Statement List (STL) programming due to more complex algorithms and evolving CPU architectures. Upon completion, participants will be capable of independently developing sophisticated algorithms and performing system diagnostics.

<https://www.dankon.si/izobra%C5%BEEvanje/simatic-s7-scl/#opis>

Smart manufacturing

SCL, PLC Programming, Data Processing, SIMATIC

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Industrial software	http://data.europa.eu/esco/skill/41ec47dd-08b3-464a-9c45-c706f3e74467	4
Operate programmable logic controllers (PLCs)	http://data.europa.eu/esco/skill/6468e5fb-f3be-4025-87be-4b6556755c61	4

GENERAL INFORMATION

Course provider	Dankon industrijska avtomatizacija
Country	Slovenia
Language	Slovenian
Education Subject	SIMATIC S7 SCL
Learner Profile	Workers, Adult
Mode of Learning	In Person
Credential Type	Paper based
EQF Level	EQF 4 and 5
Teaching Methodology	Theoretical / Practical
Learning Environment	Learning lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	06/10/2025 – 08/10/2025
Workload / Duration	24 hours (3 days)
Schedule information	06/10/2025 – 08/10/2025 (morning/afternoon)
Price	1.195,60 EUR (VAT included)
Location	Žalec
Learning activities	Practical example, diagnostic, creating programme code
Assessment Type	Practical exam
Entry requirement	Basic knowledge of electrical engineering

Selective Laser Sintering (SLS) 3D-Printing

ADMA TRANSFORMATION AREA

This training includes practical training using SLS-printing in ABS-plastic, for precise additive manufactured parts, using similar techniques as SLS-printing in Metal. This training also includes PPE.

<https://www.cng.se/te4-gymnasieingenj%C3%B6r>

Advanced Manufacturing
Technologies

Additive manufacturing, 3D-
printing, SLS, PPE

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D Printing process	http://data.europa.eu/esco/skill/2afb2b59-c9a3-4cf3-b1dd-1a2fad51e583	3
Maintain AM systems	http://data.europa.eu/esco/skill/3a699f1e-3803-4c1b-b6a8-6230cca92933	3
Set up AM systems	http://data.europa.eu/esco/skill/5f8e1bde-a2f9-4742-a4f4-309dfc2f6311	3

GENERAL INFORMATION

Course provider	Curt Nicolin Gymnasiet
Country	Sweden
Language	Swedish
Education Subject	Industrial production methods
Learner Profile	EQF 5
Mode of Learning	In Person
Credential Type	Certificate of Completion
EQF Level	EQF 5
Teaching Methodology	Practical
Learning Environment	Workshop

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to agreement
Workload / Duration	4 days
Schedule information	4 days training
Location	Finspång Sweden
Learning activities	Practical training in SLS 3D-printer, PPE
Assessment Type	Practical test
Entry requirement	Technical studies or similar completed EQF 4
Admission procedure	https://www.cng.se/

SOLIDWORKS ADVANCED PART MODELING

ADMA TRANSFORMATION AREA

SOLIDWORKS Advanced Part Modeling is designed for users who want to deepen their knowledge and master advanced modeling techniques. Participants will learn how to handle complex geometries, use advanced sketching and modeling methods, adapt imported geometry, and efficiently use the feature library.

<https://www.solidworld.si/izobrazevanja/napredno-modeliranje-kosov>

Smart manufacturing

3D Modeling, SOLIDWORKS, Multibody Design

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
3D modeling	http://data.europa.eu/esco/skill/97965983-0da4-4902-9daf-d5cd2693ef73	4
Interpret 3D plans	http://data.europa.eu/esco/skill/aafbb139-02c6-4f35-bc62-ff73faf97d6d	4

GENERAL INFORMATION

Course provider	Solid World
Country	Slovenia
Language	Slovenian
Education Subject	This course delves into advanced 3D modeling techniques, focusing on multibody design, complex 3D sketching, and sophisticated feature creation like sweeps, lofts, and advanced fillets. You'll gain expertise in managing complex geometries, working with imported data, and building reusable design libraries within a CAD environment.
Learner Profile	Adult, students
Mode of Learning	Online / Hybrid / In Person
Credential Type	Certificat
EQF Level	EQF 5
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Educational lab

INFORMATION ABOUT THE COURSE

Start Date – End Date	21/10/2025 – 29/10/2025
Workload / Duration	3 days (21 hours)
Schedule information	21/10/2025, 8:30 - 15:30 22/10/2025, 8:30 - 15:30 29/10/2025, 8:30 - 15:30
Price	570,00 EUR
Location	Rusjanova ulica 10, 1235 Radomlje
Learning activities	Practical exercises
Assessment Type	Certificat of achievement

Statistical Process Control (SPC)

ADMA TRANSFORMATION AREA

Statistical Process Control (SPC) is a method used in manufacturing and service industries to monitor and control processes through statistical techniques. This course provides participants with the knowledge and tools to apply SPC to improve process performance, reduce variability, and ensure product quality.

<https://community.lcamp.eu/catalog-item/statistical-process-control-spc/>

Digital Factory, Smart Manufacturing

Big data, data analysis, business intelligence

CURRENT MATURITY
LEVEL (1-5)

3

TARGET MATURITY
LEVEL (1-5)

4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Statistical process control	http://data.europa.eu/esco/skill/0c77bcd5-b94a-475d-98e9-5a4327e4d726	3
Apply control process statistical methods	http://data.europa.eu/esco/skill/ee8fee1a-75c1-43fb-b08d-779929f99249	3
Interpret current data	http://data.europa.eu/esco/skill/1e77e42a-181f-4b48-8e74-201ce50ffc29	3
Monitor manufacturing quality standards	http://data.europa.eu/esco/skill/3edfcb2b-2d0e-4673-87ce-f55c37eb5fca	2

GENERAL INFORMATION

Course provider	IMH CAMPUS
Country	Basque Country / Spain
Language	Spanish
Education Subject	Analyze a production process by means of control charts and capacity studies to predict its evolution over time and make decisions.
Learner Profile	Technical personnel responsible for production and quality areas who want to apply statistical control techniques.
Mode of Learning	Online
Credential Type	Microcredential Course
EQF Level	5
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	16 Hours
Price	250€
Location	Online
Entry requirement	Basic knowledge of production and quality control, and spreadsheet management.

Subtractive manufacturing processes

ADMA TRANSFORMATION AREA

This course introduces learners to the principles and practical aspects of subtractive manufacturing. Participants will learn how to prepare digital files, set up machining operations, and produce components. They will learn principles such as : file management, machining strategies, process control, and quality verification to ensure efficient and accurate manufacturing outcomes.

<https://community.lcamp.eu/catalog-item/subtractive-manufacturing-processes/>

Advanced Manufacturing Technologies

Manufacturing processes, machining strategies

CURRENT
MATURITY
LEVEL 3



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Manufacturing processes	http://data.europa.eu/esco/skill/3786b61f-f22e-48d1-af8d-ad4c354534db	3
Abrasive machining processes	http://data.europa.eu/esco/skill/f777173e-567c-4d4a-80b3-0ff5353bb9ce	3
Quality standards	http://data.europa.eu/esco/skill/8d4271ca-c9fd-40b3-875f-15f78332a49e	3

GENERAL INFORMATION

Course provider	Lycée La Découverte
Country	France
Language	French
Education Subject	Manufacturing processes
Learner Profile	Learners in EQF 5 diploma
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	5
Teaching Methodology	Theoretical & Practical
Learning Environment	VET Center

INFORMATION ABOUT THE COURSE

Start Date – End Date	2025-02-10 2025-02-11
Workload / Duration	12 Hours
Location	Lycée La Découverte Decazeville France
Learning activities	Theoretical classes and practical work
Entry requirement	EQF 4 diploma
Admission procedure	Registration – Parcoursup

Teamwork

Teamwork has proven to be a soft skill that is becoming increasingly important in the development of organizations, bringing numerous benefits to both the organization and the employee.

<https://www.lhusurbil.eus/web/Default.aspx?lng=EU>

ADMA TRANSFORMATION AREA

Human Centred Organization

Human, teamwork, Industry 5.0

CURRENT
MATURITY (1-5)
LEVEL: 4



TARGET
MATURITY
LEVEL (1-5): 5

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Work in a team	https://esco.ec.europa.eu/en/skill/431bd4e6-0994-4ef8-b388-71c9f326b0d7	4
Foster teamwork	https://esco.ec.europa.eu/en/skill/f69b145c-f4f4-4c5b-8b90-d3b252e9c81d	5
Communicate in a team	https://esco.ec.europa.eu/en/skill/8eae4f48-dab3-4484-8963-805e6bd72d4e	4
Show intercultural awareness	https://esco.ec.europa.eu/en/skill/c4d57995-6b4b-4d11-b430-4c198ae12e68	5

GENERAL INFORMATION

Course provider	CIFP Usurbil LHII
Country	Basque Country/ Spain
Language	Spanish
Learner Profile	Professionals, team leaders, and employees from various organizational levels who seek to enhance their teamwork skills
Mode of Learning	Online
Credential Type	Microcredential Course
EQF Level	Although it is not currently part of the National Qualifications Framework (NQF), the course is part of the lifelong learning offer of the Basque Government.
Teaching Methodology	Theoretical / Practical / Practical in CLF

INFORMATION ABOUT THE COURSE

Workload / Duration	30 hours
Price	Free
Location	Usurbil, Basque Country

THINKING INNOVATIVELY

ADMA TRANSFORMATION AREA

Thinking innovately is important in terms of to develop ideas or conclusions that lead to the creation and Implementation of innovations or changes. Objectives of this course are: understanding the concept and importance of innovative thinking in today's world, developing skills to approach problems creatively and propose new ideas, learning techniques to foster innovation in different areas of life and work, practicing on applying innovative thinking to real-world situations and projects, working in teams to create and present innovative solutions.

<https://community.lcamp.eu/catalog-item/gebkim-vet-thinking-innovatively/>

HUMAN-CENTERED
ORGANIZATION

HUMAN-FOCUSED INNOVATION

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Thinking creatively and innovatively	Thinking creatively and innovatively	4
Think innovatively	Think innovatively	4

GENERAL INFORMATION

Course provider	KPDoNE
Country	Türkiye
Language	Turkish
Education Subject	The course introduces the principles and tools of innovative thinking, fostering creativity, problem-solving, and idea development. It encourages learners to generate novel solutions in work, entrepreneurship, and social contexts.
Learner Profile	VET Students and Teachers
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	42 Hours
Location	KPDoNE
Learning activities	Lectures, Practicing brainstorming and mind-mapping
Assessment Type	Participation in workshops and creative sessions, Team-based innovation challenge or mini-project
Entry requirement	Interest in creativity, entrepreneurship, or personal development
Admission procedure	Online or in-person application submission

Towards Open and Generative Organizational Models

ADMA TRANSFORMATION AREA

The course aims to develop the ability to (i) critically analyse organizational and leadership models, (ii) Encourage reflection on the changes impacting the effectiveness of current organizational structures, (iii) introduce and experiment with new learning approaches to support change.

<https://www.rold.com/academy-offering/>

Human Centred Organization

People management and development

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Leading and motivating	http://data.europa.eu/esco/skill/S4.5	3

GENERAL INFORMATION

Course provider	Rold Academy
Country	Italy
Language	Italian
Education Subject	Towards Open and Generative Organizational Models
Learner Profile	Roles involved in business organization (HR, Managers, Area Managers, Board Members, Team Leaders)
Mode of Learning	In Person
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical and Practical
Learning Environment	MIND (Milan Innovation District), but it can also be arranged at company premises

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to requests
Workload / Duration	8 hours (4h per day)
Schedule information	Possibility to arrange specific courses
Price	800 €
Location	Milan (Italy)
Learning activities	The learning activities include: (i) What is an organization? (ii) Closed vs. open organizations: features and key differences (iii) Introduction to global change agents and their impact (iv) The strategic value of plurality and inclusion in organizations (v) Group work: exploring and practicing models of distributed leadership (vi) How skills and knowledge are acquired and transmitted in open contexts
Assessment Type	Questionnaire
Entry requirement	No entry requirement
Admission procedure	Interview

Course schedules and content can be customized, and additional follow-up meetings and continuous learning activities activities can be planned.

Understanding Environmental and Social Impacts

ADMA TRANSFORMATION AREA

The course aims to (i) identify the key factors that make sustainability processes a lever for competitiveness, (ii) gain knowledge related to environmental and social impact assessments, (iii) understand the role of supply chain relationships and stakeholders in enabling shared and systemic sustainability processes.

<https://www.rolld.com/academy-offering/>

Eco Factory

Eco design

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Assess environmental impact	http://data.europa.eu/esco/skill/e541c69c-ea80-4b17-87cb-4001d0b9d303	3

GENERAL INFORMATION

Course provider	Rold Academy
Country	Italy
Language	Italian (but it can also be delivered in English)
Education Subject	Strategies for leveraging LCA to redesign processes and products
Learner Profile	Roles involved in business organization (HR, Managers, Area Managers)
Mode of Learning	In Person
Credential Type	Certificate
EQF Level	6
Teaching Methodology	Theoretical and Practical
Learning Environment	MIND (Milan Innovation District), but it can also be arranged at company premises

INFORMATION ABOUT THE COURSE

Start Date – End Date	According to requests
Workload / Duration	8 hours
Schedule information	Possibility to arrange specific courses
Price	1400 €
Location	Milan (Italy)
Learning activities	CURRENT CONTEXT & FUTURE SCENARIOS: DRIVERS AND REGULATIONS Why it is still strategic for SMEs to invest in sustainability UNDERSTANDING AND MANAGING IMPACTS ON ENVIRONMENT AND PEOPLE LCA (Life Cycle Assessment) as a tool for creativity and redesign (includes theory and practical exercise) Social impacts in the supply chain (includes theory and practical exercise)
Assessment Type	Questionnaire
Entry requirement	No entry requirement
Admission procedure	Interview

Course schedules and content can be customized, and additional follow-up meetings and continuous learning activities can be planned.

USING A CHEMICAL REACTOR

ADMA TRANSFORMATION AREA

Preparing the reactor for production and commissioning.

<https://community.lcamp.eu/catalog-item/using-a-chemical-reactor/>

ADVANCED MANUFACTURING
TECHNOLOGIES

CHEMICAL PROCESS CONTROL

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Use chemical analysis equipment	Use chemical analysis equipment	4
Chemical processes	Chemical processes	4

GENERAL INFORMATION

Course provider	GEBKIM VET
Country	Türkiye
Language	Turkish
Education Subject	This course provides learners with the theoretical and practical skills required to operate, monitor, and control chemical reactors safely and efficiently in industrial environments. It includes understanding reaction types, process parameters, and safety protocols.
Learner Profile	Students, Technician
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	30 Hours
Location	GEBKIM VET
Learning activities	Lectures, Practices, Lab Work
Assessment Type	Lab performance, Hands-on practical evaluations
Entry requirement	Interest in industrial chemical processes and plant operations
Admission procedure	Online or in-person application submission

WASTE TREATMENT PROCESS

ADMA TRANSFORMATION AREA

It aimed at educating students or professionals about waste treatment methods, environmental impacts, and modern waste management practices.

<https://community.lcamp.eu/catalog-item/gebkim-vet-waste-treatment-process/>

ECO FACTORY

WASTE MANAGEMENT

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Waste management	Waste management	4
Manage waste	Manage waste	4
Dispose waste	Dispose waste	4

GENERAL INFORMATION

Course provider	Gebkim VET
Country	Türkiye
Language	Turkish
Education Subject	"Waste Treatment Process" course aims to equip learners with practical and theoretical knowledge about waste collection, segregation, treatment technologies, and environmental sustainability in accordance with European and national standards.
Learner Profile	EQF 4
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	30 Hours
Location	GEBKIM VET
Learning activities	Lectures & Practices
Assessment Type	Quizz, Lab Works, Exams
Entry requirement	Motivation and interest in environmental sustainability
Admission procedure	Online or in-person application submission

Workplace Organization & Standard Work

This course introduces the key methods and tools for standardizing work operations in both production and service contexts. Participants learn how to develop Standard Operating Procedures (SOPs), implement 5S, conduct improvement audits and sustain continuous workplace organization.

<https://www.smarttvalley.it/manufacturing/>

ADMA TRANSFORMATION AREA

Human-Centred Organisation; Smart Manufacturing; End-to-End Customer-Focused Engineering

Standard Work · SOP · Visual SOP · One-Point Lessons (OPL) · Work Instructions · 5S · Improvement Audits · Checklists · Workplace Organization · Continuous Improvement

CURRENT
MATURITY
LEVEL 1



TARGET
MATURITY
LEVEL 3

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Develop Standard Operating Procedures	http://data.europa.eu/esco/skill/c64c4f42-253b-4d53-8637-fd00d86100c7	3
Apply workplace organization techniques	http://data.europa.eu/esco/skill/d3eccb86-f02d-4950-bfbd-20b9510774a1	2
Conduct improvement and compliance audits	http://data.europa.eu/esco/skill/d3eccb86-f02d-4950-bfbd-20b9510774a1	2

GENERAL INFORMATION

Course provider	Fondazione Ergo
Country	Italy
Language	Italian / English
Education Subject	Key methods and tools for standardizing work operations in both production and service contexts
Learner Profile	Production supervisors, line operators, quality engineers, continuous-improvement specialists
Mode of Learning	In-Person/Hybrid
Credential Type	Certificate
EQF Level	5-6
Teaching Methodology	Theoretical / Practical / Practical in CLF
Learning Environment	Classroom, Experience lab with workstations

INFORMATION ABOUT THE COURSE

Workload / Duration	3 days (24 h) – approx
Price	Depending on time schedule and location
Location	Learning Factory, Smartt Valley
Learning activities	5S zone set-up, SOP writing workshops, audit simulations, group projects
Assessment Type	Multiple choice assessment customized on client needs + situational interview
Entry requirement	No prerequisites; familiarity with basic manufacturing concepts beneficial

The course's content, schedule and location can be adapted to the needs of the recipients.

WRITING A PROGRAM TO PLC

ADMA TRANSFORMATION AREA

Writes basic program to PLC by making relay and contact operations.

[GEBKIM VET-Writing a Program to PLC - Open Innovation Community](#)

SMART MANUFACTURING

SMART MANUFACTURING

CURRENT
MATURITY
LEVEL 2



TARGET
MATURITY
LEVEL 4

LEARNING OUTCOMES

ESCO Skill	ESCO URL	Maturity Level 1-4
Programmable logic controller	Programmable logic controller	4
Use logic programming	Use logic programming	4

GENERAL INFORMATION

Course provider	Gebkim VET
Country	Türkiye
Language	Turkish
Education Subject	This course focuses on the fundamentals of PLC (Programmable Logic Controller) programming, enabling learners to design, write, test, and troubleshoot basic automation programs used in industrial systems.
Learner Profile	EQF 4
Mode of Learning	In Person
Credential Type	ECTS
EQF Level	EQF 4
Teaching Methodology	Theoretical / Practical
Learning Environment	VET Centre

INFORMATION ABOUT THE COURSE

Workload / Duration	60 Hours
Location	GEBKIM VET
Learning activities	Lectures & Practices
Assessment Type	Practical programming tasks, Exams
Entry requirement	Basic knowledge of electricity, electronics, or IT
Admission procedure	Basic technical knowledge interview or short assessment

4. COMPARACIÓN CON OTRAS FORMACIONES

Este capítulo presenta una comparación con otras ofertas de formación externas con el fin de mejorar continuamente el catálogo de formación de LCAMP para pymes. La necesidad de esta comparación se basa en las conclusiones del D7.2. En 59 análisis de pymes en ocho países, surgieron dos puntos fuertes de forma sistemática: la ingeniería centrada en el cliente de principio a fin (orientación al cliente) y la organización centrada en las personas (orientación a los empleados). Cuatro áreas mostraron una madurez más débil: la fabricación inteligente (baja automatización y uso limitado de datos en tiempo real), la fábrica digital (retos de integración de sistemas y conectividad), la fábrica abierta orientada a la cadena de valor (innovación abierta y asociaciones externas limitadas) y la fábrica ecológica (prácticas de sostenibilidad desiguales). En consecuencia, esta evaluación comparativa da prioridad a las formaciones que pueden acelerar el progreso en estas áreas más débiles, al tiempo que se preservan y aprovechan los puntos fuertes ya existentes.

Analizamos seis proveedores representativos con perfiles complementarios y alcance global: Coursera, EIT Manufacturing, Fraunhofer-Gesellschaft, Mondragon University, POK (POLIMI Open Knowledge) y Udemy. En conjunto, cubren:

- Contenido académicamente riguroso y validado por la industria (universidades, organizaciones de investigación).
- Oferta en línea modular y a gran escala (plataformas MOOC).
- Ecosistemas de formación aplicada y orientada a la práctica (KIC de innovación e institutos de investigación aplicada).
- Ofertas multinivel que abarcan cursos cortos, especializaciones, microcredenciales y programas de grado completos.

Esta combinación nos permite contrastar los planes de estudios, la pedagogía, los modelos de acreditación y la integración en la industria a través de diferentes lógicas de impartición (plataformas abiertas, programas universitarios, academias dirigidas por institutos) e identificar las mejores prácticas transferibles a los socios de LCAMP.

Para garantizar una comparación coherente y significativa entre las diferentes organizaciones analizadas, esta evaluación comparativa sigue un enfoque analítico común.

Dadas las deficiencias detectadas en D7.2, este capítulo destaca las formaciones que:

- Permiten la fabricación inteligente (por ejemplo, automatización, mantenimiento predictivo, optimización basada en IA, supervisión en tiempo real).
- Fortalecen la fábrica digital (integración de sistemas entre ERP-MES-SCADA, gobernanza de datos, ciberseguridad, gemelos digitales).
- Desarrollan una fábrica abierta orientada a la cadena de valor (innovación abierta, codesarrollo entre proveedores y clientes, intercambio de datos, operaciones en red).
- Ponen en práctica las prácticas de la fábrica ecológica (eficiencia energética y de recursos, circularidad, diseño ecológico, gestión del agua y los materiales).

Esta evaluación comparativa contribuye directamente al catálogo de formación y al marco de microcredenciales de LCAMP, ayudando a los socios a identificar las formaciones existentes pertinentes, definir áreas para el desarrollo de nuevos módulos y mejorar la pedagogía, la evaluación y la cooperación industrial para reforzar el impacto y el crecimiento de la madurez de las pymes.



4.1. COURSERA

Coursera es una plataforma líder mundial de aprendizaje en línea, fundada en 2012 por los profesores de Stanford Daphne Koller y Andrew Ng. Colabora con universidades de primer nivel y líderes del sector para ofrecer cursos flexibles y de alta calidad, certificados profesionales y programas completos de grado. Coursera abarca temas que van desde la tecnología y la ciencia de datos hasta el liderazgo, los negocios y las ciencias sociales, y combina el rigor académico con habilidades prácticas y relevantes para el mundo laboral. Entre sus puntos fuertes se incluyen la accesibilidad a nivel mundial, las prestigiosas colaboraciones, las opciones de aprendizaje modulares y el enfoque en el crecimiento profesional y el aprendizaje permanente.

Características principales

- Formatos de aprendizaje: cursos individuales, especializaciones (una serie de cursos relacionados), proyectos guiados, certificados profesionales y, ocasionalmente, títulos completos.
- Flexibilidad: la mayoría de los cursos son asincrónicos y se pueden realizar a ritmo propio, mientras que algunos siguen un calendario fijo.
- Credenciales: los alumnos obtienen certificados, cuyo valor refleja la reputación de la universidad u organización que los expide.
- Opciones freemium y de pago: muchos cursos pueden auditarse de forma gratuita (sin certificación), mientras que las versiones de pago incluyen evaluaciones calificadas y certificados. También hay disponibles opciones de suscripción como Coursera Plus.
- Calidad y credibilidad: la plataforma alberga cursos de instituciones de primer nivel, como IIM, la Universidad de Illinois e IBM, lo que garantiza la credibilidad académica y profesional.
- Amplia cobertura de temas: desde ciencia de datos e inteligencia artificial hasta liderazgo, negocios y marketing digital.
- Asistencia y servicios adicionales: son habituales características como la revisión por pares, los estudios de casos, los proyectos finales y las tareas prácticas. Muchos cursos también incluyen traducciones y subtítulos en varios idiomas.

El diseño de los cursos de Coursera refleja un enfoque estructurado y coherente que lo ha convertido en un referente en la educación digital. La mayoría de las especializaciones siguen una trayectoria progresiva: comienzan con conceptos básicos, pasan por aplicaciones estratégicas y culminan en proyectos del mundo real o proyectos finales. Este enfoque por niveles ayuda a los alumnos a desarrollar habilidades paso a paso, al tiempo que mantiene su motivación. La flexibilidad y la modularidad siguen siendo fundamentales: los alumnos pueden avanzar a su propio ritmo, auditar los cursos antes de comprometerse u optar por programas introductorios breves, como «IA para todos» o «IA generativa para todos», para un aprendizaje rápido y accesible.

Otra característica definitoria es la integración del liderazgo, la gestión del cambio y la tecnología. Coursera presenta la transformación no solo como un proceso técnico, sino como uno profundamente vinculado a la gobernanza, la cultura organizativa y las personas. Muchos



cursos entrelazan estas dimensiones para fomentar el desarrollo tanto estratégico como técnico. Además, la plataforma hace hincapié en la creación de valor empresarial, en lugar de limitarse a enseñar el uso de herramientas. Los cursos suelen demostrar cómo las tecnologías digitales pueden remodelar los modelos de negocio, las estructuras de gobernanza y las estrategias competitivas, alineando el aprendizaje con resultados medibles.

El análisis y la medición del rendimiento están integrados en todo el diseño de aprendizaje de Coursera, lo que fomenta la toma de decisiones basada en pruebas y la mejora continua. La plataforma equilibra las ofertas breves, orientadas a la sensibilización, con especializaciones completas, lo que resulta atractivo tanto para los estudiantes ocasionales como para los profesionales que buscan una mayor especialización. La mayoría de los programas terminan con un proyecto práctico o real, lo que refuerza el aprendizaje aplicado y los resultados tangibles.

Para diferenciarse del enfoque de Coursera, las plataformas de aprendizaje emergentes podrían centrarse en simulaciones interactivas y laboratorios prácticos que reflejen los retos reales de las organizaciones. La incorporación de tutorías entre compañeros, proyectos colaborativos y estudios de casos localizados mejoraría el compromiso y la relevancia contextual. Los paneles de control avanzados para el seguimiento del progreso podrían ayudar a los alumnos a visualizar su crecimiento y sus logros. Ofrecer microcredenciales acumulables y combinar las habilidades técnicas con el desarrollo del liderazgo crearía una experiencia de aprendizaje más rica e integrada.

Ejemplos de formación de Coursera relevantes para las transformaciones metodológicas de ADMA

1. Fundamentos de la IA y el aprendizaje automático (Microsoft)

- Áreas ADMA: Fabricación inteligente; Fábrica digital.
- Resumen: Este curso de nivel intermedio presenta los fundamentos de la IA y el aprendizaje automático, centrándose en la gestión de datos, el preprocesamiento, la implementación de modelos y la infraestructura. Explica cómo diseñar y mantener la columna vertebral técnica (datos, hardware y software) de los sistemas de IA..
- Enlace: <https://www.coursera.org/learn/foundations-of-ai-and-machine-learning>

2. Fundamentos de IA para todos (IBM) Especialización

- ADMA areas: Digital Factory; Smart Manufacturing; Human-Centered Organization
- Resumen: Una especialización no técnica que explica qué es la IA, cómo se puede implementar de manera responsable y cómo gestionar los cambios organizativos, éticos y de gobernanza necesarios para su adopción. Fomenta la concienciación y la comprensión básica, más que los conocimientos técnicos profundos.
- Enlace: <https://www.coursera.org/specializations/ai-foundations-for-everyone>

3. Especialización en liderazgo estratégico y gestión (Universidad de Illinois Urbana-Champaign)

- Áreas ADMA: Fábrica digital; Fabricación inteligente; Organización centrada en las personas.
- Resumen: Diseñada para líderes actuales y aspirantes, esta especialización explora el liderazgo, la cultura organizativa, la alineación estratégica, la creación de equipos y la gestión del cambio. Hace hincapié en cómo un liderazgo y una estructura eficaces fomentan organizaciones adaptables y centradas en el cliente.
- Enlace: <https://www.coursera.org/specializations/strategic-leadership>



4. Especialización en marketing digital (Universidad de Illinois Urbana-Champaign)

- Áreas ADMA: Ingeniería centrada en el cliente de principio a fin; Fábrica digital; Fábrica abierta orientada a la cadena de valor
- Resumen: Se centra en las estrategias modernas de marketing digital, el análisis, el comportamiento de los clientes y la medición del rendimiento. Los alumnos adquieren habilidades para trazar el recorrido de los clientes, diseñar campañas digitales y gestionar iniciativas de marketing en ecosistemas conectados.
- Enlace: <https://www.coursera.org/specializations/digital-marketing>



4.2. EIT MANUFACTURING

El Instituto Europeo de Innovación y Tecnología (EIT) es un organismo de la Unión Europea creado en 2008 con la misión de impulsar la innovación en Europa conectando universidades, centros de investigación y empresas. Para lograrlo, el EIT trabaja a través de grandes comunidades temáticas denominadas CCI (Comunidades de Conocimiento e Innovación), cada una de las cuales se centra en un reto estratégico como la energía sostenible, la salud, la digitalización, el cambio climático, las materias primas, la alimentación... y la fabricación.

EIT Manufacturing es una de estas CCI, dedicada al sector industrial y de la fabricación avanzada. Su objetivo general es hacer que la fabricación europea sea más competitiva, digital y sostenible. Para lograrlo, desarrolla actividades en cuatro líneas de acción principales:

- Innovación: apoyo a proyectos de colaboración entre empresas, centros de investigación y universidades para desarrollar nuevas soluciones de fabricación.
- Educación: ofrece programas de formación para estudiantes, profesionales y pymes (másteres, cursos en línea, escuelas de verano, talleres), proporcionando las competencias que demanda la industria del futuro.
Creación de empresas: ayuda a emprendedores, start-ups y scale-ups a llevar al mercado tecnologías y servicios innovadores para la fabricación.
- Comunidad: crea redes europeas que conectan los ecosistemas locales de innovación industrial.

Desde una perspectiva comparativa, el pilar de la educación es especialmente relevante. A través del EIT Campus <https://eit-campus.eu/courses>, EIT Manufacturing ofrece un amplio catálogo de oportunidades de formación, que van desde módulos cortos en línea hasta programas de máster especializados. La oferta abarca temas como la fabricación digital, la sostenibilidad, el liderazgo y el espíritu empresarial, y está diseñada para atender a diferentes grupos destinatarios: estudiantes, profesionales del sector y pymes.

Esta estructura refleja un enfoque formativo integral, que combina habilidades técnicas (por ejemplo, digitalización, automatización, fabricación sostenible) con competencias transversales (por ejemplo, gestión de la innovación, liderazgo, emprendimiento). Como tal, EIT Manufacturing representa un punto de referencia en cuanto a cómo se puede integrar la oferta formativa en un ecosistema de innovación más amplio, garantizando la alineación entre la educación, la investigación y las necesidades industriales.

Ejemplos de cursos de formación de interés para las transformaciones metodológicas de ADMA:

- Aprovechamiento de la tecnología de gemelos digitales para la fabricación sostenible
 - o Curso en línea, nivel principiante.
 - o Áreas relevantes de ADMA: Fábrica digital, Fábrica ecológica, Tecnologías de fabricación avanzadas.
 - o Descripción general: Introduce cómo utilizar los gemelos digitales para mejorar la eficiencia, reducir los residuos, optimizar las operaciones y mejorar la sostenibilidad
 - o Enlace: <https://eitmanufacturingacademy.eu/courses/leveraging-digital-twin-technology-for-sustainable-manufacturing-31925/>
- Impulsar la creación de valor: habilidades para un futuro sostenible e inclusivo
 - o Curso en línea, nivel intermedio.



- Áreas ADMA relevantes: Organización centrada en las personas, Fábrica ecológica, Fábrica abierta orientada a la cadena de valor.
- Descripción general: Proporciona competencias para fomentar la sostenibilidad, la inclusión y la creación de valor en la industria. Se centra en el liderazgo, la colaboración y la innovación responsable para alinear los negocios con los objetivos sociales y medioambientales.
- Enlace: <https://eit-campus.eu/learning-path/driving-value-creation-skills-for-a-sustainable-and-inclusive-future>
- Máster en Interacción Humano-Robot para la Fabricación Sostenible
 - Programa de máster, nivel avanzado (2 años, doble titulación).
 - Áreas ADMA relevantes: Tecnologías de fabricación avanzadas, fabricación inteligente, organización centrada en el ser humano.
 - Descripción general: Se centra en la integración de la robótica y el diseño centrado en el ser humano en la fabricación sostenible. Combina los conocimientos técnicos con la formación en innovación y emprendimiento.
 - Enlace: <https://www.eitmanufacturing.eu/what-we-do/education/master-school/msc-in-human-robot-interaction-for-sustainable-manufacturing/>
- Máster en Fabricación Digital para Ecosistemas Innovadores
 - Programa de máster, nivel avanzado (2 años, doble titulación).
 - Áreas ADMA relevantes: Fábrica digital, fabricación inteligente, fábrica abierta orientada a la cadena de valor.
 - Descripción general: Aborda las tecnologías digitales para los ecosistemas de fabricación, incluida la integración de sistemas, la innovación basada en datos y la colaboración dentro de las cadenas de valor. Prepara a los graduados para liderar la transformación digital en las redes industriales.
 - Enlace: <https://www.eitmanufacturing.eu/what-we-do/education/master-school/msc-in-digital-manufacturing-for-innovative-ecosystems/>
- MSc en la fabricación sin defectos para una economía circular
 - Programa de máster, nivel avanzado (2 años, doble titulación).
 - Áreas ADMA relevantes: Fabricación inteligente, Fábrica ecológica, Tecnologías de fabricación avanzadas.
 - Descripción general: Se especializa en la prevención de defectos y en métodos de producción de alta calidad, vinculando la fabricación avanzada con los principios de la economía circular. Se centra en la supervisión en tiempo real, la optimización de procesos y las prácticas sostenibles.
 - Enlace: <https://www.eitmanufacturing.eu/what-we-do/education/master-school/msc-in-zero-defect-manufacturing-for-a-circular-economy/>
- Economía circular: gestión sostenible de materiales
 - Curso en línea, nivel principiante
 - Áreas relevantes de ADMA: Fábrica ECO, Fábrica abierta orientada a la cadena de valor
 - Descripción general: Introduce los principios de la gestión sostenible de materiales, con énfasis en la reutilización, el reciclaje y las cadenas de suministro responsables. Dirigido a profesionales que buscan integrar prácticas de economía circular en la fabricación.



- Enlace: <https://eit-campus.eu/course/raw-materials/circular-economy-sustainable-materials-management>
- Máster en Fabricación Digital para Ecosistemas Innovadores
 - Programa de máster, nivel avanzado (2 años, doble titulación).
 - Áreas ADMA relevantes: Fábrica digital, fabricación inteligente, fábrica abierta orientada a la cadena de valor.
 - Descripción general: Aborda las tecnologías digitales para los ecosistemas de fabricación, incluida la integración de sistemas, la innovación basada en datos y la colaboración dentro de las cadenas de valor. Prepara a los graduados para liderar la transformación digital en las redes industriales.
 - Enlace: <https://eit-campus.eu/course/girls-go-circular/artificial-intelligence-and-the-circular-economy>



4.3. FRAUNHOFER-GESELLSCHAFT

La Fraunhofer-Gesellschaft (Sociedad Fraunhofer) es una de las organizaciones líderes en Europa en el ámbito de la investigación aplicada, fundada en 1949 en Alemania, cuyo objetivo principal es promover la innovación, la transferencia de tecnología y el beneficio social tendiendo puentes entre la investigación académica y la aplicación industrial.

Fraunhofer opera a través de unos 75-76 institutos y unidades de investigación independientes repartidos por toda Alemania, que emplean a casi 32 000 investigadores, ingenieros y personal de apoyo, con un presupuesto anual de investigación de aproximadamente 3600 millones de euros, de los cuales unos 3100 millones proceden de contratos de investigación con socios industriales y del sector público.

La misión de Fraunhofer incluye abordar retos sociales urgentes, como la transformación digital, el cambio climático, la transición energética, la atención sanitaria y las infraestructuras resilientes, mediante la búsqueda de soluciones tecnológicas sostenibles y éticamente sólidas. Colabora estrechamente con universidades, empresas (de todos los tamaños), instituciones públicas y socios internacionales para traducir la investigación en productos, servicios y procesos eficaces.

Los principios clave y los diferenciadores de Fraunhofer son:

- Investigación aplicada y orientada al mercado: gran parte del trabajo se realiza mediante contratos de investigación, desarrollo de prototipos y colaboraciones público-privadas.
- Modelo de financiación básica + financiación de proyectos: la financiación básica de los gobiernos federal y estatal apoya a los institutos para que exploren la investigación precompetitiva a largo plazo, mientras que una gran parte de los recursos proviene de proyectos financiados con fondos externos.
- Estructura interdisciplinaria: los campos de investigación incluyen la bioeconomía, la inteligencia artificial, la tecnología cuántica, la eficiencia de los recursos, la sanidad digital y las tecnologías del hidrógeno, entre otros.
- Transferencia de tecnología y ecosistema de innovación: Fraunhofer apoya las escisiones, la concesión de licencias y la innovación colaborativa. La organización se esfuerza por acelerar la aplicación de los resultados de la investigación en el mundo real.

Fraunhofer tiene como objetivo equilibrar el avance de la excelencia científica con la generación de un impacto medible para la industria y la sociedad, especialmente ayudando a las pequeñas y medianas empresas a participar en la innovación de alta tecnología y contribuyendo a la competitividad industrial de Alemania y Europa.

Ejemplos de cursos de formación de interés para las transformaciones metodológicas de ADMA::

T1. Tecnologías de fabricación avanzadas.

- Fraunhofer Additive Academy – Formación básica en producción aditiva → formación introductoria que abarca las tecnologías, el potencial y las aplicaciones de la fabricación aditiva.
- Formación básica en fabricación aditiva – Diseño (Fraunhofer IAPT).



T2. Fábrica digital

- Fraunhofer Academy – Profesional de la producción inteligente → abarca la producción inteligente, los sensores, la fabricación aditiva, el aprendizaje automático y las tendencias.
- Profesional de la producción inteligente (Fraunhofer Academy).

T3. Ecofábrica (sostenibilidad)

- Fraunhofer Academy / Oferta general de Fraunhofer Academy en «Energía y sostenibilidad» en su catálogo de formación continua.
- Fraunhofer Academy – Temas de formación continua, entre ellos Energía y sostenibilidad.

T4. Ingeniería integrada orientada al cliente

- Fraunhofer Additive Academy – Formación en diseño para la producción aditiva (DfAP) → se centra en el diseño, la integración funcional y las estructuras ligeras.
- Formación en diseño para la producción aditiva (Fraunhofer IAPT).

T5. Organización centrada en las personas

- Fraunhofer Academy: cursos profesionales generales y certificados diseñados para profesionales y ejecutivos de la industria, que incluyen transformación y liderazgo.
- Fraunhofer Academy: cursos profesionales para la industria y ejecutivos.

T6. Fabricación inteligente

- AMPOWER y Fraunhofer IAPT: formación en inyección de aglutinante (práctica) → curso profundamente técnico sobre una tecnología de fabricación avanzada específica (metal binder jetting).
- Formación en inyección de aglutinante (AMPOWER + Fraunhofer IAPT).

T7. Fábrica abierta orientada a la cadena de valor

- Programas de formación continua de la Academia Fraunhofer en producción, logística e integración de procesos, orientados a la cadena de suministro/cadena de valor.
- Academia Fraunhofer: formación continua en producción, logística, etc.



4.4. MONDRAGON UNIBERTSITATEA

Mondragon Unibertsitatea (MU) es una universidad cooperativa creada en 1997, cuyo objetivo es promover el conocimiento, la innovación y el desarrollo social y empresarial en el País Vasco y a nivel internacional. Su misión se estructura en torno a la integración de la educación, la investigación y la transferencia de conocimiento, conectando a estudiantes, empresas y centros de investigación.

Mondragon Unibertsitatea opera a través de facultades y centros especializados en ingeniería, empresariales, educación, humanidades, comunicación y gastronomía, y colabora estrechamente con la red empresarial e industrial, especialmente en áreas estratégicas como la industria avanzada, la digitalización, la sostenibilidad, la economía circular y el emprendimiento.

El objetivo general de Mondragon Unibertsitatea es formar profesionales competentes e innovadores y contribuir al desarrollo tecnológico y social de la industria y la sociedad. Para ello, desarrolla actividades en torno a cuatro áreas principales:

- Educación: Ofrecemos programas de grado, máster, doctorado y especialización para estudiantes, profesionales y empresas, proporcionando las habilidades que demanda la industria del futuro.
- Innovación e investigación aplicada: Apoyar proyectos de I+D en colaboración con empresas y centros tecnológicos, destinados a resolver retos industriales reales.
- Emprendimiento: Promover la creación de empresas, iniciativas emprendedoras y proyectos de innovación a través de Mondragon Team Academy y programas especializados.
- Comunidad: Construir un ecosistema cooperativo y de innovación que conecte a la universidad, las empresas y la sociedad en torno a proyectos de transformación industrial y social.

Desde una perspectiva comparativa, el pilar de la educación es especialmente relevante. Mondragon Unibertsitatea ofrece una amplia gama de programas, desde formación continua y microcredenciales hasta másteres oficiales y programas de doctorado especializados. La oferta abarca áreas como la fabricación digital, la robótica, la inteligencia artificial, la sostenibilidad, la economía circular y el liderazgo, y está diseñada para atender a diferentes grupos destinatarios: estudiantes, profesionales en activo y pymes.

Esta estructura refleja un enfoque integral, que combina competencias técnicas (digitalización, automatización, fabricación avanzada) con competencias transversales (gestión de la innovación, emprendimiento, liderazgo cooperativo). Como tal, Mondragon Unibertsitatea constituye un referente en la educación universitaria aplicada a la industria y la sociedad, garantizando la alineación entre la educación, la investigación y las necesidades del sector productivo.

Ejemplos de cursos de formación de interés para las transformaciones de la metodología ADMA:

T1. Tecnologías de fabricación avanzadas.

- Máster en Fabricación Aditiva Industrial → Impresión 3D en metales, compuestos y biomateriales.
- Formación continua en Procesos de Fabricación Avanzados → Mecanizado de precisión, compuestos y técnicas de alta productividad.
- Curso de Mantenimiento Predictivo y Mantenimiento Inteligente.



T2. Fábrica digital

- Máster en Robótica y Sistemas de Control → automatización, sistemas ciberfísicos.
- Curso en Digitalización del Mantenimiento Industrial → IoT, gemelos digitales, sensorización.
- Especialización en Ciberseguridad en entornos OT.

T3. Ecofábrica (sostenibilidad)

- Máster en Economía Circular y Sostenibilidad Industrial.
- Cursos en Eficiencia Energética y Energías Renovables.
- Gestión sostenible de materiales en la cadena de valor..

T4. Ingeniería integrada orientada al cliente

- Máster en Ingeniería Industrial → gestión de proyectos de diseño y fabricación centrada en el cliente.
- Formación en Diseño de Productos y Experiencia de Usuario (UX).
- Cursos en Simulación y CAD/CAE/PLM aplicados a la cocreación..

T5. Organización centrada en las personas

- Máster en Facilitación del Aprendizaje y Liderazgo (MU Educación).
- Formación en Liderazgo Cooperativo y Gestión de Equipos.
- Mondragon Team Academy (MTA): emprendimiento y trabajo colaborativo.

T6. Fabricación inteligente

- Máster en Robótica y Sistemas de Control (automatización flexible, cobots, IA en la producción).
- Cursos en Lean Manufacturing y Digital Six Sigma.
- Big Data e Inteligencia Artificial en la Industria.

T7. Open Factory Oriented to the Value Chain

- Programas en Cooperativismo, Innovación Abierta y Economía Social.
- Curso en Innovación Colaborativa en Redes de Valor.
- Formación ejecutiva en Industria 4.0 (4GUNE) → con enfoque en cadenas de suministro digitales.



4.5. POK (POLIMI OPEN KNOWLEDGE)

POK (POLIMI Open Knowledge) es la plataforma oficial MOOC (Massive Open Online Course) del Politecnico di Milano, creada para promover el acceso abierto e inclusivo a una educación de alta calidad. Desarrollada y gestionada por la unidad METID (Metodi e Tecnologie Innovative per la Didattica - Métodos y Tecnologías Innovadoras para la Enseñanza) - Unidad de Innovación en el Aprendizaje de la universidad, POK encarna el compromiso del Politecnico di Milano de compartir el conocimiento y la experiencia académicos con un amplio público, desde estudiantes y profesionales hasta ciudadanos y educadores de todo el mundo.

A diferencia de los mercados de aprendizaje comerciales, POK opera en el marco de una universidad pública, lo que garantiza el rigor académico, los contenidos basados en la investigación y la alineación con los objetivos docentes institucionales. Su misión es salvar las brechas educativas haciendo que la experiencia científica y técnica del Politecnico di Milano sea de libre acceso en línea.

Las actividades y ofertas de POK se pueden agrupar en cuatro dimensiones principales::

- MOOCs académicos:

POK alberga un catálogo cada vez mayor de cursos en línea gratuitos diseñados por profesores e investigadores del Politecnico di Milano. Los cursos abarcan una amplia gama de disciplinas, entre ellas ingeniería, arquitectura, diseño, informática, sostenibilidad y gestión, y están estructurados para diferentes públicos, como estudiantes de grado y máster, investigadores y ciudadanos.

- Formación profesional y aprendizaje permanente:

Más allá de la educación académica, POK ofrece MOOC dirigidos a profesionales que buscan mejorar continuamente sus habilidades en campos emergentes como la gestión ágil de proyectos, la innovación digital y el desarrollo sostenible. Estos cursos apoyan el aprendizaje permanente y ayudan a salvar la brecha entre las necesidades del mundo académico y las de la industria.

- Conocimiento abierto e inclusión:

Fieles a los principios de la educación abierta, todos los cursos de POK son de acceso gratuito y están disponibles en varios idiomas (principalmente italiano e inglés). La plataforma fomenta la inclusión al llegar a diversos grupos de estudiantes, desde alumnos de secundaria hasta personas mayores, y anima a participar independientemente de las barreras geográficas o sociales.

- Compromiso entre la universidad y la comunidad:

POK refuerza la conexión entre el Politecnico di Milano y la sociedad en general. A través de MOOC orientados a los ciudadanos, como «Unfolding Gianfranco Ferré» o «City and Sustainability», promueve la conciencia cultural, la sostenibilidad y el compromiso cívico, mostrando cómo el conocimiento académico puede contribuir a la comprensión pública y la innovación.



Desde una perspectiva comparativa, POK representa un modelo de educación digital abierta impulsado por la universidad, que combina la credibilidad académica con la accesibilidad. Su fuerza radica en la integración de contenidos científicos rigurosos con enfoques pedagógicos modernos — incluido el aprendizaje a ritmo propio, las lecciones multimedia y las evaluaciones interactivas — dentro de un marco de acceso abierto.

Al alinear la innovación educativa con la excelencia en la investigación y la enseñanza del Politecnico di Milano, POK se erige como un punto de referencia para los MOOC institucionales en Europa, demostrando cómo las universidades pueden aprovechar las plataformas digitales para fomentar el aprendizaje continuo, el desarrollo profesional y el impacto social.

Ejemplos de cursos de formación de interés para las transformaciones metodológicas de ADMA:

- Gestión ágil de proyectos: la agilidad como cultura, más allá de SCRUM.
 - o Curso en línea, nivel intermedio.
 - o Áreas relevantes de ADMA: Organización centrada en las personas, Fabricación inteligente, Fábrica digital.
 - o Descripción general: exploración de la mentalidad ágil como enfoque de transformación cultural y organizativa; introducción a modelos híbridos que combinan la gestión ágil y la gestión tradicional de proyectos para mejorar la flexibilidad, la colaboración y la innovación en los proyectos de transformación digital
 - o Enlace: https://www.pok.polimi.it/course/view.php?id=206&utm_source=chatgpt.com#tab2
- Pensamiento de plataforma: explotación de datos a través de plataformas
 - o Curso en línea, nivel intermedio.
 - o Áreas relevantes de ADMA: Fábrica digital, Tecnologías de fabricación avanzadas, Fábrica digital, Fabricación inteligente.
 - o Descripción general: comprender cómo los datos y las plataformas digitales crean nuevos modelos de negocio y redes de valor; centrarse en las dimensiones estratégicas y tecnológicas de la innovación basada en plataformas.
 - o Enlace: <https://www.pok.polimi.it/course/view.php?id=91#courseTabContent>
- Realidad virtual y aumentada para apoyar la formación y el mantenimiento
 - o Curso en línea, nivel intermedio.
 - o Áreas relevantes de ADMA: tecnologías de fabricación avanzadas, fábrica digital, fabricación inteligente, organización centrada en las personas.
 - o Descripción general: introducción de aplicaciones de realidad virtual y aumentada a los procesos industriales, la formación y el mantenimiento; exploración de cómo las tecnologías inmersivas mejoran el rendimiento, la seguridad y el aprendizaje en entornos de fabricación.
 - o Enlace: <https://www.pok.polimi.it/course/view.php?id=172#courseTabContent>
- El paradigma de la tecnología de la moda que está revolucionando los modelos de las industrias culturales y creativas (ICC)
 - o Curso en línea, nivel principiante.
 - o Áreas relevantes de ADMA: fabricación inteligente, fábrica ecológica, fábrica abierta orientada a la cadena de valor.



- Descripción general: análisis de cómo la tecnología y la innovación digital están transformando el diseño, la producción y la distribución en la industria de la moda; exploración de la transformación sostenible, digital y basada en datos de los ecosistemas de fabricación creativa.
- Enlace: https://www.pok.polimi.it/course/view.php?id=66&utm_source=chatgpt.com#courseTabContent
- Gestión de la innovación y transformación digital
 - Curso en línea, nivel intermedio.
 - Áreas relevantes de ADMA: fabricación inteligente, fábrica digital, tecnologías de fabricación avanzadas.
 - Descripción general: introducción a marcos y herramientas para gestionar la innovación en contextos de transformación digital; centrado en cómo la tecnología, la estrategia y la cultura organizativa interactúan para impulsar la competitividad.
 - Enlace: <https://www.pok.polimi.it/course/view.php?id=207#courseTabContent>



4.6. UDEMY

Udemy es una plataforma global de aprendizaje en línea fundada en 2010 con la misión de mejorar la vida de las personas a través del aprendizaje. Funciona como un mercado que conecta a estudiantes, instructores y organizaciones, permitiendo a cualquier persona enseñar y aprender nuevas habilidades en línea. A diferencia de las instituciones educativas tradicionales, el modelo de Udemy es abierto y descentralizado: expertos y profesionales individuales de todo el mundo pueden crear cursos y llegar a una audiencia global.

Las actividades y ofertas de Udemy se pueden agrupar en cuatro dimensiones principales:

- Mercado de cursos: Udemy alberga uno de los catálogos de cursos en línea más grandes del mundo, con más de 200 000 cursos sobre una amplia variedad de temas, desde negocios y tecnología hasta desarrollo personal, diseño y aprendizaje de idiomas. Los cursos suelen ser breves, basados en vídeos y a ritmo propio, lo que se adapta a las necesidades de flexibilidad de los alumnos.
- Mejora de las habilidades profesionales: a través de «Udemy Business», la plataforma ofrece soluciones de aprendizaje seleccionadas para empresas y organizaciones. Este servicio da acceso a un catálogo de cursos de alta calidad centrados en habilidades profesionales y técnicas (por ejemplo, ciencia de datos, computación en la nube, gestión de proyectos), así como en habilidades sociales y desarrollo del liderazgo. Las empresas utilizan Udemy Business para apoyar el reciclaje profesional y el aprendizaje continuo de su personal.
- Ecosistema de instructores: Udemy permite a los instructores y expertos en la materia diseñar, publicar y monetizar sus propios cursos. Este modelo abierto fomenta la renovación constante y la diversidad de contenidos, lo que garantiza que los materiales de aprendizaje se mantengan alineados con las tecnologías y las prácticas industriales en constante evolución.
- Comunidad de aprendizaje global: con más de 70 millones de alumnos en todo el mundo, Udemy ha creado una comunidad verdaderamente global de alumnos y educadores. Su plataforma admite múltiples idiomas y contenidos localizados, lo que fomenta el acceso inclusivo a la educación independientemente de la ubicación geográfica o los antecedentes.

Desde una perspectiva comparativa, Udemy representa una referencia clave en la educación en línea flexible y orientada a la demanda. Su éxito radica en la escalabilidad de su modelo de mercado digital y en la diversidad de su oferta de cursos, que satisfacen tanto las necesidades de los estudiantes individuales como las de formación corporativa.

Gracias a su combinación de contenidos técnicos (por ejemplo, programación, inteligencia artificial, computación en la nube) y habilidades transversales (por ejemplo, comunicación, liderazgo, innovación), Udemy se ha posicionado como una plataforma líder a nivel mundial para el aprendizaje permanente. Es un ejemplo de cómo la educación puede impartirse de forma eficaz a gran escala a través de plataformas digitales, fomentando la mejora continua de las competencias y la empleabilidad en una economía en rápida evolución.

Ejemplos de cursos de formación de interés para las transformaciones metodológicas de ADMA:

- Máster en Industria 4.0: Automatización, Robótica y Ciberseguridad



- Curso en línea, nivel principiante: diseñado para estudiantes sin experiencia previa, aunque es útil estar familiarizado con la ingeniería general o los sistemas informáticos.
- Áreas relevantes de ADMA: Tecnologías de fabricación avanzadas, Fábrica digital, Fabricación inteligente.
- Descripción general: comprensión de los sistemas de automatización industrial; implementación de sistemas instrumentados de seguridad; dominio de la ciberseguridad para sistemas industriales; exploración de los fundamentos y aplicaciones de la robótica.
- Enlace: <https://www.udemy.com/course/master-industry-40-automation-robotics-cybersecurity/>
- Curso de maestría en tecnologías sostenibles y dataficación 2.0
 - Curso en línea, nivel principiante, diseñado para estudiantes de grado y posgrado en sistemas empresariales, tecnología de la información e informática, así como para cualquier persona interesada en aprender sobre tecnología sostenible.
 - Áreas relevantes de ADMA: Fábrica ecológica, Fabricación inteligente.
 - Descripción general: aprovechar la tecnología y los datos para abordar los retos medioambientales de forma eficaz
 - Enlace: <https://www.udemy.com/course/sustainable-technologies-datafication/>
- Industrial Digital Twins for Automation - Godot and CoDeSys
 - Curso en línea, nivel avanzado: diseñado para ingenieros, desarrolladores y entusiastas de la automatización que tengan conocimientos básicos de programación de PLC y deseen mejorar sus habilidades en tecnología de gemelos digitales.
 - Áreas relevantes de ADMA: tecnologías de fabricación avanzadas, fábrica digital, fabricación inteligente.
 - Descripción general: creación de modelos interactivos de máquinas y robots, integrándolos con PLC para la puesta en marcha virtual.
 - Enlace: <https://www.udemy.com/course/industrial-digital-twins-for-automation/>
- Robótica: interacción humano-robot — Teoría y aplicaciones
 - Curso en línea, nivel principiante.
 - Áreas relevantes de ADMA: tecnologías de fabricación avanzadas, organización centrada en las personas, fabricación inteligente.
 - Descripción general: alcanzar un profundo conocimiento sobre cómo diseñar, evaluar e implementar de manera eficaz sistemas de interacción humano-robot (HRI) que mejoren la colaboración entre personas y robots.
 - Enlace: <https://www.udemy.com/course/robotics-human-robot-interaction-theory-and-applications/>



4.7. ELEMENTOS COMUNES ENTRE LOS PROVEEDORES DE FORMACIÓN ANALIZADOS

Los seis proveedores de formación analizados (Coursera, EIT Manufacturing, Fraunhofer-Gesellschaft, Mondragon University, POLIMI Open Knowledge y Udemy) presentan diversos enfoques del aprendizaje y la mejora de las competencias. Sin embargo, a pesar de las diferencias en cuanto a su naturaleza institucional y su alcance, surgen varios elementos comunes que ilustran principios compartidos en cuanto a la forma en que diseñan e imparten la formación para la transformación digital y sostenible. Estos puntos en común son muy relevantes para el marco ADMA y para el objetivo de LCAMP de crear un catálogo de formación integrado y orientado a las pymes.

Todos los proveedores comparten un fuerte enfoque en la empleabilidad y el desarrollo de competencias. Sus ofertas de formación están diseñadas para desarrollar habilidades que sean directamente aplicables en la industria y apoyen el crecimiento profesional. La cobertura temática se alinea estrechamente con las áreas de transformación de ADMA, en particular la Fábrica Digital, la Fabricación Inteligente, la Fábrica ECO y la Fábrica Abierta Orientada a la Cadena de Valor.

Las instituciones analizadas se dirigen a una amplia gama de alumnos, desde estudiantes universitarios y profesionales que inician su carrera hasta pymes y clientes corporativos. Sus cursos están diseñados para diferentes niveles de acceso, desde programas introductorios o de sensibilización (MOOC para principiantes o cursos cortos en línea) hasta títulos avanzados (másteres y formación profesional especializada).

Una tendencia clara en todas las entidades es el énfasis en la flexibilidad y la modularidad. Predomina el aprendizaje en línea y asincrónico, complementado con opciones mixtas o presenciales. Los cursos suelen estructurarse como módulos independientes, itinerarios de aprendizaje o programas de grado, lo que permite a los alumnos progresar paso a paso según sus necesidades y nivel de madurez.

Todas las entidades mantienen un fuerte vínculo con la industria y los ecosistemas de innovación. Esto refuerza una visión compartida de la formación como puente entre la educación, la investigación y la práctica empresarial.

La evaluación comparativa muestra una fuerte concentración de ofertas de formación en las áreas ADMA identificadas en D7.2 como más débiles entre las pymes. Las seis entidades ofrecen cursos que contribuyen directa o indirectamente a reforzar estas áreas de transformación:

- Fabricación inteligente: automatización, IA, mantenimiento predictivo y gestión de datos en tiempo real.
- Fábrica digital: integración de sistemas, gemelos digitales y ciberseguridad.
- Fábrica ecológica: producción sostenible, economía circular, eficiencia de recursos y energía.
- Fábrica abierta orientada a la cadena de valor: innovación abierta, colaboración entre redes de suministro y diseño orientado al cliente.



En conjunto, estos proveedores ilustran cómo los ecosistemas de formación eficaces combinan flexibilidad, modularidad y fuertes vínculos con la industria para apoyar el aprendizaje permanente y la transformación digital. Sus prácticas comunes proporcionan una valiosa inspiración a los socios de LCAMP a la hora de estructurar su propia oferta formativa, garantizando que los cursos nuevos o adaptados se ajusten a las necesidades de las pymes, apoyen las vías de transformación de ADMA y permitan un progreso medible en la madurez digital y sostenible.



5. CONCLUSIONES

El trabajo realizado en el marco del WP7 proporciona una comprensión exhaustiva de cómo se puede apoyar eficazmente a las pymes en su transición hacia la Industria 4.0 y la Industria 5.0 mediante metodologías estructuradas, herramientas de diagnóstico y estrategias de formación específicas. Al integrar marcos conceptuales como ADMA y la Fábrica de Aprendizaje Colaborativo (CLF) con pruebas prácticas procedentes de análisis de pymes, planes de implementación y un catálogo de formación estructurado, el proyecto ha sentado unas bases sólidas para una oferta formativa totalmente alineada con las necesidades industriales reales y las vías de madurez digital.

El análisis de informes anteriores demuestra que la metodología ADMA sigue siendo un marco sólido para evaluar la preparación digital y orientar los procesos de transformación en las pymes. Sus siete áreas de transformación proporcionan un lenguaje estructurado para captar los puntos fuertes, los puntos débiles y las prioridades de desarrollo. Paralelamente, el concepto CLF muestra cómo los centros de FP pueden servir como laboratorios vivos que replican los entornos industriales y apoyan el aprendizaje experiencial. Las complementariedades entre ADMA y CLF confirman la viabilidad de conectar el diagnóstico de la madurez industrial con el diseño pedagógico, formando una base sólida para itinerarios de aprendizaje personalizados.

Los análisis de las pymes realizados en ocho países revelan un panorama heterogéneo en cuanto a los niveles de madurez, pero también una serie de patrones recurrentes. Las fortalezas se manifiestan claramente en la orientación al cliente y la organización centrada en las personas, mientras que las áreas débiles son comunes a todas las regiones: automatización limitada y uso de datos en tiempo real (fabricación inteligente), dificultades en la integración de sistemas (fábrica digital), colaboración insuficiente a lo largo de la cadena de valor e implementación desigual de prácticas de sostenibilidad (fábrica ecológica). Estos hallazgos influyen directamente en las prioridades del catálogo de formación, lo que justifica un fuerte énfasis en la digitalización, la sostenibilidad, la producción basada en datos y la innovación colaborativa.

El WP7 ha dado como resultado un catálogo estructurado de 109 actividades de formación, todas ellas alineadas con una o más áreas de transformación de ADMA. El catálogo incluye 31 cursos de formación de España, 18 de Italia, 11 de Turquía, 10 de Canadá, 10 de Francia, 10 de Eslovenia, 10 de Suecia y 9 de Alemania. Todas las áreas de transformación de ADMA están cubiertas por al menos algunas ofertas de formación, con una representación especialmente destacada en tecnologías de fabricación avanzadas, fábrica digital y fabricación inteligente. Esto confirma tanto la relevancia de estos ámbitos para las pymes como la capacidad del ecosistema de EFP para responder a sus necesidades de transformación.

El sistema de doble indexación desarrollado en el WP7 resulta esencial para garantizar la usabilidad y la relevancia estratégica de esta oferta formativa. Vincular cada oportunidad de formación tanto a un área específica de transformación de ADMA como a un nivel de progresión de madurez permite a las pymes navegar por el catálogo en función de sus necesidades, capacidades y objetivos estratégicos. Esta estructura favorece el aprendizaje gradual, fomenta la toma de decisiones informadas y ayuda a los proveedores de FP a diseñar intervenciones formativas alineadas con los retos industriales reales.



La evaluación comparativa de seis proveedores de formación internacionales (Coursera, EIT Manufacturing, Fraunhofer-Gesellschaft, Mondragon University, POLIMI Open Knowledge y Udey) confirma la relevancia y la exhaustividad del enfoque formativo de LCAMP. A pesar de su diversidad, estas instituciones comparten varios principios fundamentales: un fuerte enfoque en la empleabilidad, formatos de formación modulares y flexibles, itinerarios de aprendizaje multinivel y una alineación constante con la práctica industrial. Sus carteras abordan de manera coherente las mismas áreas débiles identificadas en las pymes, en particular la fabricación inteligente, la fábrica digital, la fábrica ecológica y la fábrica abierta orientada a la cadena de valor. Esta convergencia valida la orientación del propio catálogo de formación de LCAMP y destaca las mejores prácticas que pueden adoptarse o adaptarse.

Las conclusiones combinadas de los análisis de madurez de ADMA, los modelos educativos de CLF, el catálogo de formación orientado a las pymes con 109 cursos y la evaluación comparativa externa apuntan a una dirección estratégica clara para LCAMP. El desarrollo y perfeccionamiento futuros del catálogo deben:

- Dar prioridad a la formación que acelere la madurez en las áreas más débiles de ADMA.
- Reforzar los puntos fuertes en la orientación al cliente y la organización centrada en las personas.
- Promover itinerarios de aprendizaje modulares, flexibles y orientados al progreso.
- Construir puentes sólidos entre las instituciones de FP, las pymes y los ecosistemas de innovación.
- Integrar la sostenibilidad, la digitalización y el enfoque centrado en las personas como elementos transversales en todas las ofertas.

En conclusión, el WP7 ha generado una base cohesionada y basada en pruebas para un catálogo de formación que apoyará a las pymes en su transformación hacia modelos más digitales, sostenibles, resilientes y centrados en las personas. Este catálogo no solo responderá a las necesidades industriales actuales, sino que también ayudará a configurar las competencias necesarias para la próxima generación de la industria manufacturera europea.



6. REFERENCIAS

- **ADMA TranS4MErs.** (n.d.). *ADMA TranS4MErs Project*. <https://trans4mers.eu/>
- **ADMA TranS4MErs.** (n.d.). *ADMA TranS4MErs SCAN*. <https://trans4mers.eu/blog/post/62/adma-trans4mers-scan>
- **ADMA TranS4MErs.** (n.d.). *ADMA TranS4MErs Scan Results*. https://trans4mers.eu/assets/content/Resources/ADMA_TranS4MErs_Sample_Scan_Results.pdf
- **ADMA TranS4MErs.** (n.d.). *ADMA TranS4MErs Transformation and Implementation Plan*. https://trans4mers.eu/assets/content/Resources/ADMA_TranS4MErs_Sample_Transformation_Plan.pdf
- **ADMA TranS4MErs.** (n.d.). *ADMA TranS4MErs xChange Platform*. <https://trans4mersxchange.eu/user/login>
- **ADMA.** (2021, July 2). *ADMA Inspiration Book*. https://trans4mers.eu/assets/content/attachments/20210702-ADMA-booklet_final.pdf
- **European Advanced Manufacturing Support Centre.** (n.d.). *ADMA Project*. <https://adma.ec/>
- **European Commission.** (2022, December 22). *ADMA TranS4MErs xChange Platform: A one-stop shop for your digital transformation journey*. https://eisma.ec.europa.eu/news/adma-trans4mers-xchange-platform-one-stop-shop-your-digital-transformation-journey-2022-12-22_en
- **EXAM Project.** (n.d.). *EXAM 4.0 Platform – Strategic Plan for the European Platform of VET Excellence in Advanced Manufacturing*. <https://examhub.eu/exam4-0-platform/>
- **EXAM Project.** (n.d.). *Report Position Paper: VET 4.0 for Advanced Manufacturing*. <https://examhub.eu/report-position-paper-vet-4-0-for-advanced-manufacturing/>
- **EXAM Project.** (n.d.). *Proposals for Advanced Manufacturing 4.0 Labs*. <https://examhub.eu/proposals-for-advanced-manufacturing-4-0-labs/>
- **EXAM Project.** (n.d.). *Preliminary Analysis: Skills and Competencies in Advanced Manufacturing*. <https://examhub.eu/preliminary-analysis/>
- **EXAM Project.** (n.d.). *Validation Report: Labs for Advanced Manufacturing*. <https://examhub.eu/validation-report/>
- **EXAM Project.** (2021, April). *Report on Most Relevant Trends for Advanced Manufacturing*. https://examhub.eu/wp-content/uploads/2021/04/WP_2_2.pdf



- **LCAMP Project.** (2024, December). *D2.2 – Strategic and Annual Plans for LCAMP Alliance (II)*. <https://lcamp.eu/wp-content/uploads/sites/53/2024/12/D2.2-Strategic-and-annual-plans-II-Final-version-2-1.pdf>
- **LCAMP Project.** (2023, July). *D3.2 Observatory Report N1*. https://lcamp.eu/wp-content/uploads/sites/53/2023/07/D3.2-Observatory_reportN1-2.pdf
- **LCAMP Project.** (2024, September). *D3.2 – M24 – Analysis of the Impacts and Evolution of Jobs in Advanced Manufacturing – Synthesis of all D3.2*. <https://lcamp.eu/wp-content/uploads/sites/53/2024/09/D3.2-M24-S-Synthesis-of-all-D3.2-M24-Sub-reports-9.0.pdf>
- **LCAMP Project.** (2024, September). *D3.2 – M24 – Analysis of the Impacts and Evolution of Jobs in Advanced Manufacturing [Archivo PDF]*. *D3.2-M24-C-Analysis-of-the-Impacts-and-Evolution-of-jobs-in-Advanced-Manufacturing1.0-2.pdf*
- **LCAMP Project.** (2024, May 15). *D3.2 SubReport – Basque Country: Analysis of the Evolution of Jobs in Advanced Manufacturing*. <https://lcamp.eu/wp-content/uploads/sites/53/2024/05/2024-05-15-D3.2-SubReport-Basque-Country-Analysis-of-evolution-on-Jobs1.0EN-1.pdf>
- **LCAMP Project.** (n.d.). *D5.1 – Identification of Industry 4.0-specific Qualifications and Job Profiles in Different Industry Sectors*. <https://lcamp.eu/wp-content/uploads/sites/53/2024/12/D5.1-Identification-of-I4.0-specific-qualifications-and-job-profiles-in-different-industry-sectors.pdf>
- **LCAMP Project.** (2024, December). *D5.2 – Skills Assessment Tool*. https://lcamp.eu/wp-content/uploads/sites/53/2024/12/D5.2_Skills-Assessment-Tool_V.1.0_Final_VotingValidation.pdf
- **LCAMP Project.** (2025, January). *D6.1 – Industry 4.0 Technology Absorption Through the Collaborative Learning Factory*. <https://lcamp.eu/wp-content/uploads/sites/53/2025/01/D6.1-INDUSTRY-4.0-TECHNOLOGY-ABSORPTION-THROUGH-THE-COLLABORATIVE-LEARNING-FACTORY consolidated.pdf>
- **LCAMP Project.** (2024, June). *D7.1 – ADMA-LCAMP FRAMEWORKS INTEGRATION*. <https://lcamp.eu/wp-content/uploads/sites/53/2024/12/D7.1-ADMA-LCAMP-Frameworks-Integration-Final-Version-1.pdf>
- **LCAMP Project.** (2025, May). *D7.2 – Cases studies of SME's scans and implementations*. <https://lcamp.eu/wp-content/uploads/sites/53/2025/05/D7.2-CASE-STUDIES-OF-SMES-SCANS-AND-IMPLEMENTATIONS.pdf>





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