

# Digital4Business Joint Master's in Advanced Digital Skills

Student Handbook 2024

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# Welcome to Digital4Business (D4B) — Joint Master's in Advanced Digital Skills

Become part of a revolutionary new international online master's programme that teaches you the practical advanced digital skills to succeed in European business. It's an entirely market-led academic programme driven and designed to meet the current and future (up)skill needs of SMEs and companies all over Europe.

Digital4Business will give you the essential tools and experience to thrive in today's fast-paced digital world. It's a learning journey where universities, research centres, industry leaders and employment services collaborate to create something special and transformative in international business. We are building a vibrant, innovative programme that's not just about theory, but also about getting hands-on with the skills that European businesses need to thrive.

## What will you learn?

From the practical application of AI to mastering the intricacies of cybersecurity, data science and the cloud, our programme is designed to keep you ahead of the curve. You'll be diving into real-world projects, participating in hackathons, and working alongside industry professionals who are leaders in their fields. Plus, you'll graduate with not only a degree from top European institutions but also internationally recognised industry certifications that will make you stand out in a global field.

## How will you learn?

Flexibility is key, so we offer different formats to suit your lifestyle:

1. Part-time MSc EQF level 7 programme
2. Part-time Accelerated MSc EQF level 7 programme
3. Full-time MSc EQF level 7 programme
4. Individual modules and courses

Our innovative online platform combines the best of in-house university tools with a new 'Master's as a Service' model, perfect for part-time students and busy professionals.

## Beyond the virtual classroom

It's not just about what you learn from our tutors — it's also about who you meet and the experiences you gain. With mentoring programmes, industry-led projects and coaching on essential soft skills, we're here to support you every step of the way. You'll have the chance to connect with top companies, gain invaluable insights, and build a network that will boost your career long after graduation.

## Ready to start?

We're launching multiple cohorts over the next four years, with both part-time and full-time options available.

D4B will help businesses achieve long-term competitiveness and growth through digital transformation and innovation. These skills are pivotal to European businesses' ongoing competitiveness and growth, aligning with the goals of the Digital Europe Programme (DIGITAL) — an EU funding initiative focused on bringing digital technology to businesses, citizens and public administrations. At Digital4Business, your potential to harness digital technology for the future begins!

## How to use this handbook

This handbook is your essential guide to everything you need to know about the programme. Inside, you'll find info on how the programme runs, its structure, assessment details, student services, and important policies. It will give you a clear idea of what to expect throughout your studies.

We hope you find this programme engaging, enjoyable and rewarding!

## The Digital4Business Consortium

The Consortium launching Digital4Business is a team comprised of academic institutions and industry partners from across Europe. As an initial launch, Università Di Bologna (UNIBO), Italy, will deliver the foundational mandatory module **Digital Transformation**. After this initial launch in November 2024, the full range of elective modules will be rolled out in January 2025, overseen by the Consortium's collective partnership of European higher education institutions.

## Digital4Business objectives

The programme aims to equip you with the essential knowledge, skills and competence to understand digital transformation, advanced digital skills, and emerging technologies in business. The curriculum covers key topics both theoretically and practically, including:

- Digital Transformation
- Innovation
- Data Governance and Ethics
- Artificial Intelligence
- Generative AI
- Data Science
- IoT (Internet of Things)
- Blockchain Technologies
- Cloud Computing for Business
- Cybersecurity
- Risk and Change Management
- Business Programming
- Quantum Computing
  
- Digital Transformation Project

Digital Transformation is a mandatory module, and serves as the cornerstone of the Master's, providing the essential knowledge and skills needed for various specialised fields. This core module ensures that learners develop a comprehensive understanding of the rapidly evolving digital landscape. Its learning outcomes are directly connected to other modules, creating a holistic learning experience. Additionally, there is a mandatory Project module within the programme.

The programme also includes a suite of elective modules, giving learners the flexibility to choose areas of focus that interest them the most within the advanced digital skills landscape.

**AI and Data Science** modules are linked with **Digital Transformation**, providing practical context for their use in organisations. **Cloud Computing for Business** becomes more relevant as you learn to implement cloud solutions effectively within digital transformation.

**Cybersecurity** knowledge is more practical and strategic when connected to **Digital Transformation**, helping you navigate digital security challenges. Studying **Blockchain** in this context highlights its role in reshaping digital infrastructures.

The **Internet of Things (IoT)** module shows you how to harness IoT technologies' full potential within digital transformation. Insights into **Quantum Computing**'s impact on digital ecosystems are also covered, keeping you ahead of technological advancements.

The **Data Governance and Ethics** module aligns data policies and ethical guidelines with technological progress, grounded in Digital Transformation. You'll also learn to use **Generative AI** applications strategically and responsibly.

Innovation thrives in the environment created by successful Digital Transformation, and understanding this process is crucial for managing risks and changes from digital disruptions and opportunities.

Together with the core Digital Transformation and capstone **Project** modules, these electives will ensure you gain multidisciplinary skills and insights, preparing you for the dynamic digital landscape. The **Digital Transformation Project** gives students a chance to practically apply everything they've learned into a hands-on project.

The programme has a list of 'Minimum Intended Programme Learning Outcomes (MIPLOs) in terms of knowledge, skill and competence. These outcomes have been developed to align with industry feedback and the analysis of related programmes internationally.

<b>MIPLO1</b>	Critically appraise, select and employ existing and emerging technologies to address complex business problems and support innovation and digital transformation in business.
<b>MIPLO2</b>	Critically assess and evaluate sustainability, governance and ethical risks and impacts associated with digital transformation.
<b>MIPLO3</b>	Synthesise and communicate the opportunities, risks and critical challenges of digital transformation practices to underpin strategic decisions to key stakeholders.
<b>MIPLO4</b>	Demonstrate an in-depth understanding of the fundamental concepts and techniques of advanced digital skills from a business perspective.
<b>MIPLO5</b>	Cultivate, select, and employ transversal advanced digital skills and practices, evaluating their application in various contexts.
<b>MIPLO6</b>	Explore, strategically leverage, and implement advanced digital skills and practices to foster creativity at an individual, team and organisational levels.

**Table 1. Minimum Intended Programme Learning Outcomes (MIPLOs)**

## Programme structure and delivery modes

The Joint Master's Degree in Advanced Digital Skills is delivered entirely online, using a mix of live (synchronous) and pre-recorded (asynchronous) methods. Since the programme is fully online, you won't need to attend any classes in person at any partner institution. Everything is managed through a central learning management system (LMS) and virtual classroom technologies.

The programme is offered in three modes of study:

- i) Full-time,
- ii) Part-time accelerated, and
- iii) Part-time.

For all study modes, you will need to obtain a total number of 60 ECTS to be awarded the Joint Master’s Degree in Advanced Digital Skills. For each of the study modes, full-time, part-time accelerated, and part-time, the duration of the programme is either 2 semesters, 3 semesters, or 4 semesters (see Table 2).

**Note:** Note: A semester is an academic session that typically includes 12 weeks of teaching, followed by additional time for final module exams after the 12th week of teaching.

Mode of study	Duration	Average time required to complete studies	Credit points/unit
Full-time	2 semesters	1 year	60 ECTS
Part-time (accelerated)	3 semesters	1 year	60 ECTS
Part-time	4 semesters	2 years	60 ECTS

**Table 2. Duration of programme for each mode of study**

For a full-time student, the programme takes one year to complete as standard. The schedule and curriculum are designed for students to earn 30 ECTS credits per semester over two semesters. Each semester involves an average workload of 750 hours.

For a student in the part-time accelerated programme, the standard study period is also one year. The schedule and curriculum are designed for students to earn 20 ECTS credits per semester over three semesters. Each semester involves an average workload of 500 hours.

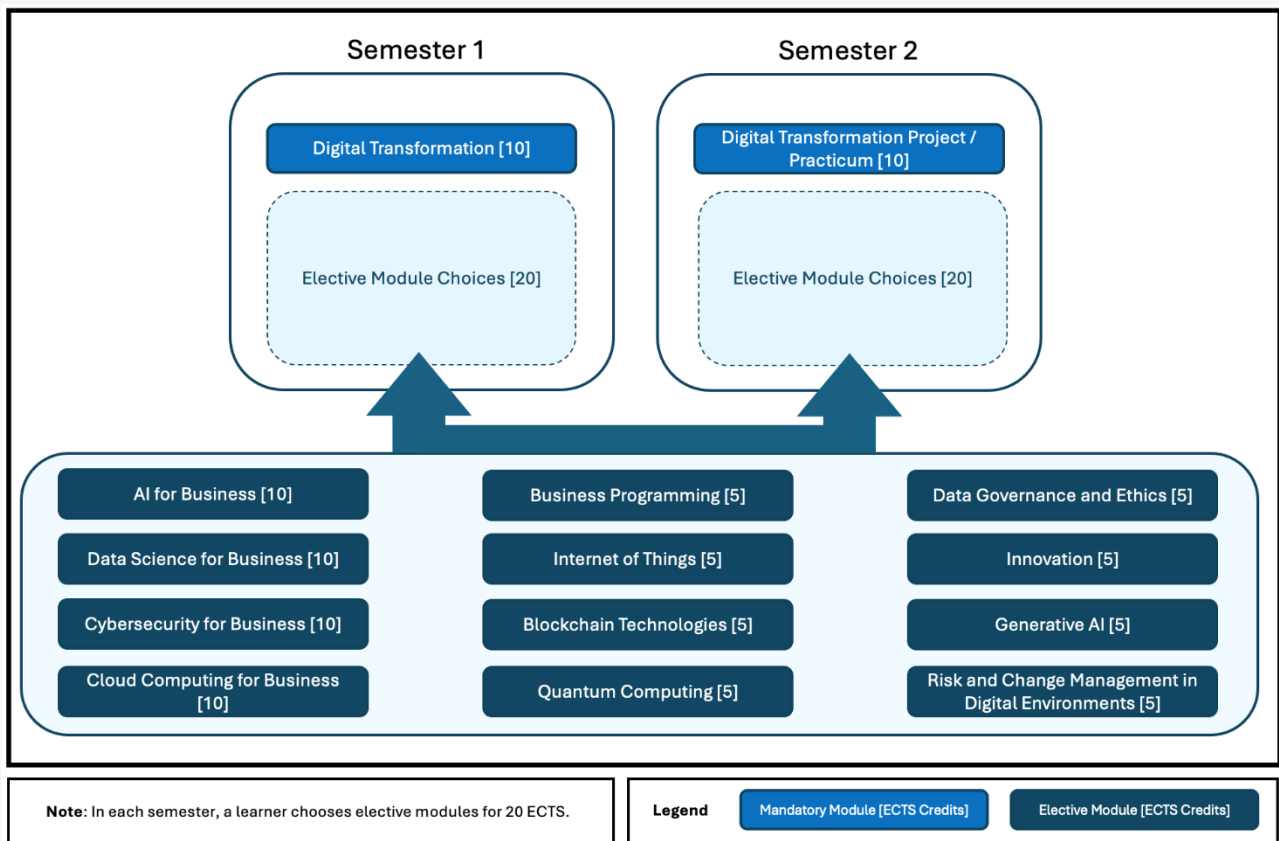
For a student in the part-time programme, the standard study period is two years. The schedule and curriculum are designed for students to earn 15 ECTS credits per semester over four semesters. Each semester involves an average workload of 375 hours.

The programme aims to distribute the workload evenly across the semester by offering various teaching and assessment formats.

### Full-time delivery

The curriculum and programme structure for the Joint Master’s Degree in Advanced Digital Skills (full-time) is shown in Figure 1.

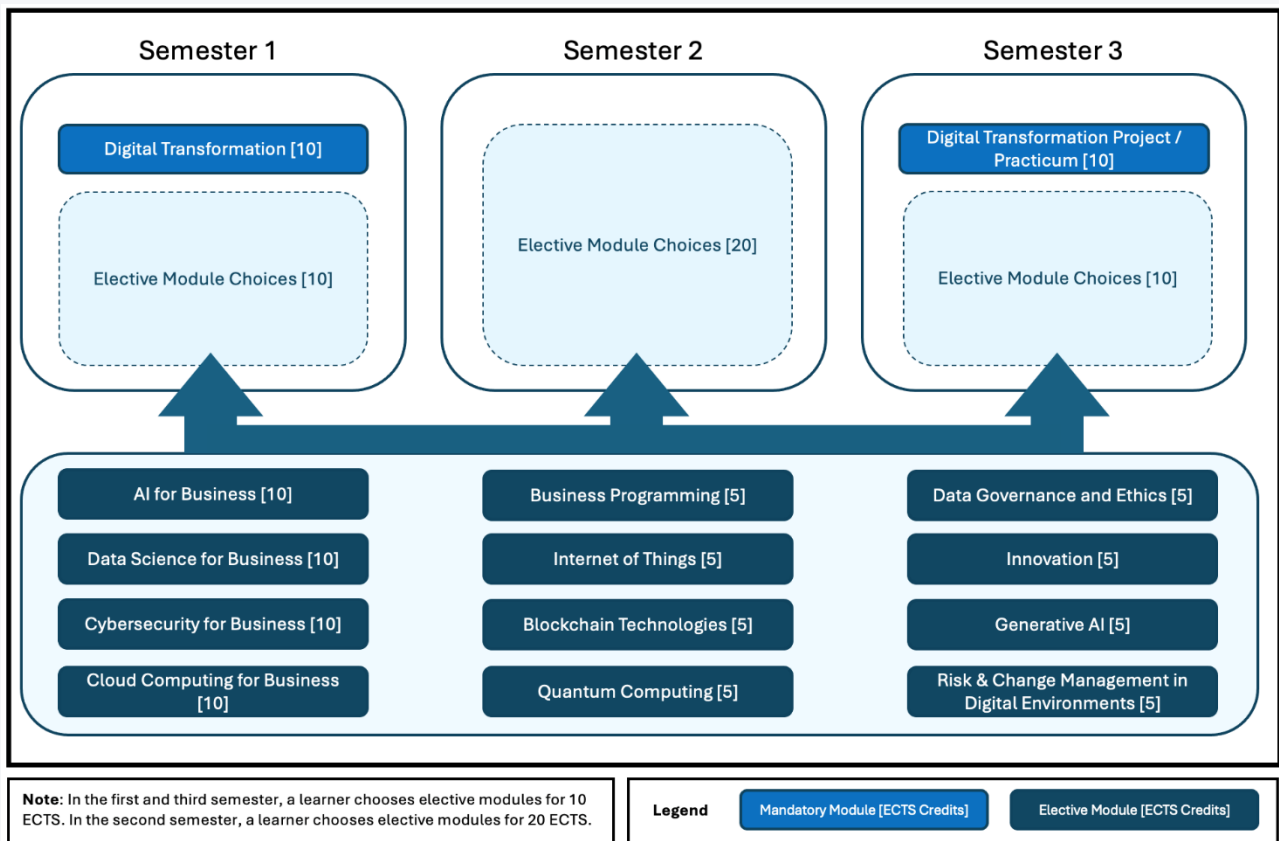




**Figure 1: Joint Master’s Degree in Advanced Digital Skills (Full-Time)**

**Part-time accelerated delivery**

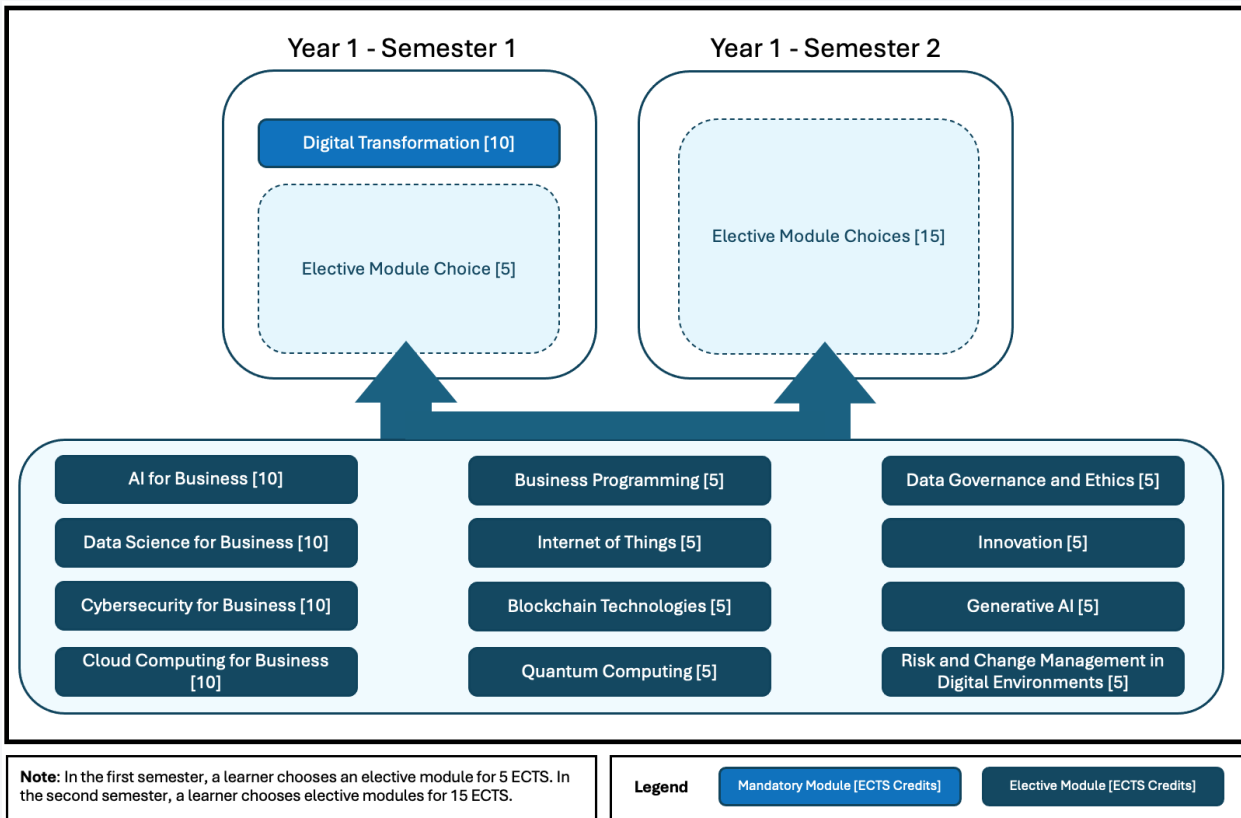
The curriculum and structure for the Joint Master’s Degree in Advanced Digital Skills (part-time accelerated) is shown in Figure 2.



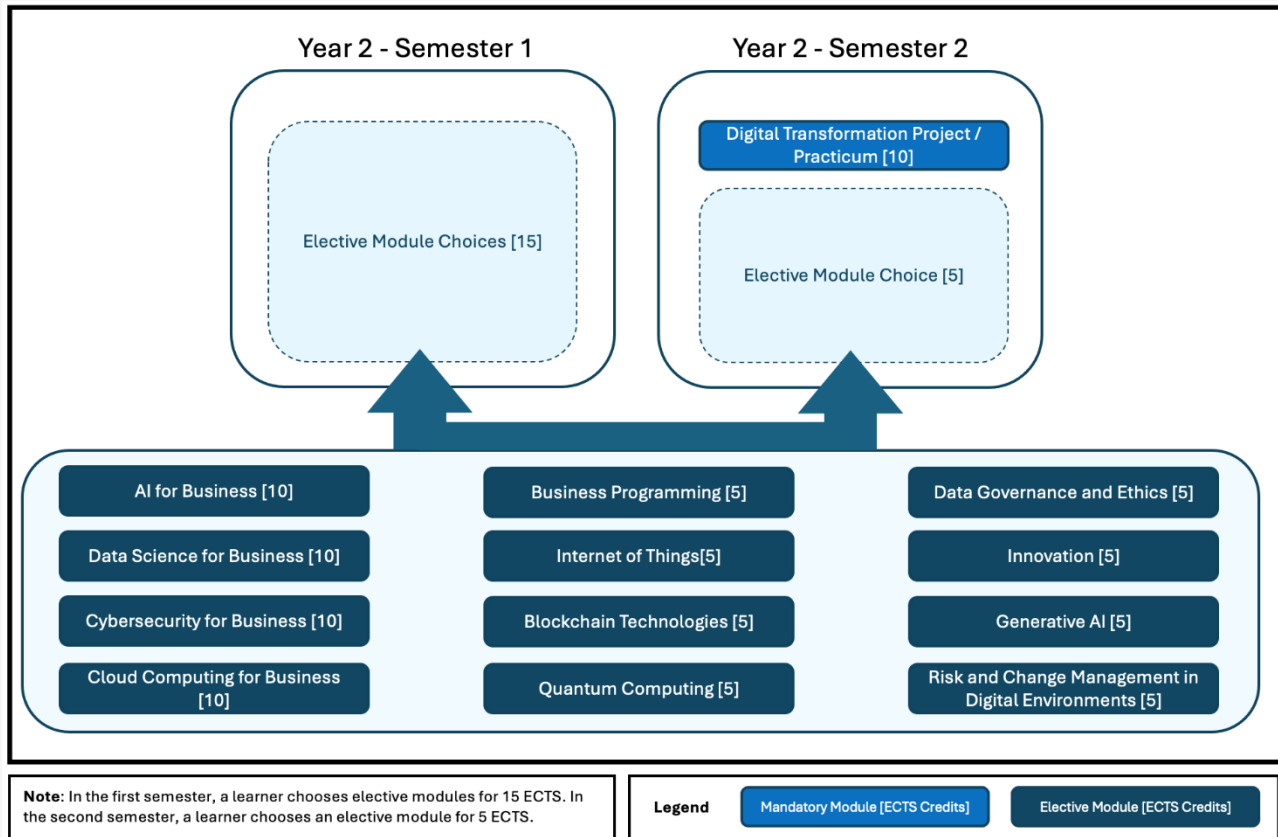
**Figure 2: Joint Master’s Degree in Advanced Digital Skills (part-time accelerated)**

**Part-time delivery**

The curriculum and structure for the Joint Master’s Degree in Advanced Digital Skills (part-time) Year 1 and Year 2 is shown in Figure 3a and Figure 3b.



**Figure 3a: Joint Master's Degree in Advanced Digital Skills (part-time) Year 1**



**Figure 3b: Joint Master's Degree in Advanced Digital Skills (part-time) Year 2**

## Choice of elective modules

Students have a high degree of flexibility when choosing elective modules. The programme team analyses role profiles to guide students on which elective modules are most suitable for their career goals.

**Note: The elective modules available each semester may be limited due to scheduling constraints and overall demand. However, the programme team will strive to offer the widest range of elective modules possible within these constraints.**

## Language of Instruction

The programme is delivered in English.

## Summary description of programme modules

Table 3 provides a summary and set of learning objectives for each of the programme's modules.

Note: Detailed information for each module can be found in the Module Descriptor Handbook, available for download at <https://www.digital4business.eu>.

Module title	Mandatory / Elective	ECTS	Module overview	Module learning objectives
<b>Digital Transformation</b>	Mandatory	10	<p><i>The module aims to help students understand, discuss, and synthesise the fundamentals of digital transformation and the main strategies for digital implementation. The Digital Transformation module offers an in-depth look at key digital transformation concepts and tools. Students will evaluate different digital transformation models to see how they influence innovative business models.</i></p> <p><i>They will also learn to allocate strategic resources for effective digital change. The course focuses on designing and implementing advanced digital transformation strategies, using practical exercises to simulate real-world situations.</i></p> <p><i>This module prepares students to lead digital transformation initiatives, effectively manage changes, and capitalise on opportunities in the digital business world. This module also aims to develop students' methodological and</i></p>	<p><i>At the end of the unit, learners will be able to:</i></p> <ul style="list-style-type: none"> <li><b>LO1:</b> <i>Analyse and synthesise the key concepts and enablers of digital transformation.</i></li> <li><b>LO2:</b> <i>Critically evaluate digital transformation paradigms and their impact on innovative business models.</i></li> <li><b>LO3:</b> <i>Assess and strategise the deployment of strategic resources for digital transformation,</i></li> <li><b>LO4:</b> <i>Design and implement advanced strategies for digital business transformation.</i></li> </ul>

			<i>research skills in business and digital transformation.</i>	
<b>AI for Business</b>	Elective	10	<p><i>The main objective of this module is to give students a solid understanding of the fundamental theories, methods, and models behind machine learning (ML) and artificial intelligence (AI).</i></p> <p><i>The AI module explores artificial intelligence and machine learning, focusing on analysis, synthesis, and innovation. Students will learn to design, train, and evaluate advanced ML models using cutting-edge data and optimisation strategies. This will equip them with the skills to innovate and improve business processes through advanced ML models, enhancing decision-making, increasing efficiency, and gaining a competitive edge in the market.</i></p> <p><i>The course emphasises rigorous performance assessment techniques, result interpretation, and effective communication of findings. Students will apply strategic thinking to complex AI applications, critically evaluating and improving their effectiveness.</i></p> <p><i>The module also covers the ethical, societal, and environmental impacts of AI, guiding students to propose responsible development and implementation practices.</i></p>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <ul style="list-style-type: none"> <li><b>L01:</b> <i>Analyse, synthesise, and innovate within artificial intelligence and machine learning, emphasising critical understanding and the capability to advance the field.</i></li> <li><b>L02:</b> <i>Design, train and critically evaluate advanced machine learning models, focusing on innovative data and optimisation strategies to boost performance.</i></li> <li><b>L03:</b> <i>Employ innovative techniques for rigorous machine learning model performance assessment, interpret results, and communicate implications across contexts effectively.</i></li> <li><b>L04:</b> <i>Apply strategic thinking in AI and machine learning for complex applications, assess effectiveness critically, and propose innovative solutions or improvements.</i></li> <li><b>L05:</b> <i>Critically explore AI and machine learning's ethical, societal and environmental impacts, and propose ethical, sustainable development and implementation practices.</i></li> </ul>

			<p><i>By the end of the module, students will be prepared to navigate the complexities of technology responsibly, ensuring that AI implementations are socially acceptable and environmentally sustainable. This will help safeguard the company's reputation and contribute to long-term success.</i></p>	
<b>Data Science for Business</b>	Elective	10	<p><i>This module provides a comprehensive overview of data science concepts, techniques, tools and best practices. Students will gain hands-on experience applying key data science methods and technologies to extract insights from data. The course covers both fundamental principles and advanced techniques with real-world applications across various industries.</i></p> <p><i>Students will develop technical data science skills and an understanding of ethical data science practices. The focus is on innovative data interpretation and insight extraction strategies. The course includes advanced data science processes, methods, and algorithms, fostering originality in problem-solving and model optimisation, which are essential for driving digital change.</i></p> <p><i>Through comprehensive data analysis using statistical and machine learning techniques, students will learn to synthesise insights, supporting informed decision-making and effective communication. The curriculum</i></p>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <p><b>LO1:</b> <i>Evaluate and integrate data science concepts, theories and practices to analyse and solve real-world problems, employing innovative strategies and techniques for data interpretation and insight extraction.</i></p> <p><b>LO2:</b> <i>Apply advanced processes, methods and algorithms in data science to address complex situations with originality in problem-solving, including the development and optimisation of models for impactful real-world applications.</i></p> <p><b>LO3:</b> <i>Conduct comprehensive data analysis using a variety of statistical and machine learning techniques to inform decision-making, synthesising data insights for effective communication to diverse audiences.</i></p> <p><b>LO4:</b> <i>Design, implement and critically assess advanced visualisations, models and business intelligence outputs,</i></p>

			<i>emphasises the design and assessment of advanced visualisations and business intelligence tools, equipping students to convey complex data insights and enhance model performance, thereby driving business innovation and success.</i>	<i>demonstrating mastery in communicating complex data insights and optimising model performance.</i>
<b>Cybersecurity for Business</b>	Elective	10	<i>This module aims to enable learners to explore the field of cybersecurity — focusing on mastering cybersecurity to protect personal and organisational data. Students will learn to identify and assess vulnerabilities in data systems, understanding how these can lead to security breaches. It will equip students with the skills to create strong protection strategies, ensuring data remains safe from potential threats. Additionally, the module delves into the legal and ethical dimensions of cybersecurity.</i>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <ul style="list-style-type: none"> <li><b>LO1:</b> <i>Analyse and critically evaluate vulnerabilities in personal and organisational data systems to identify potential security breaches and suggest mitigation strategies.</i></li> <li><b>LO2:</b> <i>Synthesise and apply advanced concepts and techniques of cyber attacks to simulate potential security breaches, demonstrating a comprehensive understanding of cyber threat landscapes.</i></li> <li><b>LO3:</b> <i>Design and implement robust strategies for the protection of personal and organisational data, utilising advanced encryption techniques and security protocols to mitigate potential threats.</i></li> <li><b>LO4:</b> <i>Evaluate and integrate sophisticated tools and methodologies for the prevention and detection of cyber attack incidents, demonstrating an ability to anticipate and counteract emerging cyber threats.</i></li> <li><b>LO5:</b> <i>Critically assess and debate cybersecurity legal and ethical issues, formulating well-</i></li> </ul>



				<i>justified recommendations for policy and practice that reflect an advanced understanding of the complexities and responsibilities in the field of cybersecurity.</i>
<b>Cloud Computing for Business</b>	Elective	10	<i>The Cloud Computing for Business module aims to provide a comprehensive coverage of cloud computing technologies and addresses the potential impact, challenges, and benefits of these technologies in the context of digital business transformation. Students will explore the essentials of cloud computing and its role in digital business transformation, assessing core principles, frameworks and methodologies, along with the tools necessary for implementing cloud computing solutions effectively. The course will delve into the governance and security challenges of cloud-based systems, guiding students to identify and evaluate various cloud security architectures and deployment strategies. The module also covers a broad spectrum of existing and emerging cloud services, including storage, machine learning, compute, analytics and quantum computing. Students will learn to critically appraise these services and develop strategies to harness their potential for driving digital business transformation, equipping them with the knowledge to make informed decisions in a cloud-enabled business landscape.</i>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <p><b>LO1:</b> <i>Assess core principles, frameworks, development methodologies and tools for the adoption of cloud computing solutions to support and enable digital business transformation.</i></p> <p><b>LO2:</b> <i>Critically analyse the governance and security challenges associated with cloud-based systems to identify and evaluate candidate cloud security architectures and deployment strategies.</i></p> <p><b>LO3:</b> <i>Evaluate and assess the intersection and impact of fog and edge computing in relation to cloud computing.</i></p> <p><b>LO4:</b> <i>Critically appraise the wide range of existing and emerging cloud services (eg storage, machine learning, compute, analytics, quantum computing, etc) and develop strategies to leverage such services for digital business transformation.</i></p>
<b>Business Programming</b>	Elective	5	<i>The Business Programming module curriculum aims to equip learners with a solid understanding of programming</i>	<i>Upon successful completion of this module, learners will be able to:</i>

			<p><i>fundamentals, applications, and their impact on business model development. This module aims to equip students with a deep understanding of programming fundamentals, paradigms, and languages, focusing on creating innovative solutions for business. Students will learn to design and implement solutions in web and mobile app development using low-code/no-code strategies and business analytics, enhancing their ability to innovate in digital transformation. The course emphasises leadership in managing software projects, integrating data science and machine learning to develop business models that can predict and address business challenges. Students will analyse programming case studies to understand their impact and anticipate future trends and challenges in business development.</i></p>	<p><b>LO1:</b> Critically evaluate programming fundamentals, paradigms and languages to synthesise innovative approaches for industry-specific applications and business model innovation.</p> <p><b>LO2:</b> Design and execute advanced solutions in web and mobile app development, employing low-code/no-code strategies and business analytics to innovate business models.</p> <p><b>LO3:</b> Demonstrate leadership in managing complex software projects, applying advanced methodologies, and leveraging tools for debugging, testing and version control in business contexts.</p> <p><b>LO4:</b> Integrate data science and machine learning into business model development, creating innovative solutions to predict and solve business challenges through advanced programming.</p> <p><b>LO5:</b> Analyse programming case studies to critique their impact on business models and forecast future programming trends and challenges in business development.</p>
<b>Internet of Things</b>	Elective	5	<p><i>The Internet of Things module aims to provide learners with a comprehensive understanding of IoT fundamentals, applications, and their impact on business model development. The objectives include gaining knowledge of IoT architecture, communication protocols, devices and data</i></p>	<p>Upon successful completion of this module, learners will be able to:</p> <p><b>LO1:</b> Critically evaluate the fundamentals of IoT, including architecture, communication protocols, devices, sensors and data management techniques, and assess their</p>

			<p>management techniques, as well as exploring IoT connectivity options, security, and risk management. Additionally, learners will develop skills in IoT project management and analyse real-world IoT case studies in business model development.</p>	<p>impact on business model innovation across various industries.</p> <p><b>LO2:</b> Analyse IoT connectivity options and networking technologies, identifying challenges, and proposing advanced solutions for business applications.</p> <p><b>LO3:</b> Evaluate the critical aspects of IoT security, privacy, and risk management in business environments, proposing strategic measures to address these concerns.</p> <p><b>LO4:</b> Design and manage IoT projects by integrating data analytics, cloud computing and edge computing solutions to drive business model development.</p> <p><b>LO5:</b> Conduct in-depth analyses of real-world IoT case studies to identify best practices and emerging trends, and critically discuss future challenges in IoT business model innovation.</p>
<b>Blockchain Technologies</b>	Elective	5	<p>The module aims to enable learners to evaluate and appraise the impact of blockchain in modern business environments. Learners will explore the underlying protocols and key aspects of blockchain technologies, including distributed ledgers, decentralisation, cryptocurrencies and dApps. Furthermore, this module explores ethical and legal issues associated with adoption of blockchain technologies and considers how blockchain technologies can be leveraged for potential competitive business advantage.</p>	<p>Upon successful completion of this module, learners will be able to:</p> <p><b>LO1:</b> Critically assess blockchain technologies and their revolutionary impact on financial systems, integrating analysis of core components and pioneering use cases.</p> <p><b>LO2:</b> Analyse and differentiate between blockchain protocols, addressing ethical, legal, and practical adoption challenges, to foresee the technology's evolving landscape.</p>

				<p><b>L03:</b> Design and implement a blockchain application, employing critical analysis to evaluate its infrastructure and applicability within various contexts.</p> <p><b>L04:</b> Strategise blockchain integration within enterprises, synthesising technological and regulatory insights to navigate and leverage emerging opportunities.</p>
<b>Quantum Computing</b>	Elective	5	<p>Quantum computing is a rapidly developing field that shows great promise for fundamentally transforming and extending the scope of computational capabilities through using key results from the theory of quantum mechanics. The physical construction of quantum computers and accessibility to quantum computing via cloud services is now a reality.</p> <p>This module aims to provide learners with an introduction to the theory and foundations of quantum computing and its applications. The module also aims to provide learners with the practical skills to develop and implement quantum computing algorithms to solve computational problems.</p> <p>This course includes a research component, where students will explore the current landscape and future potential of quantum computing evaluating its impact on various industries. This module aims to prepare students with the knowledge and skills to understand and leverage the</p>	<p>Upon successful completion of this module, learners will be able to:</p> <p><b>L01:</b> Interpret and apply mathematical and quantum mechanical principles to qubit systems.</p> <p><b>L02:</b> Critically assess the differences and similarities between quantum and classical computation.</p> <p><b>L03:</b> Solve computational problems through the implementation of algorithms for quantum computers.</p> <p><b>L04:</b> Apply the circuit model of quantum gates when analysing problems and formulating solutions.</p> <p><b>L05:</b> Research and evaluate the impact and potential of quantum computing.</p>

			<i>emerging field of quantum computing in a business context</i>	
<b>Data Governance and Ethics</b>	Elective	5	<i>This module focuses on the critical aspects of data governance and regulatory compliance in the context of data acquisition, storage, and transformation. Students will learn to assess and compare various data governance frameworks and understand the legal and ethical implications of managing data. Students will critically analyse ethical considerations in business data handling and develop strategies to manage data ethically and responsibly. This module will also address the growing importance of artificial intelligence in data analysis, ensuring students comprehend the technical and legal facets of data management and appreciate the ethical and societal impacts, preparing them for responsible leadership in the digital business environment.</i>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <ul style="list-style-type: none"> <li><b>LO1:</b> <i>Assess and critically compare data governance and regulatory processes for data acquisition, storage and transformation.</i></li> <li><b>LO2:</b> <i>Map data flows to identify access and usage rights clearly and analyse data manipulation practices.</i></li> <li><b>LO3:</b> <i>Evaluate the impact of data management quality on security, confidentiality and sustainability.</i></li> <li><b>LO4:</b> <i>Critically analyse data ethics in business and develop ethical data management strategies.</i></li> <li><b>LO5:</b> <i>Enhance transparency and explainability of AI-generated data insights.</i></li> </ul>
<b>Innovation</b>	Elective	5	<i>The module aims to enable learners to understand, discuss and summarise innovation and the main Innovation implementation strategies. This curricular unit intends to develop methodological and research skills on the lead of innovation. This module on innovation is designed to develop a deep understanding of the creative development process and the strategic application of innovative methods across different contexts.</i>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <ul style="list-style-type: none"> <li><b>LO1:</b> <i>Demonstrate a critical awareness of the creative development process and the application of creative and innovative strategies in a variety of contexts.</i></li> <li><b>LO2:</b> <i>Evaluate and explore various case studies and innovation techniques to help</i></li> </ul>

			<p><i>Students will gain a critical awareness of how creative and innovative strategies can be implemented effectively to drive business growth and transformation. Students will evaluate and explore a range of case studies and innovation techniques providing them with insights into successful creative practices and methodologies. The module will focus on the tangible impacts and return on investment that innovation can bring.</i></p> <p><i>Students will learn to quantify and communicate the value of creative efforts, linking innovation to business outcomes. Students will understand the theory behind innovation and can apply these principles practically to drive real-world business success.</i></p>	<p><i>understand creative and innovative practices.</i></p> <p><b>LO3:</b> <i>Discern, critique and apply the various techniques to foster creative talent environments at an individual, team and organisational level.</i></p> <p><b>LO4:</b> <i>Demonstrate impacts and return on investment at an individual and organisational level.</i></p> <p><b>LO5:</b> <i>Create and explore strategies to deliver the results of creative work in business.</i></p>
<b>Generative AI</b>	Elective	5	<p><i>This module provides a practical introduction to generative AI and its broad range of transformative applications. Using state-of-the-art models, the curriculum encompasses text, image, audio, video and data generation. Students will master techniques like prompt engineering to control and customise generative model outputs. Responsible development practices and ethical considerations around synthetic media are emphasised. Case studies in marketing, medicine and computer science showcase cutting-edge generative applications and their business value. The course encourages innovation by enabling students to identify opportunities for employing generative AI to devise novel business solutions. By exploring its application across different sectors and activity</i></p>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <p><b>LO1:</b> <i>Analyse and differentiate between the core principles and mechanisms of generative AI, focusing on text, image, video and code generation technologies.</i></p> <p><b>LO2:</b> <i>Critically evaluate recent advancements in generative AI, including cutting-edge techniques, models and applications, using academic and industry research.</i></p> <p><b>LO3:</b> <i>Design and implement effective prompt engineering strategies for optimising interactions with generative AI models.</i></p> <p><b>LO4:</b> <i>Develop competencies to architect and integrate generative AI models into</i></p>

			<p>domains, students will gain the ability to leverage generative AI's transformative potential, driving forward-thinking and competitive advantage in the business landscape.</p>	<p>complex real-world applications, assessing their potential impact and effectiveness.</p> <p><b>L05:</b> Innovate by identifying and exploiting opportunities for leveraging generative AI in creating novel business solutions across various sectors and activity domains.</p>
<p><b>Risk and Change Management in Digital Environments</b></p>	<p>Elective</p>	<p>5</p>	<p>This module provides a practical introduction to risk and change management in digital business environments. Students will learn to articulate the core principles of risk and change management, understanding how digital transformation affects business models and workforce dynamics. This module has practical application, teaching students to effectively implement change management strategies in digital transformation projects.</p> <p>Key areas of focus include communication, stakeholder engagement, and the development of an organisational culture conducive to digital adaptation. Students will engage in critical comparisons of digital business models and strategies, assess the associated risks and opportunities, evaluate the broader impact of digital disruption and innovation across various industries.</p>	<p>Upon successful completion of this module, learners will be able to:</p> <p><b>L01:</b> Articulate core principles of risk and change management in digital environments, including digital transformation dynamics and impact on business models and workforce.</p> <p><b>L02:</b> Apply change management strategies effectively in digital transformation projects, with a focus on communication, stakeholder engagement, and organisational culture development.</p> <p><b>L03:</b> Critically compare digital business models, strategies, and the associated risks and opportunities, evaluating the impact of digital disruption and innovation on industries.</p> <p><b>L04:</b> Design and evaluate comprehensive digital transformation plans, incorporating risk management and change management strategies, and assess their effectiveness in promoting innovation, digital culture, and compliance with ethical standards.</p>



<b>Digital Transformation Project / Practicum</b>	Mandatory	10	<i>This module provides a plan for the Digital Transformation Project / Practicum. Using state-of-the-art models, the curriculum encompasses text, image, audio, video and data generation. Responsible development practices and ethical considerations around synthetic media are emphasised.</i>	<p><i>Upon successful completion of this module, learners will be able to:</i></p> <ul style="list-style-type: none"> <li><b>LO1:</b> <i>Synthesise knowledge from core areas of the programme to propose, develop, and evaluate a significant digital transformation project for a specific industry or business.</i></li> <li><b>LO2:</b> <i>Apply project management principles to plan, execute, and deliver a project / practicum.</i></li> <li><b>LO3:</b> <i>Analyse the current state, identify opportunities for digital innovation, propose a transformation strategy, and outline the steps for implementation.</i></li> <li><b>LO4:</b> <i>Demonstrate professional communication skills by presenting and defending their project outcomes.</i></li> <li><b>LO5:</b> <i>Reflect on the ethical implications and sustainability of their project within a global and societal context.</i></li> </ul>
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**Table 3. Module Summary Overview and Learning Objectives**



## Digital4Business governance and management structure

The Master's degree programme has a clear management structure with specific roles for decision-making, evaluation and execution.

### **i) Master's Board of Directors**

The Master's Board of Directors consists of representative Programme Directors from each Partner Institution. They handle general management, academic supervision, quality assurance, degree awarding, recognition issues, agreement changes, dispute resolution and student complaints. They also review the system, advise on policy developments for the joint degree programme, and ensure the programme's coherence and consistency.

The Master's Board meets at least twice a year. The Secretariat compiles initial minutes of each meeting and sends them to all Board members within 15 days. Any changes to the draft minutes must be submitted within a week. After this period, the Secretariat finalises and files the minutes, and a copy is sent to all Programme Directors.

### **ii) The Programme Secretariat (including Programme Coordinators)**

The Secretariat is responsible for the daily operation and administrative management of the programme, guided and governed by the Master's Board. It is partly based at the Project Coordinator Institution, also known as the Master's Secretariat. The Secretariat supports the coordination and day-to-day management of the programme, handling quality assurance, applications, selection, student admission, administration and mobility coordination.

The Secretariat includes Programme Coordinators from each Partner institution. These coordinators liaise with their counterparts at other partner institutions and provide administrative support for issues related to their own institutions. The Secretariat also supports the Master's Board Meetings by preparing the minutes, managing the public website, and handling other tasks assigned by the Master's Board.

### **iii) The Joint Admissions Board**

The Joint Admissions Board shall consist of one representative from each Partner Institution. The Partner Institution is responsible for appointing its representative in accordance with its own procedures and national regulations. The Joint Admissions Board convenes at least once after each application deadline and can hold additional meetings until a selection and admission procedure is completed.

### **iv) The Examinations Board**

The Examinations Board, headed by the Master's Board of Directors, ensures the overall quality and standards of the degree programme. It monitors compliance by the partner institutions and maintains high academic standards. The Examinations Board may include additional nominees from Partner Institutions with expertise in quality assurance and examination administration.

The Examinations Board meets after each examination session to review grading and assessment of exams, projects and coursework. It deliberates cases brought to its attention with at least one

week's notice. For urgent cases, a special meeting can be arranged or members can be consulted electronically. All assessments follow the jointly agreed policies and procedures for the degree programme, as adopted by the Master's Board in accordance with the Study and Examination Regulations.

#### **v) The Joint Programme Committee**

The Joint Programme Committee advises the Master's Board of Directors. It is responsible for reviewing the system and providing policy development advice for the joint degree programme. The Joint Programme Committee meets in person at least once a year to ensure the programme's coherence and consistency. Additional meetings can be held as needed. The committee includes representatives from the Secretariat, Programme Coordinators, the Master's Board of Directors, Faculty representatives, and the Quality Enhancement and Curriculum Development Committee.

#### **vi) The Quality Enhancement and Curriculum Development (QECD) Committee**

The Quality Enhancement and Curriculum Development (QECD) Committee includes at least one academic faculty member from each Partner Institution. It prepares and implements quality enhancement and curriculum development on behalf of the Master's Board of Directors, following the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). The QECD Committee strengthens the collaborative nature of the degree programme.

The QECD Committee reports to the Master's Board and meets as needed or as required by the annual internal quality procedures outlined in the Internal Quality Handbook. Meetings can be held in person or via electronically mediated systems.

The QECD Committee supports the Joint Programme Committee in assessing the programme's effectiveness in meeting its learning objectives and maintaining coherence. It also ensures effective processes for data collection, analysis, making recommendations, and channelling suggestions to improve the programme.

#### **vii) The Project Coordinator**

The Project Coordinator is responsible for:

- Student recruitment, onboarding, and support: Managing these processes through digital platforms and supplementary events.
- Industry certifications and micro-credentials: Implementing relevant certifications and micro-credentials.
- Employability programme: Establishing a programme to enhance student employability.
- European mobility programme: Facilitating mobility for students and lecturers between institutions and companies.
- Faculty training resources: Providing necessary resources for faculty training and support.

The Project Coordinator also has overall coordination responsibility for the degree programme. They represent the Digital4Business Consortium partnership before the Commission and report to

the Master's Board and other stakeholders on the operation and programme coordination issues and quality enhancement outcomes.

### **viii) Faculty members**

The programme's teaching staff includes academics from each of the partner institutions directly involved in the design, development, and delivery of the programme. It comprises highly qualified lecturers and researchers with a broad range of expertise across the spectrum of subjects associated with advanced digital skills. The primary responsibility of the program faculty is to develop curriculum ideas, create innovative teaching materials and methods, engage in professional discussions with fellow academics, and promote interdisciplinary thinking across different subjects. They may participate in teacher exchange and joint teaching programme design. The programme faculty members focus on approaches to teaching and learning, assessment and performance, and comparative analysis of student workload. The faculty is committed to providing the best possible service to students of the Master's programme.

## **Teaching, Learning and Assessment on the Joint Master's Degree Programme**

The teaching, learning and assessment (TLA) strategy for the programme provides learners with an innovative mix of approaches to engage with the content of their modules and to demonstrate their learning. The TLA strategy combines lectures, tutorials, problem-based learning (PBL), enquiry-based learning, practical work, the flipped classroom, seminars, case-based learning, project-based work, and group work, all recognised as effective teaching and learning methods.

Central to this strategy is the belief that learners are active participants in the learning process, not just passive recipients of information. Therefore, teaching aims to make content relevant to the worlds of work and community, creating opportunities for learners to interact with each other and with faculty from partner HEIs in a supportive learning environment.

### **Teaching and learning**

Teaching and learning is a collaborative process involving learners, lecturers, and academic support staff. All students enrolled in this programme are at the centre of this process, and their success depends on their active engagement.

Here is what students can expect from lecturers and academic support staff, and what is expected from students:

Students can expect teaching and support staff to:

- Treat all learners with dignity and respect
- Provide academic support and guidance
- Provide appropriate teaching and learning materials

- Provide a Module Descriptor for each Module studied
- Assess your learning in ways that are fair, consistent and valid
- Assure fair and consistent enforcement of all college rules and procedures

In turn, students are expected to:

- Treat all teaching and support staff and students with dignity and respect
- Take responsibility for their own learning
- Attend all classes, tutorials and other learning sessions
- Make proper use of all learning resources provided
- Honestly attempt all assessments set on your programme
- Abide by all the programme's rules, regulations and procedures

Teaching attempts to create a relevant and meaningful context for learners to make practical connections to the knowledge and skills being acquired. This is primarily achieved through the broadly practical nature of tutorials across most modules, which expose students to industry-based technologies and techniques through practical laboratory exercises.

Teaching styles and contexts are flexible and aim to motivate and engage learners. Assessments are recognised as learning opportunities, and are designed to match the level of study, and to prepare learners for progression.

The part-time programmes are delivered entirely online through directed e-Learning (DEL), which combines on-demand activities and live online classes using virtual classroom technology. Students will complete specific tasks independently at scheduled times on the programme's learning management system (LMS). This approach helps avoid overcrowded schedules, especially for students with limited time, and allows the programme team to keep track of student progress and engagement in the online courses.

Asynchronous activities may include reading or audio/video-based content, as well as practical lab exercises that must be uploaded to the LMS weekly. The synchronous class sessions build on and supplement these asynchronous and self-paced learning materials on Moodle. This approach allows learners to engage with materials outside of class time, leaving class sessions for practical facilitation based directly on those materials.

For full-time programmes, both lecture and practical labs/tutorials will be delivered fully online. Full-time learners will also be able to avail of DEL assets and resources.

Learners are also given the tools and guidance to create and manage their own digital spaces where they can organise group work/study groups/support chats etc.

In general, asynchronous activities consist of:

- Audio/video presentations
- Podcasts
- Practical lab/project work
- Asynchronous discussion activities

Synchronous activities consist of:

- Live lectures

- Live labs
- Group work/breakout rooms

Due to the fully online delivery mode, the programme team will ensure that:

- Learners are informed in advance about the technical requirements and prerequisite skills needed for effective participation in the programme.
- Learners are provided with support during induction on how to use the learning technologies.
- Support and ongoing professional development are provided to college staff in the design, production and use of new technologies in teaching and learning.
- Technical support is provided for the systems used in the programme (eg, LMS, Learner Portal, etc).
- Programme and module learning outcomes and associated assessments are the same for all modes of delivery except where specifically specified and approved.
- Lecturers are encouraged to apply good pedagogic design to their production and planning of learner learning activities — this is achieved by mapping such activities against specific learning outcomes.
- Learners should be provided with opportunities to review archived instructional sequences for revision purposes.
- Learner assignments are to be submitted electronically through the LMS unless otherwise specified.

Students should be aware that there is a clear link between their attendance and engagement in learning sessions, and their performance in each module

## Assessment

Teaching is based on the principle of constructive alignment, meaning we closely link the learning outcomes of each module with the teaching methods and assessments used. Exams are designed to measure how well you have met the learning objectives.

Each Module Descriptor gives details on the types of exams and assessments, including any alternatives. At the start of each module, you'll be informed about what's required to complete it, like coursework and exams.

Exams are marked using clear criteria, and grading rubrics for assignments are provided. Lecturers will give general feedback on assignments within two weeks of submission. If you need more feedback, you can request additional meetings with your lecturers.

The choice of assessment methods is based on five principles:

- *Students are responsible for demonstrating their learning achievement:* A student enrolled on a programme should submit their assessment to demonstrate that they have achieved the intended learning outcomes.

- *Assessment is designed to meet specific standards related to learning outcomes:* Grades and awards are given solely based on assessments that evaluate specific criteria, which include knowledge, skills, and competencies.
- *Assessment promotes and supports effective learning and teaching:* Effective assessment is intrinsic to effective teaching and learning, and is (i) consistent with, (ii) supportive of, and (iii) derived from the intended programme and module learning outcomes.
- *Assessment methods are regularly reviewed:* The Joint Programme Committee, in conjunction with the Quality Enhancement and Curriculum Development Committee, regularly reviews the assessment methods to adapt to evolving requirements. Each module's assessment strategy is designed to effectively evaluate the learning outcomes for that module.
- *Students are well informed about how and why they are assessed:* Students need to be (i) familiar with and understand the intended module and programme learning outcomes, relevant programme and module assessment strategies, and (ii) regularly reminded of the assessments and their regulations.
- *All modules use formative assessments as in-class individual or group activities to assess the learning progress of the students:* These assessments, designed as practical lab work, are completed weekly during mentoring and tutoring hours to enhance hands-on learning. In addition, each individual module assessment strategy is composed of one or at most two additional assessments. The types of assessment may vary, but can include:
  - Open book examinations/terminal examinations where learners can demonstrate their understanding of the topic and their capacity to conduct research about the topic.
  - Peer reviews where learners demonstrate their critical analysis skills.
  - Individual as well as team projects where learners can hone and demonstrate their practical and leadership skills.

All exams and assessments follow the agreed policies and procedures set by the Master's Board of Directors. Each Partner Institution has approved the joint examination regulations. The Examinations Board ensures these rules are followed.

Assessment and examination rules are available to students. The Modules Handbook details the types of assessments for each module, the contribution of each assessment to the overall marks, and when the assessments will take place.

### **Resits and Repeat Assessments**

If you fail a module, miss or withdraw from a module assessment, you can apply for a repeat assessment that covers all the learning outcomes of the failed module. If you fail again after the repeat assessment, you will need to re-enrol and attend the module again.

For more information on examinations and assessments, refer to the Study and Examination Regulations document available for download at [digital4business.eu](https://digital4business.eu).

## **Late submission of coursework**

Late submission of assignments is only accepted under special circumstances, such as illness. You must inform the lecturer before the deadline and provide medical proof if requested by the Programme Coordinator's team. Without proper notice or proof, the lecturer may penalise your grade or refuse to accept the late work. Typically, assignments submitted late are graded as a failure.

## **Digital Transformation Project / Practicum**

The Digital Transformation Project / Practicum module stands as a capstone module for the programme. This culminating project or practicum is designed so that students integrate and apply the knowledge and skills acquired throughout the programme. This capstone module is designed to demonstrate students' comprehensive understanding and competence in digital transformation within a practical, real-world context.

## **Avoiding academic misconduct**

### **Plagiarism**

Plagiarism is using someone else's work without giving proper credit. This includes text, graphics, tables, photos, videos, music or code. Examples of plagiarism include failing to use quotation marks for direct quotes, not citing sources for paraphrased content, or not referencing any borrowed material. Submitting the same work for multiple assignments is also considered plagiarism. To avoid this, always properly cite and reference all sources.

### **Collaboration/collusion**

Collaboration or collusion occurs when two or more students work together without the lecturer's or supervisor's permission, to produce the same piece of work and present it as their own. This is a disciplinary offence.

### **Poor scholarship**

Poor scholarship involves issues like poor referencing, even if there is no intention to deceive. It also includes very close paraphrasing of published work or overusing long quotations, making your own contribution unclear. These issues will lead to a lower mark.

### **Cheating in assessments or examinations**

Using, possessing, sharing, or relying on any unauthorised materials or help during assessments or academic activities is a violation and may result in disciplinary action.

### **Outsourcing assessments**

Getting someone else to do your assessments, whether it is a friend or a paid service, is against regulations and will lead to disciplinary action.

## Knowingly aiding and abetting academic misconduct

Letting others copy all or part of your work is also against regulations and will be treated as an offence.

## Plagiarism of software code

Plagiarism of programming assignments is a serious offence. This policy covers plagiarism in programming assignments that are part of continuous assessments in modules. Since these assessments and projects are part of the examination process, any attempt to plagiarise will be punished accordingly.

Plagiarism includes the following:

- Reuse of code that is based on the learning outcome of the module.
- Submitting another student's work as your own (with or without that person's consent).
- Any act designed to give a student an unfair advantage over another student, or the attempt to commit such acts.
- Allowing another student to use your entire program code.
- The reuse of code from previous years' laboratory assessments.
- Not being able to demonstrate an awareness and understanding of the code.
- Taking code with no understanding and not tailoring it to the requirements of the assessment.
- Reuse of code from other locations and not substantially modifying it.

This policy advocates the use of software reuse under strict guidelines, namely:

- Each source code program shall contain a standard header which states that this is entirely the author's own work or references the reused code.

It is at the lecturer's discretion to determine whether a student has breached the above conditions and committed plagiarism.

## Disciplinary Committee

Students found guilty of these offences will be penalised and may be reported to the Master's Board of Directors. The Master's Board of Directors may subsequently convene a Disciplinary Committee. Disciplinary measures include written warnings, suspension from the programme, or expulsion and exclusion of the student from the programme.

## Student mobility

Since the programme is fully online, there is no need for students to attend classes in person at any Partner institution. Learner mobility will be mainly virtual, with students enrolling in modules taught by faculty from different institutional Partners. Additionally, students will have opportunities to attend various networking events, hackathons, and similar activities associated with the Master's programme. These events can be attended either physically or online, providing



an option for some physical mobility. Partner institutions in different countries will host these events as part of the programme's schedule.

## The Joint Master's Degree in Advanced Digital Skills Award

Students who meet all the requirements of the final assessment will be awarded the Joint Master's Degree in Advanced Digital Skills. Those who do not meet all the requirements within the duration of the degree programme will need to re-register and pay extension fees.

Upon meeting all requirements, students will receive a Master's Degree and a Diploma Supplement. The Diploma Supplement follows the template developed by the European Commission, the Council of Europe, and UNESCO/CEPES, and will be adapted to national legislation as needed. The Degree Certificate will be issued as a Joint Degree.

### Grading system

Classification of Master's degree	Percentage point average boundaries	Description
First-class honours	70%	Achievement includes that required for a Pass and in most respects is significantly and consistently beyond this.
Second-class honours	60%	Achievement includes that required for a Pass and in many respects is significantly beyond this.
Pass	40%	Attains all the minimum intended programme learning outcomes.

## Student complaints procedures

### Making a complaint

This process aims to resolve concerns quickly and effectively. Most issues can be addressed informally, but if that doesn't work, a formal process is available. This procedure is not for appealing assessment results or disciplinary actions — relevant appeals processes should be used for those cases.

If you have a concern, you should express it directly, not through a third party. If you mention another person, they have the right to know what was said about them and who raised the concern. Retaliation for raising a concern will not be tolerated, and confidentiality will be maintained when appropriate. All concerns are taken seriously and assumed to be legitimate. However, if a concern is found to be malicious, the Master's Board of Directors may consider disciplinary action.

We will respectfully deal with each concern and deal with it in the context of our policies and resources.

There are five steps in expressing a concern:

- Step 1: Approach the person responsible for the student's concern. The student should first address concerns directly to the person responsible and attempt to resolve the matter informally.
- Step 2: Approach the person responsible for the area about which the learner has the concern. This may be the Master's Board of Directors or the Programme Coordinators. Many concerns can be dealt with informally by explanation and discussion. If the student needs help in expressing their concern or is reluctant to approach the person(s) responsible, the student can seek advice from the Programme Coordinators.
- Step 3: Make a formal complaint in writing. If it is not possible to resolve the student's concern informally by discussion and explanation, the student can lodge a formal complaint with the Master's Board of Directors. A formal complaint must be made in writing.

Please supply the following details in a letter:

- The student's name and where the student can be contacted.
- The nature of the complaint.
- What action, if any, has already been taken by the student to attempt to resolve the concern.
- Any prior action taken by the programme's management in regard to this matter.
- Say what the student would expect to be done to resolve the complaint.

Please send the written formal complaint to the Programme Coordinators, marking the complaint for the attention of the Master's Board of Directors.

- Step 4: Acknowledgement of the complaint. The student can expect to receive a written acknowledgement of the learner's complaint within 20 working days of its receipt. The student can expect to be kept informed if there is undue delay in coming to a conclusion on the student's complaint. If the person dealing with the student's complaint thinks it would be better dealt with by someone else, or that it should be dealt with under some other procedure, the student will be informed.
- Step 5: Investigation of the complaint and response. The student's complaint will be investigated as quickly as possible, and the student will receive a written response upon completion of the investigation detailing what action, if any, is to be taken.

## Appeals

If the student is still unsatisfied after the initial investigation, they can request that the Project Coordinator, or another appropriate person or group who has not previously handled the student's complaint, conduct a further investigation

## Communication

### Online communication

Official notices will be sent to student email accounts only. Furthermore, the programme's information page on the LMS provides students with information about their programme and programme resources such as the library services, career development information, and programme-related events. Further supports can be accessed through the support pages on the student support section of the <https://www.digital4business.eu> website.

## Appendix: Guide to academic writing

Assessments, whether through essays or exams, are designed to help you develop your knowledge, skills and critical thinking. They also provide a way to measure your progress and identify any additional support you might need. This guide outlines what is expected for your submissions and should assist you with academic essay writing techniques.

### Guidelines on writing essays

The following guidelines are meant to help you prepare and write essays, in addition to the guidance provided in your module outlines. Essays are designed to develop your analytical skills, ability to construct coherent and logical arguments, and understanding of the available literature on a subject. Feedback on essays will help you consistently develop and refine your critical thinking throughout the programme.

These following guidelines address the two main technical components of a good essay — structure and style.

#### Essay structure

All students should follow these guidelines on structure before starting to write an essay. An essay should have three main components: an **introduction**, a **main body**, and a **conclusion**. Using subheadings is optional, and they can help in organising your essay. Focus on addressing the question through an organised analytical argument. Make sure to observe the word limit, allowing for a 10% variation.

##### 1. Introduction

This should cover the following:

- Discussion of title — your understanding of what the question is asking, and the definition of any relevant terms.
- Summary of your argument.
- Indication of your conclusion.

Be careful not to allow the introduction to become over-long. This wastes space in a relatively short essay.

##### 2. Main body

The main part of the essay should focus on a few major themes, ideally three or four. Adding more can overwhelm the reader and make the essay seem like a list.

Instead of merely summarising readings or lecture notes, students should use them to support and strengthen their arguments. Analysis should not be substituted with summaries. They should evaluate various theories and evidence if required by the essay topic. When personal experiences are included, they should serve to illustrate points within the argument, not replace analytical thinking

##### 3. Conclusion

The conclusion consolidates and summarises the major findings from the main part of the essay. It may also suggest potential implications of the argument. New material should not be introduced at this stage.

Once the conclusion is clear, it can be integrated into the introduction, outlining the central argument at the start. This approach clarifies the subsequent discussion.

It helps to construct an essay plan before beginning the writing process. The plan should outline the main points of the introduction, key themes from the main body, and the conclusions, including any resulting implications. This provides a clear roadmap for the essay. Students are advised to discuss their essay plans with the module lecturer for further refinement

## Style

The following guidelines are not exhaustive but should help students with general and stylistic points. All essays must be referenced, with a bibliography at the end.

All concepts, figures and other evidence, use a designated referencing system (such as Harvard, IEEE).

*Bibliography* — at the end of the essay, a bibliography should be included where all references are listed in full, according to the referencing system you are using.

*Statistics* - when referring to data and statistics, use rounded numbers in the text. For example, if the cited figure is 13,201, either put 13,000 or “just over 13,000”. Unless there is a good reason, you should avoid decimal places, so put 49% rather than 48.8%.

Do not copy other students’ essays. This is a disciplinary offence — see the section on ‘Collaboration/collusion’ in this Handbook.

*Quotes* — do not over-quote.

Compiling a series of quotations, no matter how relevant, does not replace the need to develop arguments in the essay writer’s own words and with their own emphasis. A careful use of quotes that enhances the argument is sufficient. When quoting, writers should avoid long paragraphs and consider that often a single sentence or phrase captures the essential point. Inserting passages from literature without proper citation and acknowledgment can be viewed as plagiarism by the evaluator (refer to the ‘Plagiarism’ section).

When referencing an author’s work, the full citation — author, date and page — must be provided. Essays should not be composed solely of paragraphs that start with phrases like “Jones/Smith argues...” Instead, they should focus on concepts, issues and cases, with references to the authors. Avoid assertions, vagueness and value-judgements. For example:

- “It is well known that” (assertion — statement without evidence)
- “Some business leaders have said” (vague — imprecise statement)
- “unfortunately, Labour is still in government” (value-judgement)

*Historical material* — too much of this is often reproduced in essays. As with other evidence, it should be used selectively to illustrate arguments, not to avoid making them. In social science essays, historical exposition does not usually constitute an argument in its own right, so it should not be used as one of the major themes, but in support of each of the themes. Finally, historical

material can easily impose its own structure on the writer — i.e. chronological — and, when reproduced, makes the essay far too descriptive, rather than analytical.

Check grammar and spelling. Do not use paragraphs that are either too short or too long; each should be a coherent unit.

*Typing and Word-processing* — typing your essay not only makes it look better and easier to read, but it also allows you to make corrections and changes without rewriting the entire paper. Skills in typing and word-processing are valuable in the workplace, and are a useful addition to your CV.

## **Disclaimer**

The Digital4Business Consortium has made every effort to ensure the information in this handbook is accurate and up to date at the time of publication, but cannot accept responsibility for any errors or omissions. The Consortium reserves the right to revise, alter or discontinue modules and to amend regulations and procedures at any time, but every effort will be made to notify interested parties.

#### **Legal disclaimer**

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