Digital4Business Joint Master's in Advanced Digital Technologies for Business

Student Handbook 2024

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About the Digital4Business Project

The DIGITAL4Business European Masters Programme aims to design and implement a highly innovative, effective, and sustainable European Professional Master's Programme in Advanced Digital Technologies for Business. This contributes to the overall objectives of the DIGITAL Europe Programme by fast-tracking a high number of graduates through a dynamic pan-European stakeholder ecosystem. In the latter, HEIs, Research Centres, Employment Services, and Industry work together to design, promote, deliver, and improve an innovative Master's Programme. It will focus on the practical application of Advanced Digital Technologies within European Business, an entirely market-led academic programme driven and designed to meet the current and future (up)-skill needs of SMEs and Companies.

The Master's Course(s) will focus on the practical application of Advanced Digital Technologies within Business, including topics such as AI, cybersecurity, and the cloud. The latter skills are pivotal to European businesses' ongoing competitiveness and growth. Courses will blend academic and industry content to ensure that graduates are equipped with theoretical and employment-ready digital skills that will undoubtedly ensure career success for the candidates. Their degrees will be academically accredited by the hosting institutions and comprise industry certification through the key IT leading sector partners. DIGITAL4Business fosters the industry-recognized certifications as a critical element of the learning pathway.

Online teaching and learning environments will be used, combining in-house tools of the participating universities and a new 'Master's as a Service' central online platform to enhance learning opportunities for part time students and professionals already in employment. In addition, mentoring programmes with industry partners, hackathons, industry-focused project-based learning, and coaching on soft skills and job profiles will be offered during the programme.

The programme will be offered in three different formats to cater to diverse student cohorts: (1) a part-time MSc EQF level 7 programme, (2) a part-time Accelerated MSc EQF level 7 programme, (3) a full-time MSc EQF level 7 programme, and (4) individual modules and courses. We aim to launch multiple part-time and full-time cohorts over the 4-year project duration, with at least one part-time and two full-time cohorts completed within this period. The initial part-time and full-time cohorts will serve as pilots, with a cyclical review and enhancement process implemented annually.

The Digital4Business Consortium

The DIGITAL4Business consortium is a partnership of 15 stakeholders led by National College of Ireland, bringing together key industry, technology, and education stakeholders in Europe. Its composition is presented in the following table.

Partners	Acronym
NATIONAL COLLEGE OF IRELAND	NCI
ALMA MATER STUDIORUM – UNIVERSITE DI BOLOGNA	UNIBO
GERMAN UNIVERSITY OF DIGITAL SCIENCE GGMBH	UDS
AKKA ITALIA (former MODIS CONSULTING SRL)	Akkodis
ADECCO FORMATIONE SRL	ADECCO
LEE HECHT HARRISON DEUTSCHLAND GMBH	LHH
SKILLNET IRELAND COMPANY LIMITED BY GUARANTEE	Skillnet Irl
LINKÖPINGS UNIVERSITET	LIU
TERAWE TECHNOLOGIES LIMITED	Terawe
MATRIX INTERNET APPLICATIONS LIMITED	Matrix
DIGITAL TECHNOLOGY SKILLS LIMITED	DTSL
UNIVERSIDADE NOVA LISBOA	UNL
SCHUMAN ASSOCIATES SCRL	Schuman

Associated Partners	Acronym
Certiport, A business of NCS Pearson Inc	Certiport
DIGITALEUROPE AISBL*	DIGITALEUROPE
UNIVERSITÉ PARIS 8 VINCENNES SAINT-DENIS	UP8

Digital4Business (D4B) Joint Professional Master's in Advanced Digital Technologies for Business

Welcome to your programme

Welcome to the Digital4Business (D4B) Joint Professional Master's in Advanced Digital Technologies for Business programme. This innovative postgraduate program is developed through an industry-led approach by a consortium of leading European institutions. The programme covers essential areas such as AI, data science, cybersecurity, and cloud technologies. In particular, the programme focuses on meeting the needs for advanced digital technologies within European SMEs and companies across a range of industry sectors, helping businesses achieve long-term competitiveness and growth through digital transformation and innovation. These skills are pivotal to European businesses' ongoing competitiveness and growth.

The purpose of this handbook is to provide you with key information as to how the programme is delivered, its structure, how you will be assessed, student services that you can avail of, and relevant policies and procedures. The information in this handbook outlines what you can expect at each stage of your studies.

We hope you find this programme of study interesting, enjoyable, and rewarding.

The Digital4Business Consortium

The DIGITAL4Business Consortium is a collaboration of 15 partners and associated partners representing 7 EU countries. This diverse group includes Higher Education Institutes, Research Centres, Training Providers, and industry partners. The consortium has developed this programme for business leaders, professionals and graduates from all across Europe to fill high-demand occupational profiles critical to the success of European companies. The consortium's goal is for the programme's graduates to position themselves as the next generation of digital decision-makers and business professionals with knowledge in advanced digital technologies who can work effectively with ICT teams, help companies overcome digital uncertainty, and fast-track digital transformation within organisations.

D4B Consortium – Higher Education Institute Members

The following Higher Education Institutes participate in the delivery and design of the Joint Professional Master's in Advanced Digital Technologies for Business:

- National College of Ireland [NCI], Dublin, Ireland

- Universidade Nova De Lisboa [UNL], Lisboa, Portugal

- Alma Mater Studiorum – Universita Di Bologna [UNIBO], Bologna, Italy

- Linköpings Universitet [LIU], Linköping, Sweden

The Digital4Business Joint Professional Master's Degree in Advanced Digital Technologies for Business

Objectives

The programme aims to provide learners with essential knowledge, skills, and competence to understand the impacts of digital transformation, advanced digital technologies, and emerging technologies for business and enterprise. The curriculum focuses on the associated core subject matter areas at both a theoretical and practical level including:

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

A mandatory module on Digital Transformation serves as the cornerstone of the Master's programme, establishing essential knowledge and skills that underpin various specialized fields. This core mandatory module is designed to ensure that learners develop a comprehensive understanding of the rapidly evolving digital landscape. Its learning outcomes directly link with other modules across the curriculum, creating a holistic learning experience. There is also a mandatory capstone Project module within the programme.

The other modules in the programme are offered as a suite of elective modules. This provides learners with a high degree of flexibility to choose areas of focus within the Advanced Digital Technologies landscape that are of particular interest.

Modules on AI and Data Science benefit from their linkage with Digital Transformation, providing real-world context for the applications in organizations. Likewise, Cloud Computing gains significance as learners consider the effective implementation of cloud solutions within the context of digital transformation.

Cybersecurity knowledge becomes more practical and strategic when seen through the lens of Digital Transformation, as it helps learners navigate the complex digital security landscape.

Blockchain's importance in reshaping digital infrastructures is highlighted when studied in the context of Digital Transformation.

IoT's close connection with Digital Transformation is emphasized, helping learners harness the full potential of IoT technologies. Digital Transformation also provides students with insights into the potential impact of Quantum Computing on digital ecosystems.

Data Governance & Ethics module benefits from a strong foundation in Digital Transformation, aligning data policies and ethical guidelines with technological advancements. Understanding Digital Transformation is vital for using generative AI applications strategically and responsibly.

Innovation, a critical focus of the programme, thrives in the environment created by successful Digital Transformation. Understanding the intricacies of digital transformation is instrumental in managing risks and changes associated with digital disruptions and opportunities.

The linkages between these modules provide students with a well-rounded education that equips them with multidisciplinary skills and insights. This prepares them for the dynamic digital landscape, where these areas often intersect, complement, and influence each other, fostering versatile and competent professionals ready to adapt to the evolving needs of the digital economy.

The minimum intended programme learning outcomes (MIPLOs) in terms of knowledge, skill, and competence for the programme are presented in Table 1.

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

Table 1. Minimum Intended Programme Learning Outcomes (MIPLOs)

These programme learning outcomes have been developed to align with industry feedback and the analysis of related programmes internationally.

Programme Structure and Delivery Modes

The Joint Professional Master's Degree in Advanced Digital Technologies for Business will be delivered fully online using a combination of synchronous and asynchronous delivery techniques. As delivery of the programme is fully online, there will be no requirement for learners to physically attend classes at any partner institution's geographical location. The fully online delivery of the

programme is facilitated via a centralised 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, learners must complete 60 ECTS to earn the Joint Professional Master's Degree in Advanced Digital Technologies for Business. The program duration varies by mode: 2 semesters for Full Time, 3 semesters for Part Time Accelerated, and 4 semesters for Part Time. (see Table 2).

Note: A semester is an academic session that typically encompasses 12 weeks of teaching and a further period of time to allow for module terminal examinations after the 12th week of teaching.

Mode of Study	Duration	Average time requied 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 learner registered on the Full-Time programme, the standard period of study is one year. The programme schedule and the curriculum are designed in a way that allows students to earn 30 ECTS per semester over two semesters. The workload per semester consists of an average of 750 hours.

For a learner registered on the Part Time Accelerated programme, the standard period of study is also one year. However, in this case, the programme schedule and the curriculum are designed in a way that allows students to earn 20 ECTS per semester over three semesters. The workload per semester consists of an average 500 hours.

Finally, for a learner registered on the Part Time programme, the standard period of study is two years. For such learners, the programme schedule and the curriculum are designed in a way that allows students to earn 15 ECTS per semester over four semesters. The workload per semester consists of an average 375 hours.

To the greatest extent possible, the programme schedule is designed to distribute the workload evenly across the semester by offering a variety of teaching and assessment formats.

Full Time Delivery

The curriculum and programme structure for the Joint Professional Master's Degree in Advanced Digital Technologies for Business (Full Time) is shown in Figure 1.
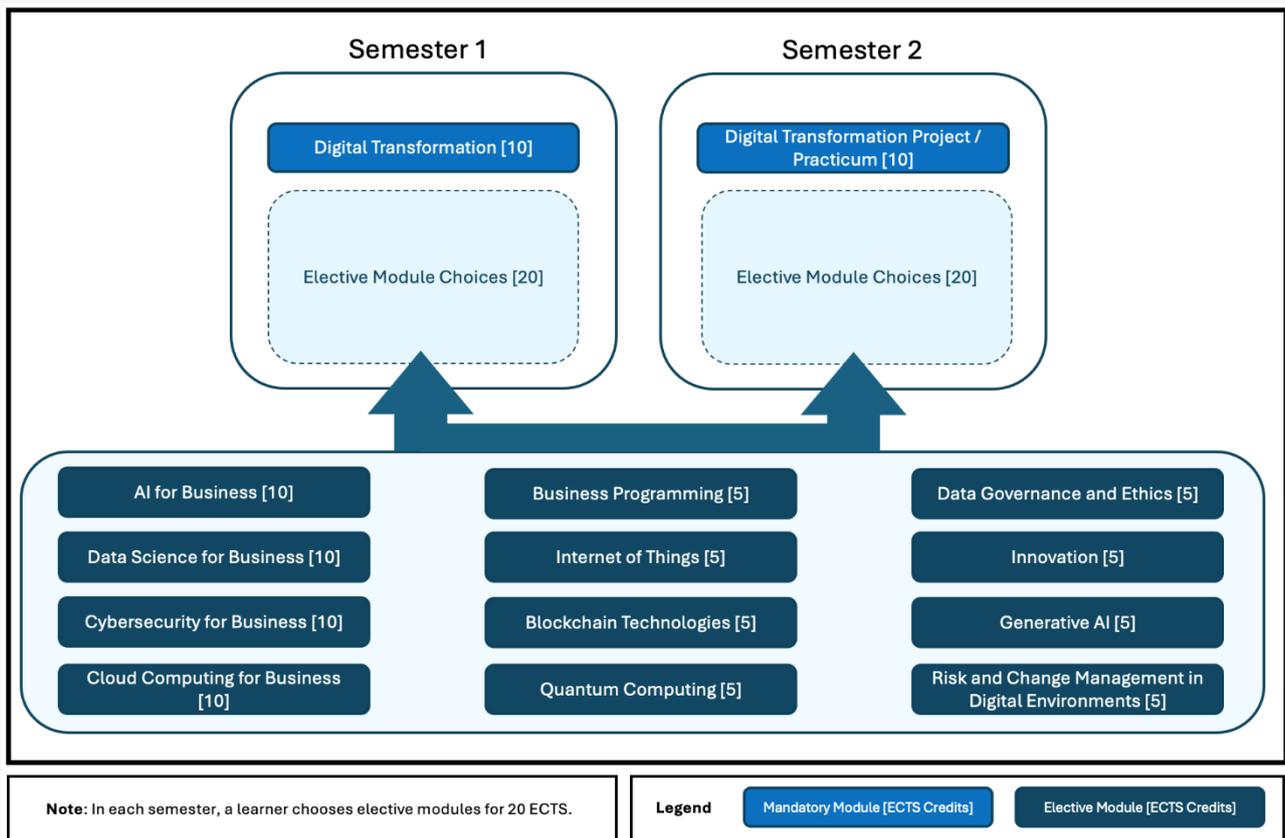
Figure 1: Joint Professional Master's Degree in Advanced Digital Technologies for Business (Full Time)

Part Time Accelerated Delivery

The curriculum and structure for the Joint Professional Master's Degree in Advanced Digital Technologies for Business (Part time Accelerated) is shown in Figure 2.
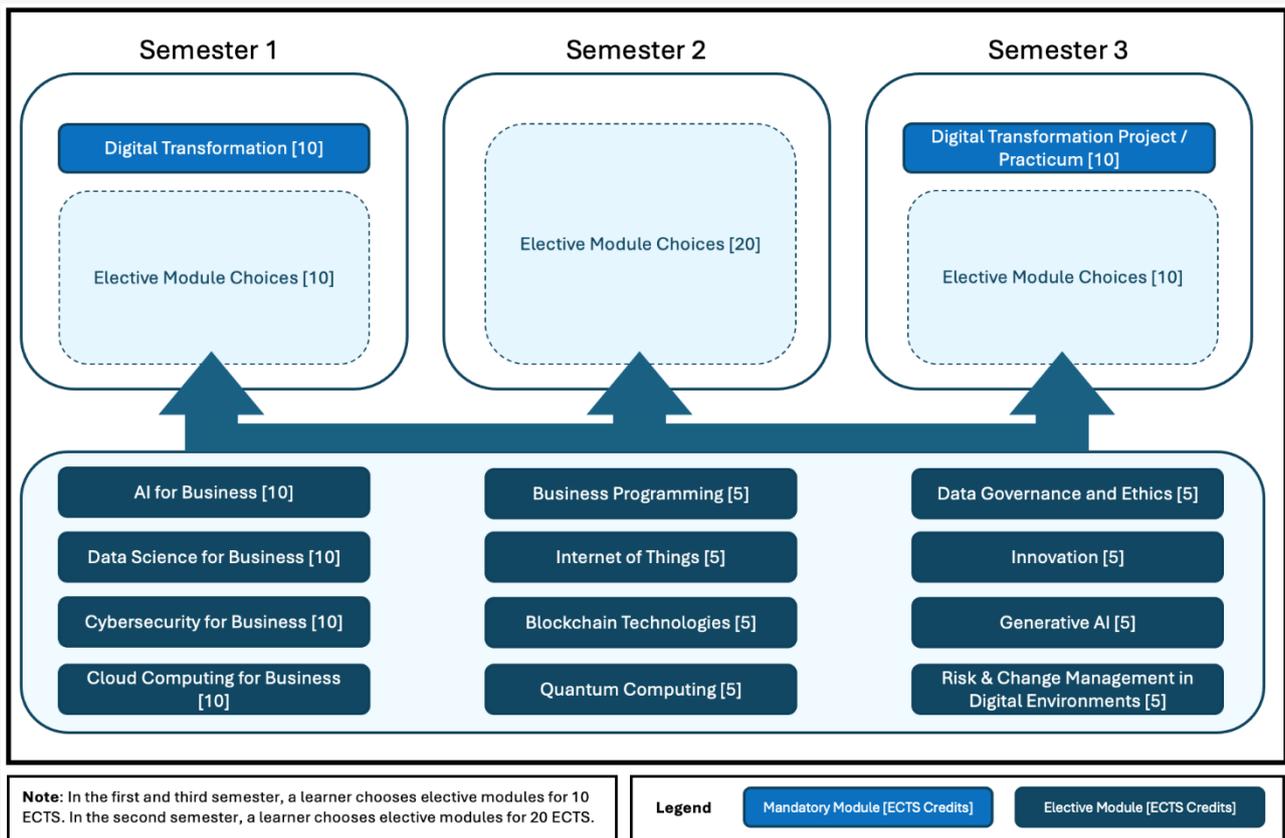
Figure 2: Joint Professional Master's Degree in Advanced Digital Technologies for Business (Part Time Accelerated)

Part Time Delivery

The curriculum and structure for the Joint Professional Master's Degree in Advanced Digital Technologies for Business (Part time) Year 1 and Year 2 is shown in Figure 3a and Figure 3b respectively.
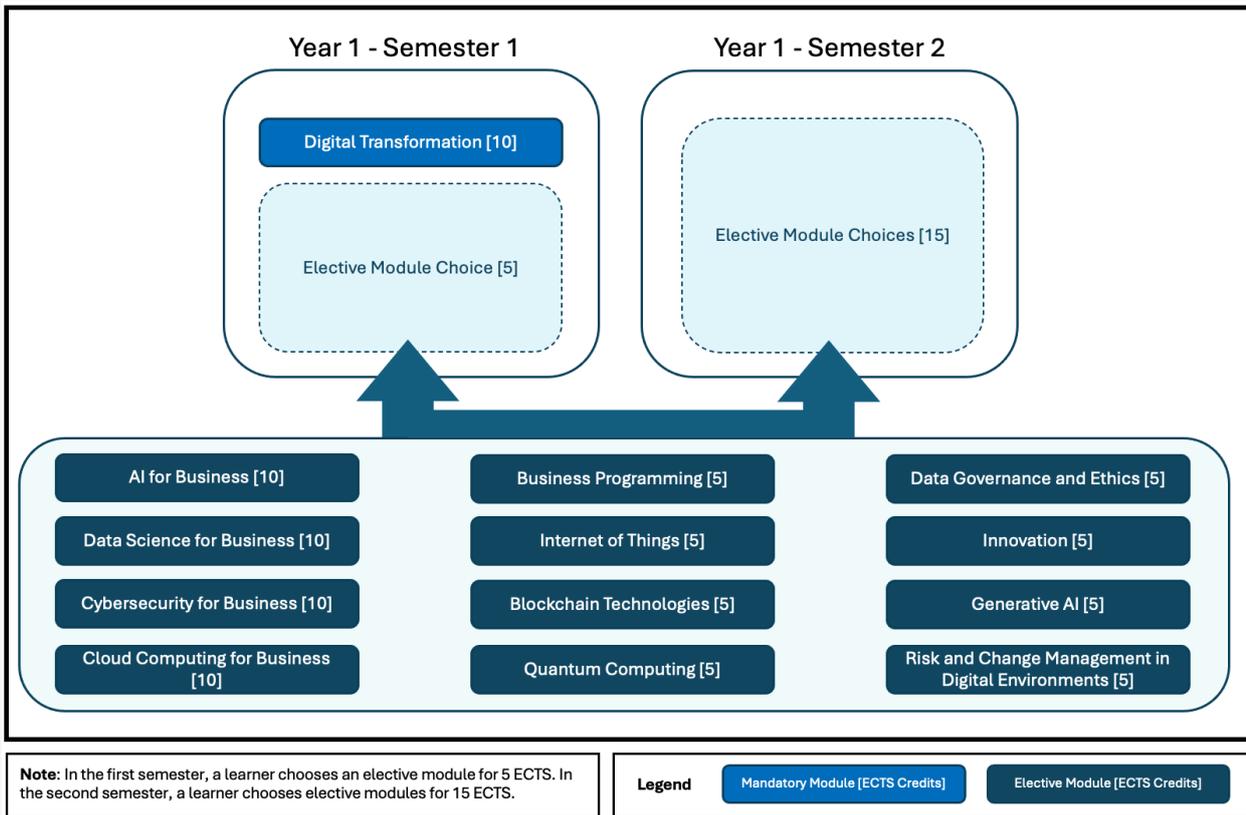
Figure 3a: Joint Professional Master's Degree in Advanced Digital Technologies for Business (Part Time) Year 1
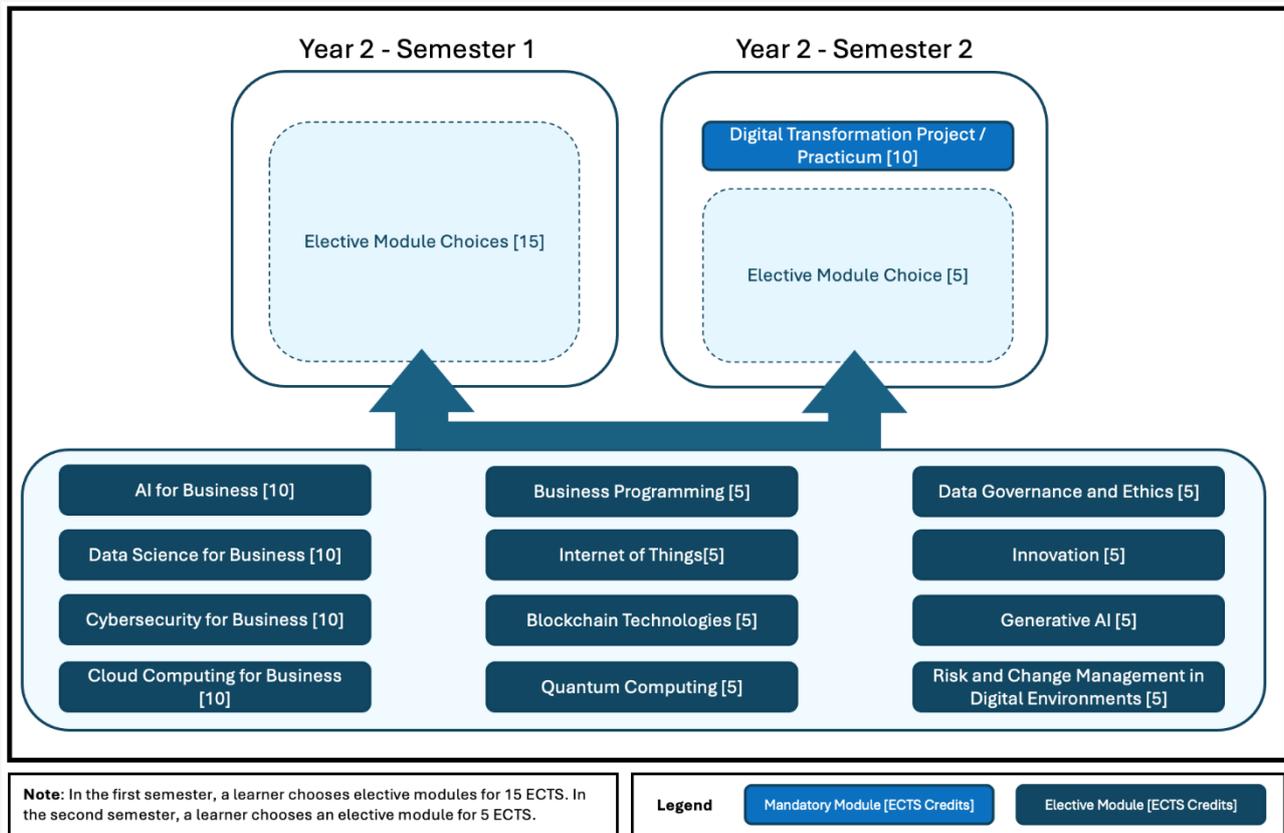
Figure 3b: Joint Professional Master's Degree in Advanced Digital Technologies for Business (Part Time) Year 2

Choice of Elective Modules

There is a high degree of flexibility for learners when choosing elective modules. The programme team's analysis of role profiles offer guidance to learners with regards to which elective modules are a more suitable choice to make when pursuing such roles.

Note: the elective modules that are offered for learners to choose from in any given semester may be restricted due to operational scheduling constraints and/or the overall learner demand for choosing particular elective modules. Notwithstanding this, the programme team will endeavour to accommodate the broadest offering of elective modules each semester under these constraints.

Language of Instruction

The program is delivered entirely in English. Applicants whose first language is not English must demonstrate proficiency through recognized tests or an interview.

Summary Description of Programme Modules

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

Note: Further detailed information for each module is available in the Module Descriptor Handbook document available for download on the https://www.digital4business.eu website.

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
Digital Transformation	Mandatory	10	*The module aims to enable students to understand, discuss and synthesise the fundamentals of Digital Transformation and the main Digital Implementation strategies.* *The Digital Transformation Module is a deep dive into the essentials of digital transformation concepts and enablers. Students will critically assess digital transformation paradigms to understand their influence on innovative business models, while defining the deployment of strategic resources for effective digital change. The course emphasises the design and implementation of cutting-edge digital transformation strategies, using practical exercises to simulate real-world applications. This module aims to equip students with the necessary skills to navigate and lead digital transformation efforts, preparing them to effectively manage and capitalise on the opportunities of the digital business landscape.* *This curricular unit intends to develop methodological and research skills on business and digital transformation.*	*Upon successful completion of this module, learners will be able to:* *LO1: Analyse and Synthesise the Key Concepts and Enablers of Digital Transformation.* *LO2: Critically Evaluate Digital Transformation Paradigms and their Impact on Innovative Business Models.* *LO3: Assess and Strategize the Deployment of Strategic Resources for Digital Transformation.* *LO4: Design and Implement Advanced Strategies for Digital Business Transformation.*
AI for Business	Elective	10	*The primary objective of this module is to provide a comprehensive understanding of the fundamental theories, methods, and models*	*Upon successful completion of this module, learners will be able to:*

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			that underlie machine learning (ML) and artificial intelligence (AI). The module delves into AI and ML, focusing on their analysis, synthesis, and innovation within business contexts. Students will learn to design, train, and evaluate advanced ML models using innovative data and optimisation strategies to address real-world business challenges. Key components include rigorous performance assessment techniques, result interpretation, and effective communication of implications. *This module will equip students with the skills to innovate and improve business processes through advanced machine learning models, leading to enhanced decision-making, increased efficiency, and competitive advantage in the market. Students will also develop transferable and soft skills such as problem-solving, communication, collaboration, teamwork, and service orientation. They will apply strategic thinking to complex AI applications, critically assessing and enhancing their effectiveness in business settings.* *The module addresses AI's ethical, societal, and environmental impacts, guiding students to propose responsible development and implementation practices. It prepares students to navigate the complexities of technology responsibly, ensuring that AI implementations are socially acceptable and environmentally sustainable, thus safeguarding organisational reputation and contributing to long-term success.*	*LO1:* *Analyse, synthesise, and innovate within artificial intelligence and machine learning, emphasising critical understanding and the capability to advance the field.* *LO2:* *Design, train, and critically evaluate advanced machine learning models, focusing on innovative data and optimisation strategies to boost performance in business applications.* *LO3:* *Employ innovative techniques for rigorous machine learning model performance assessment, interpret results, and effectively communicate implications across various business contexts and to diverse stakeholders.* *LO4:* *Apply strategic thinking in AI and ML for complex applications, assess effectiveness critically, propose innovative solutions or improvements, and improve problem-solving and decision-making skills.* *LO5:* *Teamwork to develop AI solutions, enhancing collaboration skills, team competences, and service orientation towards addressing business needs.* *LO6:* *Critically explore AI and machine learning's ethical, societal, and environmental impacts, and propose ethical, sustainable development and implementation practices within business environments.*
Data Science for Business	Elective	10	*This module equips students with the ability to use data science methodologies to address*	*Upon successful completion of this module, learners will be able to:*

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			complex business challenges while fostering essential transferable skills such as communication, collaboration, and problem-solving.	*LO1:* Evaluate and integrate data science principles to solve real-world business challenges, demonstrating creativity in data interpretation and insight extraction. (Transferable Skill: Critical Thinking) *LO2:* Apply advanced data science methods and algorithms to develop and optimize models that address complex business problems. (Transferable Skill: Problem Solving) *LO3:* Synthesize insights using statistical and machine learning techniques to make informed decisions, effectively communicating results to diverse audiences. (Transferable Skill: Communication) *LO4:* Design and assess advanced visualizations, dashboards, and BI tools to deliver actionable insights and enhance business decision-making. (Transferable Skill: Service Orientation) *LO5:* Collaborate within teams to design and implement data-driven solutions, fostering teamwork and adaptability. (Transferable Skill: Team Competence)
Cybersecurity for Business	Elective	10	*The module aims to enable learners to explore the field of cybersecurity. It focuses on identifying and mitigating security breaches in personal and organisational data systems. Students will learn to identify and assess vulnerabilities in data systems, understanding how these can lead to security breaches in business environments. The course will equip students with the skills to create strong protection strategies, ensuring that data remains safe from potential threats. In addition, the module will delve into the legal*	*Upon successful completion of this module, learners will be able to:* *LO1:* Analyse and critically evaluate vulnerabilities in personal and organisational data systems to identify potential security breaches and suggest mitigative strategies, fostering analytical thinking and attention to detail. *LO2:* Synthesise and apply advanced concepts and techniques of cyber-attacks to simulate potential security breaches,

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			and ethical dimensions of cybersecurity. Students will also develop transferable and soft skills such as problem-solving, communication, collaboration, teamwork, and service orientation. They will apply strategic thinking to complex cybersecurity applications, critically assessing and enhancing their effectiveness in business settings.	*demonstrating a comprehensive understanding of cyber threat landscapes and training problem-solving abilities and decision-making skills.* *LO3: Design and implement robust strategies for the protection of personal and organisational data, utilising encryption techniques and security protocols to mitigate potential threats.* *LO4: Evaluate and integrate tools and methodologies for the prevention and detection of cyber-attack incidents, developing critical thinking skills and demonstrating an ability to anticipate and counteract emerging cyber threats.* *LO5: Critically assess and debate cybersecurity legal and ethical issues, formulating well-justified recommendations for policy and practice that reflect an advanced understanding of the complexities and responsibilities in the field of cybersecurity, developing adaptability and continuous learning habits in a rapidly evolving field.*
Cloud Computing for Business	Elective	10	*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 module will touch upon governance and security challenges of cloud-based systems, guiding students to identify and evaluate*	*Upon successful completion of this module, learners will be able to:* *LO1: Assess core principles, frameworks, development methodologies and tools for the adoption of Cloud Computing solutions to support and enable digital business transformation.* *LO2: Critically analyse the governance and security challenges associated with cloud-based systems to identify and evaluate candidate cloud security architectures and deployment strategies.*

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			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.	**LO3:** *Evaluate and assess the intersection and impact of Fog and Edge Computing in relation to Cloud Computing.* **LO4:** *Critically appraise the wide range of existing and emerging cloud services (e.g., storage, machine learning, compute, analytics, quantum computing, etc.) and develop strategies to leverage such services for digital business transformation.*
Business Programming	Elective	5	*The Business Programming module curriculum aims to equip learners with a solid understanding of programming 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.*	*Upon successful completion of this module, learners will be able to:* *LO1: Evaluate programming fundamentals, paradigms, and languages to devise innovative approaches for solving business-specific challenges and developing data-driven business models. (Transferable Skills: Critical Thinking, Problem Solving)* *LO2: Design and implement web and mobile applications using low-code/no-code strategies to innovate business operations and models. (Transferable Skills: Creativity, Analytical Skills)* *LO3: Demonstrate leadership in managing software projects, applying debugging, testing, and version control techniques to ensure quality in business programming. (Transferable Skills: Leadership, Teamwork)* *LO4: Integrate data science and machine learning techniques into business programming to predict and address business challenges through automation and data insights. (Transferable Skills: Analytical Thinking, Service Orientation)*

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
				LO5: Analyse programming case studies to critique their effectiveness in solving business challenges and anticipate trends in programming for business innovation. (Transferable Skills: Communication, Critical Thinking)
Internet of Things	Elective	5	The Internet of Things module curriculum 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 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.	Upon successful completion of this module, learners will be able to: LO1: Critically analyse IoT architectures and protocols, identifying their suitability for different business applications. LO2: Design and develop IoT solutions to address specific business challenges, integrating hardware, software, and network components. LO3: Evaluate the performance and scalability of IoT systems in real-world business scenarios, proposing improvements. Apply IoT data analytics techniques to derive actionable insights for business decision-making. LO4: Collaborate effectively in teams to develop IoT solutions, enhancing team competences and communication skills.
Blockchain Technologies	Elective	5	The module aims to enable learners to evaluate and appraise the impact of blockchain in modern business environments. The emphasis on business problem-solving frameworks ensures non-technical learners can contextualise blockchain in familiar organisational settings and explore the underlying programming concepts, protocols, and key aspects of blockchain technologies. Furthermore, this module explores ethical and legal issues associated with adoption of blockchain technologies and considers how	Upon successful completion of this module, learners will be able to: LO1: Critically assess blockchain technologies and their revolutionary impact on financial systems, integrating analysis of core components and pioneering use cases. LO2: Analyse and differentiate between blockchain protocols, addressing ethical, legal, and practical adoption challenges, to foresee the technology's evolving landscape.

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			blockchain technologies can be leveraged for potential competitive business advantage. Transferable skills such as teamwork, communication, and collaboration are included to cater to cross-disciplinary roles.	**LO3:** *Develop communication skills by presenting blockchain-based business solutions to stakeholders with varying levels of technical knowledge.* **LO4:** *Collaborate effectively within multidisciplinary teams to design and implement a blockchain application, employing critical analysis to evaluate its infrastructure and applicability within various contexts.* **LO5:** *Strategize blockchain integration within enterprises, synthesising technological and regulatory insights to navigate and leverage emerging opportunities.*
Quantum Computing	Elective	5	*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. This module aims to provide learners with an introduction to the theory and foundations of quantum computing and its applications for business strategy and problem-solving. The module also aims to provide learners with the practical skills to develop and implement quantum computing algorithms to solve complex business problems. This module 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 emerging*	*Upon successful completion of this module, learners will be able to:* **LO1:** *Interpret and apply mathematical and Analyse quantum computing principles and their application in solving complex business optimization problems.* **LO2:** *Critically assess various quantum algorithms for business use cases, such as cryptography and machine learning, and recommend suitable methodologies.* **LO3:** *Design and implement quantum-based solutions (e.g. circuit model of quantum gates) to real-world business problems using quantum programming frameworks.* **LO4:** *Research, evaluate, and communicate technical quantum computing concepts effectively to non-technical stakeholders, emphasising business impact.*

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			field of quantum computing in a business context.	
Data Governance and Ethics	Elective	5	*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 managerial and ethical considerations in business data handling, artificial intelligence fairness, and develop strategies to manage data ethically and responsibly. This module emphasises the development of key transferable skills essential for professional success in data governance and ethics:* • *Problem-Solving Skills: Students will apply governance methodologies to complex, real-world business scenarios.* • *Communication Skills: Emphasized through report writing, presentations, and stakeholder engagement exercises.* • *Collaboration Skills: Developed through group-based case study analysis and collaborative projects.* • *Ethical Reasoning: Strengthened by engaging with ethical dilemmas and debates on real-world governance issues.* • *Service Orientation: Encouraged through tasks that require students to design governance frameworks that balance stakeholder needs with regulatory compliance. This module will also address the growing importance of artificial intelligence in data analysis ensuring students comprehend the technical and*	*Upon successful completion of this module, learners will be able to:* **LO1:** *Assess and critically compare data governance and regulatory processes for data acquisition, storage, and transformation in diverse business contexts.* **LO2:** *Design and propose solutions to business challenges using data governance strategies, emphasizing regulatory compliance and ethical considerations.* **LO3:** *Assess and implement effective data governance practices by applying appropriate methodologies such as gap analysis and risk assessment.* **LO4:** *Communicate complex data governance and ethics issues effectively to diverse stakeholders, promoting ethical practices within organizations.* **LO5:** *Enhance transparency and explainability of AI-generated data insights.*

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			legal facets of data management and appreciate the ethical and societal impacts, preparing them for responsible leadership in the digital business environment.	
Innovation	Elective	5	*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. 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. 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.*	*Upon successful completion of this module, learners will be able to:* *.* **LO1:** *Demonstrate a critical awareness of the creative development process and the application of creative and innovative strategies in a variety of contexts.* **LO2:** *Evaluate and explore various case studies and innovation techniques to help understand creative and innovative practices.* **LO3:** *Discern, critique, and apply the various techniques to foster creative talent environments at an individual, team, and organisational level.* **LO4:** *Demonstrate impacts and return on investment at an individual and organisational level.* **LO5:** *Create and explore strategies to deliver the results of creative work in business.*
Generative AI	Elective	5	*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*	*Upon successful completion of this module, learners will be able to:* **LO1:** *Analyse and differentiate between core principles and mechanisms of generative AI*

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			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 domains, students will gain the ability to leverage generative AI's transformative potential, driving forward-thinking and competitive advantage in the business landscape.	technologies, including text, image, video, and code generation. (Transferable Skills: Analytical Thinking, Critical Thinking) LO2: Evaluate recent advancements in generative AI through academic and industry research, understanding their applications and limitations. (Transferable Skills: Research and Communication Skills) LO3: Design and implement effective prompt engineering strategies for optimizing generative AI outputs in diverse contexts. (Transferable Skills: Problem Solving, Creativity) LO4: Integrate generative AI models into real-world applications, assessing their impact and effectiveness in business scenarios. (Transferable Skills: Innovation, Leadership) LO5: Identify and exploit opportunities for generative AI innovation to create novel business solutions across multiple sectors. (Transferable Skills: Service Orientation, Creativity)
Risk and Change Management in Digital Environments	Elective	5	This module provides a practical introduction to Risk & 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. 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	Upon successful completion of this module, learners will be able to: LO1: Articulate the core principles of risk and change management in digital environments, highlighting digital transformation dynamics and their impact on business models and workforce. (Transferable Skills: Critical Thinking, Communication) LO2: Apply change management strategies effectively to digital transformation projects, emphasizing stakeholder engagement, communication, and

Module Title	Mandatory / Elective	ECTS	Module Overview	Module Learning Objectives
			business models and strategies assess the associated risks and opportunities, evaluate the broader impact of digital disruption and innovation across various industries.	organizational culture development. (Transferable Skills: Leadership, Collaboration) *LO3:* Critically compare digital business models and strategies to identify associated risks and opportunities and evaluate the impact of digital disruption and innovation. (Transferable Skills: Analytical Thinking, Problem Solving) *LO4:* Design and evaluate digital transformation plans incorporating risk and change management strategies, fostering innovation and digital culture while ensuring compliance with ethical standards. (Transferable Skills: Creativity, Ethical Awareness)
Digital Transformation Project / Practicum	Mandatory	10	*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.*	*Upon successful completion of this module, learners will be able to:* *LO1:* Synthesise knowledge from core areas of the programme to propose, develop, and evaluate a significant digital transformation project for a specific industry or business. *LO2:* Apply project management principles to plan, execute, and deliver a project / practicum. *LO3:* Analyse the current state, identify opportunities for digital innovation, propose a transformation strategy, and outline the steps for implementation. *LO4:* Demonstrate professional communication skills by presenting and defending their project outcomes. *LO5:* Reflect on the ethical implications and sustainability of their project within a global and societal context.

Table 3. Module Summary Overview and Learning Objectives

Digital4Business Master's Governance and Management Structure

The Master's degree programme has the following management structures defined with responsibilities of decision, of evaluation and execution:

i) Master's Board of Directors

The Master's Board of Directors is comprised of Programme Directors that have been selected by each of the Partner Institutions to represent them on all matters concerning the degree programme. The Master's Board is responsible for general management, academic supervision, quality assurance, degree awarding and recognition issues, agreement changes, dispute resolution and student complaints. Additionally, the Master's Board is responsible for the system review, advice on policy developments for the joint degree programme, and to ensure the coherence and consistency of the concept of the programme. The Master's Board meets at least twice each year. Initial minutes of the Master's Board meeting are compiled by the Secretariat and distributed to all members of the Master's Board within fifteen days after the meeting. Any changes to the draft minutes must reach the Programme Secretariat within one week after the distribution of the minutes. After this deadline, the Programme Secretariat shall produce and file a final version, a copy of which shall also be 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. The Secretariat is partly based at the Project Coordinator Institution, also designated as the Master's Secretariat. The secretariat supports the coordination and day-to-day management of the programme, its support mechanisms, specifically tasks regarding quality assurance, application, selection and student admission and administration, and mobility coordination. The Secretariat also includes a wider group of Programme Coordinators from each of the partner institutions. Partner Programme Coordinator representatives will liaise with Programme Coordinators from other partner institutions and provide administrative support to the Secretariat for issues arising that are associated with the partner institution they are representing. The Secretariat also provides direct support for the Master's Board Meetings (the minutes), the public website, and other tasks assigned by the Master's Board.

iii) The Joint Admissions Board

Assisted by the Secretariat and under the supervision of the Master's Board, the Joint Admissions Board is responsible for the selection and admission of all students to the degree programme. 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 is headed by the Master's Board of Directors. The Master's Board is responsible for the overall quality and standards of the degree programme and for agreeing the academic standards. It monitors the partner institutions' compliance and is responsible for the degree programme being delivered to the highest academic standards. The Examinations Board may be supplemented with additional nominees from Partner Institutions that have expertise in quality assurance and those who are responsible for programme examination administration. Meetings of the Examinations Board convene after each programme examination session and on completion of grading and the assessment of learners' exam scripts, project submissions, or other relevant coursework by programme faculty. The Examinations Board deliberates cases, brought to its attention in at least one week's notice. If the nature of the case brought to its attention demands a swift ruling, a special meeting may be arranged or by written consultation of its members via electronically mediated systems. All assessments are conducted in accordance with the jointly agreed policies and procedures for the degree programme as adopted by the Master's Board (specifically in accordance with the Study and Examination Regulations).

v) The Joint Programme Committee

The Joint Programme Committee acts as advisor to the Master's Board of Directors. It is responsible for the system review and advice on policy developments for the joint degree programme. The Joint Programme Committee meets physically at least once a year to ensure the coherence and consistency of the concept of the joint degree programme. Additional meetings can be held as required. The Joint Programme Committee is composed of representatives from the Secretariat, Programme Coordinators, the Master's Board of Directors, Faculty representatives, and representatives from the Quality Enhancement and Curriculum Development Committee.

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

The Quality Enhancement and Curriculum Development Committee is composed of at least one academic faculty member from each Partner Institution. The QECD Committee prepares and implements on behalf of the Master's Board of Directors, quality enhancement and curriculum development.   It strengthens the collaborative nature of the degree program by following the European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). The Quality Enhancement and Curriculum Development (QECD) Committee reports to the Master's Board. The QECD Committee meets whenever called upon or whenever the annual internal quality procedures as detailed in the Internal Quality Handbook of the Programme require, either in person or via electronically mediated systems.

The Quality Enhancement and Curriculum Development (QECD) Committee supports the Joint Programme Committee in assessing how well the program meets its learning objectives and maintains coherence. It also ensures effective processes are in place for data collection, analysis, making recommendations, and channelling suggestions to improve the program

vii) The Project Coordinator

The Project Coordinator is responsible for:

- Student Recruitment, Onboarding, and Support: Managing recruitment, onboarding, and support processes, including the use of digital platforms and supplementary events.
- Industry Certifications & Micro-Credentials: Implementing industry certifications and micro-credentials.
- Employability Programme: Establishing an employability programme for students.
- European Mobility Programme: Facilitating student and lecturer mobility between institutions and companies.
- Faculty Training Resources: Providing resources for faculty training and support.

Moreover, the Project Coordinator has overall coordination responsibility for the degree programme. He/she represents the Digital4Business consortium partnership before the Commission and reports 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 seeks to combine lectures, tutorials, problem-based learning (PBL), enquiry-based learning, practical work, the flipped classroom, seminars, case-based learning, project-based work, and group work which are all recognised as effective teaching and learning methods.

Central to the strategy on this programme is the belief that the learner is an active participant in the learning process and not simply a passive recipient of information. Teaching on this programme therefore aims to make content relevant to the worlds of work and community and, aims to create

opportunities for learners to interact with each other as well as with faculty from partner HEIs in a mutually supportive learning environment.

Teaching and Learning

Teaching and Learning is a collaborative process involving learners, lecturers and academic support staff. All students enrolled on this programme are at the centre of this process, and their success depends on their active engagement with it. Below are some of the items students can expect from lecturers and academic support staff, and some of the items we expect from students:

Students can expect the programme 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
- Attempt honestly 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 programs 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 program's Learning Management System (LMS). This approach helps avoid overcrowded schedules, especially for students with limited time, and allows the program team to keep track of student progress and engagement in the online courses.

Asynchronous activities may consist of reading or audio/video-based content, as well as practical lab exercises which must be uploaded to the LMS on a weekly basis. The synchronous class contact elements build upon and supplement the asynchronous and self-paced learning materials and activities on Moodle to create an environment whereby learners engage practically with

materials outside of class time, leaving time for practical facilitation based directly on those materials in class-contact time.

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 advised in advance of commencement of the programme of the technical requirements and pre-requisite skills for effective participation on the programme.
- Learners are provided with support during programme induction on how to use the learning technologies.
- Support and on-going 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 utilised by the programme (e.g., 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 attendance at, and engagement in learning sessions, and their performance in each of the modules.

Assessment

Teaching follows the principle of constructive alignment and hence establishes a close relationship between the intended learning outcome of a module, the teaching formats applied and the

assessment methods. Exams are designed to assess the extent to which the defined learning objectives have been achieved. Module Descriptor documentation provides information on the types of exams and assessments (with possible alternatives) that are specified for each module. Learners are informed about the conditions for completing the module (coursework, exams etc.) at the beginning of each module. Examinations are marked according to transparent criteria. Grading rubrics for assignments are provided to learners. Lecturers will provide general assessment feedback regarding assignments in a timely manner (typically within two weeks of the assessment submission date). Learners may also apply for additional feedback meetings with their lecturers.

The rationale for the choice of assessment instrument follows five principles:

1. *Students are responsible for demonstrating their learning achievement*: A student who is enrolled on a programme should submit his or her assessment to demonstrate their attainment of the programme's intended learning outcomes.
2.
3. *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.
4. *Assessment methods are regularly reviewed*: The Joint Programme Committee, in conjunction with the Quality Enhancement and Curriculum Development Committee, regularly review the assessment methods to adapt to evolving requirements. evaluates
5. 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 examinations and assessments are conducted in accordance with the jointly agreed policies and procedures for the degree programme as adopted by the Master's Board of Directors. Each of the partner institutions has agreed on joint examination regulations for the programme. An agreed set of rules for conducting and organising examinations and assessments will be implemented for the programme. The Examinations Board is responsible for ensuring compliance with these regulations.

Documentation detailing the assessments and examinations rules and regulations are made available to students. Additionally, the Modules Handbook specifies the type of assessments associated with each of the programme's modules, including a breakdown of the contribution of each assessment to a module's overall marks and an indication of when the assessment will take place.

Further information on examination and assessment of learners can be found in the Study and Examination Regulations document available for download from the https://www.digital4business.eu website.

Resits and Repeat Assessments

Learners who fail, miss, or withdraw from a module assessment must retake it. If they fail the repeat assessment, they must re-enroll and attend the module again. Repeat assessments cover all learning outcomes of the failed module.

Late Submission of Coursework

Late submission of assignments is only accepted under special circumstances, e.g. illness. The student must inform the lecturer before the deadline of the assignment and should present medical proof on request to the Programme Coordinators team. If not, the lecturer can decide to sanction the student in terms of grading or refuse to accept late work. Assignments submitted late are typically 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 program. This capstone module is designed to demonstrate students' comprehensive understanding and competence in digital transformation within a practical, real-world context.

Avoiding Problems with Plagiarism, Poor Scholarship, Collaboration/Collusion, Outsourcing Assessments, knowingly aiding and abetting Academic Misconduct

Plagiarism

modules and. Plagiarism occurs when someone uses another's work including, e.g., text, visuals, or code without proper acknowledgment. This includes failing to use quotation marks for direct quotes, not citing sources for paraphrased work, and not referencing any borrowed material. Additionally, submitting the same work for multiple assignments is also considered plagiarism, which is a serious violation. To avoid plagiarism, it's crucial to properly cite and reference all sources

Collaboration/Collusion

Where two or more students work together, without the prior authorisation of the course lecturer or supervisor, to produce the same piece of work, and then attempt to present this work as entirely their own work, is also a disciplinary offence.

Poor Scholarship

Poor scholarship may consist of poor referencing, but where there is clearly no intention to deceive. This may be penalised in the mark you receive. Poor scholarship may also consist of very close paraphrasing of published work, or the over-use of long quotations (such that your own contribution is unclear) and will also receive a low mark.

Cheating in assessments or examinations

Using, having, sharing, or relying on any unauthorised materials or help during any assessment or academic activity is considered a violation and may lead to disciplinary action

Outsourcing assessment

Having others complete assessments for oneself whether personally or via any free or commercial service is a disciplinary offence.

Knowingly aiding and abetting academic misconduct

Cases in which students knowingly permit others to copy all or part of their work shall also be subject to the procedures outlined here and considered an offence.

Plagiarism of software code

This policy relates to plagiarism of programming assignments that take place as continuous assessments in modules. All continuous assessments and projects are part of the examination process and any attempt to plagiarise is a major offence, punishable accordingly.

Plagiarism includes the following:

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

As delivery of the programme is fully online, there will be no requirement for learners to physically attend classes at any partner institution's geographical location. Learner mobility will predominantly be virtual – with learners enrolling on modules that will be delivered by faculty from the different institutional partners. In addition to this, learners will also have opportunities to attend various networking events, hackathons, etc. that are associated with the Master's programme. For such events, learners will have an option of either attending physically or online. The programme team believe that this will facilitate some aspect of physical mobility for learners within the programme. These events will be hosted by partner institutions in different countries as part of the programme's schedule.

The Joint Professional Master's Degree in Advanced Digital Technologies for Business Award

Students who have satisfied all the requirements of the final assessment shall be awarded the Joint Professional Master's Degree in Advanced Digital Technologies for Business.

Students who have not satisfied all the requirements of the final assessment within the duration of the degree programme will be required to re-register and pay extension fees.

The degree awarded shall be testified by the issuance of a Master's Degree and Diploma Supplement. The Diploma Supplement shall follow the template developed by the European Commission, the Council of Europe and UNESCO/CEPES and shall be adapted to any further specifications in national legislation where applicable. The Degree Certificate will be issued in the form of 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 outcome.

Student Support Services

A student's principal supports on the programme are the academic and academic support staff (the Programme Coordinators). Programme Coordinators are the first point of contact for processing support requests, addressing academic, personal, or professional challenges. But since teaching and learning is a collaborative process, and since students may face a number of challenges during their time on the programme, a full range of further services are offered to students.

Information on the range of student support services can be found online through the student support services portal on the programme website at https://www.digital4business.eu/support. A number of student support services can be requested online through the student support services portal. Learning Development and Disability Support Service

The Learning Development and Disability Support Service aims to empower all students to become active and confident learners. This is accomplished through initial contact with students during the orientation process and the regular provision of effective academic skills throughout the programme's semesters.

 To enhance this direct interaction, the service actively promotes the use of learning technologies and accommodates diverse learning preferences, creating an innovative and inclusive environment for all students. The aim of the Disability Support Service is to facilitate students in reaching their full potential by providing appropriate and specific support which meets individual needs. The programme is committed to provide equal access to education and equal opportunities for students with disabilities.

Careers and Opportunities Support Service

As referenced in Criterion 1.3, the programme incorporates an Employability Strategy. As part of this strategy, an extensive series of events will be scheduled to enhance the employability of students. These events will include online, hybrid, and on-site activities involving the Digital4Business consortium's industry partners and the wider business community. Moreover, the programme will provide a general Careers and Opportunities Service to facilitate and empower students in developing Career Management and Employability skills. The service also aims to assist

students in exploring employment opportunities and/or graduate study options. This service provides a comprehensive and accessible Career Information Service for students and recent graduates.

Assistive Technology Support Service

The aim of the Assistive Technology (AT) Support Service is to dismantle the barriers to education for students with disabilities by harnessing the potential of technology. The AT Service promotes independent learning by providing technology and tailored training to meet the needs of individual students.

Student Counselling & Wellness Service

The Student Counselling and Wellness Service's aim is to support students and offer a supportive encouraging environment where students can talk about any struggles or difficulties they may be facing while they are completing their studies.

Deciding to undertake a Master's degree is a big step and this may feel daunting and students face many new challenges. These challenges may be academic, career, or even personal problems that can interfere with student's ability to take full advantage of their experience on the programme. Counselling can be a helpful and supportive place to start.

Counselling can offer students some time and space to explore any issues that may be of concern such as:

- Stress
- Anxiety
- Academic difficulties
- Relationship difficulties
- Depression
- Family issues
- Grief or bereavement
- Homesickness/loneliness
- Sexual/personal identity issues
- Physical assault/abuse
- Self-harm
- Eating disorders
- Addiction or substance use
- Confidence or self-esteem
- LGBTQ+ Support
- Autism/ADHD Support

Students can book an appointment with the Student Counselling and Wellness Service via sending an email message to counselling@digital4business.eu. Once a message is received, a counsellor will contact the student with an available appointment. Counselling sessions last for 40- 50 minutes. A counsellor will discuss the frequency and number of sessions with the student depending on their needs (usually weekly/bi-weekly and anywhere from 1 to 6 sessions).

Library Service

Library services are a key learning resource for students. Library services provide access to a wide range of scholarly publications. Much information (useful and otherwise) is now available on the web, and you will need to be familiar how to use it effectively and correctly. Library services for the programme provide an extensive source of on-line resources, all of which are of the quality that students need for successful study. The library catalogue may be accessed online and is searchable in a number of ways: author, title, author and title (the most useful for a specific reference), keywords (very good for a search). Copies of principal books and articles specified in the reading list are available through the programme 's library services and each module's description document.

Student Complaints Procedures

Making a Complaint

The following process is designed to resolve concerns as speedily and effectively as possible. Most concerns can be addressed successfully through informal means (before writing a formal complaint); however, if informal resolution is unsuccessful, a formal process is available. This procedure is not to be used in cases where the learner is not satisfied with an assessment result or outcome of disciplinary actions. In these cases, relevant appeals processes should be used.

Students are expected to raise concerns directly rather than through a third party. If another person is named in the concern, they have the right to be informed promptly about what was said and who raised it. Any fear of retaliation as a result of raising a concern will not be tolerated. Confidentiality will be maintained when appropriate. All concerns are taken seriously. It is assumed they are legitimate. If an expressed concern is found to be malicious the Master's Board of Directors may have to consider initiating disciplinary proceedings.

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 r 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:

- o The student's name and where the student can be contacted
- o The nature of the complaint
- o What action, if any, has already been taken by the student to attempt to resolve the concern
- o Any prior action taken by the programme's management in regard to this matter
- o Say what the student would expect to be done to resolve their 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 (twenty) 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 essays or examinations, are designed to help students develop their knowledge, skills, and critical thinking while identifying areas for improvement. This guide outlines expectations for submitted work and provides tips for academic essay writing.

Guidelines on Essay Writing

The folloing guidelines complement module-specific instructions and aim to support students in preparing and writing essays. Essays are intended to develop analytical thinking, the ability to construct coherent arguments, and an understanding of relevant literature. Feedback on essays will help students refine their critical thinking throughout the programme.

Essays involve two key aspects: structure and style.

Essay Structure

All students are advised to follow these guidelines on essay structure, before starting to write an essay. The structure should have three main components: an Introduction, a main part, and a conclusion. Note that it is not a requirement to use subheadings, although you may find these helpful in structuring your essay. The question should be ''addressed' rather than 'answered', in an organised analytical argument.   Observe the word limit (plus or minus 10%).

1.	Introduction

This should cover the following:

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

 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 summarizing 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 summarizes 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.

Constructing an essay plan before beginning the writing process is beneficial. 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 (e.g., 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 student's 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 in the HRM Handbook). When referencing an author's work, the full citation—author, date, and page—must be provided. Essays should not be comprised 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:

- o   'It is well known that' (assertion - statement without evidence)
- o   'Some business leaders have said' (vague - imprecise statement)
- o   "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 either too short or too long; each should be a coherent unit.

Typing and Word-processing - Quite apart from the fact that a typed essay looks better and is easier to read, using word-processing facilities enables work to be corrected and altered without having to rewrite the entire essay. Any skills gained in typing and/or word-processing are almost certain to be useful in the workplace and a useful addition to student's CVs.

Disclaimer

The Digital4Business Consortium has made all reasonable efforts to ensure that the information contained within this publication is accurate and up-to-date when published but cannot accept responsibility for any errors or omissions.

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