EXEED COLLEGE

istec
BUSINESS SCHOOL . PARIS

Doctorate in Technology Management and AI

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1. Aim of the Programme

The DBA in Technology Management and AI aims to develop advanced expertise in the strategic application of artificial intelligence and emerging technologies within organizational and managerial contexts. This programme will equip learners with research skills, theoretical knowledge, and practical competencies required to lead, innovate, and implement AI-driven solutions to complex business and societal challenges. Learners will be prepared to contribute to the academic and professional fields of Technology Management and AI, conducting pioneering research that bridges the gap between cutting-edge AI technologies and effective management practices for sustainable, data-informed decision-making in dynamic environments.

The DBA in Technology Management and AI programme offers a rigorous, research-intensive curriculum tailored for IT and management professionals aiming to lead in the evolving field of technology management and AI. The programme integrates advanced study in AI, machine learning, and business analytics with core principles of technology management, providing a multidisciplinary approach to address critical challenges faced by organizations today. Overall, this programme empowers learners with a comprehensive understanding of the intersections between AI, technology, and management, equipping them with the analytical, ethical, and leadership competencies necessary to influence the future of AI and technology on a global scale.

1.1. Course Structure

Module Code	Course Name	ECTS
YEAR 1		
DBATMAI101	Introduction to Research Methods in Technology Management and AI	**10**
DBATMAI102	Disruption, Innovation and Leadership in Technology Management	**10**
DBATMAI103	Research Perspectives in AI Technology and Knowledge Practices	**10**
DBATMAI104	Governance, Ethics, and Regulation in AI and Emerging Technologies	**10**
DBATMAI105	Research Design and Epistemology in Technology Management and AI	**10**
DBATMAI106	Doctoral Research Proposal	**10**
YEAR 2		
	Proposal Defence	**20**
	Thesis Registration	**10**
	Ongoing Supervisory Meetings to review writing progress	**20**
	Research Publication and Ongoing Academic Seminar Participation	**10**
YEAR 3		
	Complete Dissertation and Ready for Defence	**15**
	Thesis Report and Presentation	**30**
	Viva voce examination	**15**
TOTAL CREDITS		**180**

2. Module Description and Outcomes

2.1. Introduction to Research Methods in Technology Management and AI

Module Code: DBATMAI101
Level of study: Level 8
Guided learning hours: 250
Credits: 10
Status: Core Course

Course Description

This course, Introduction to Research Methods in Technology Management and AI, focuses on research methods specifically tailored for technology management and AI, aiming to deepen participants' understanding of the research process within this domain. Learners will critically engage with various research methodologies, ethical considerations, and the specialized language of technology management and AI research. Through a step-by-step approach, participants will develop knowledge and skills in both quantitative and qualitative research designs, including advanced techniques in secondary research, such as conducting scoping and systematic reviews, equipping learners to synthesize existing literature effectively. By critically analyzing the strengths and limitations of different methodologies, participants will be better prepared to address the ethical and practical challenges of conducting research in technology management and AI. At the end of this course, learners will develop the ability to evaluate published research, drawing insights that can be applied to enhance professional practice and foster growth in the rapidly evolving fields of technology management and AI.

Learning Outcomes

LO1: Critically review different quantitative study designs, describe the key elements and strengths & weaknesses associated with each approach, and application of quantitative and qualitative research in technology management and AI.

LO2: Critically analyze qualitative and mixed-method research approaches and their application including data collection, analysis, and reporting methods.

LO3: Critically evaluate secondary research design and application methods including scoping and systematic review approaches, and how different research designs can be combined in a mixed-method study approach.

LO4: Apply the concept of research quality assurance and its application in research and ethical principles and application of validity and reliability principles in research.

Course Content

- Introduction to Research and Research Process

- Foundations of Research in Technology Management and AI

- Research Philosophies and Approaches

- Research Methodology: Qualitative, Quantitative and Mixed Methods

- Exploring Research Designs

- Literature Review and Knowledge Synthesis

- Methods in Secondary Research: Critical Review and Meta-Analysis

- Data Collection and Analysis: Qualitative, Quantitative and Mixed Methods

- Advanced Data Collection Techniques

- Quality Assurance in Research Validity, Reliability, Research Ethics, and Integrity

2.2. Disruption, Innovation and Leadership in Technology Management

Module Code: DBATMAI102
Level of study: Level 8
Guided learning hours: 250
Credits: 10
Status: Core Course

Course Description

This course, Disruption, Innovation, and Leadership in Technology Management equips leaders with the expertise to navigate and influence the rapidly changing technological landscape affecting the business. This course explores disruptive innovation, strategic leadership, and emerging technologies, empowering professionals to drive transformative initiatives within their organizations. Learners will examine theoretical foundations like disruptive innovation theory and diffusion of innovation theory and practical approaches like agile project management and design thinking to foster innovation, manage technology-driven change, and develop sustainable solutions to complex business challenges. At the end of this course, students gain advanced expertise to prepare themselves to drive sustainable growth and resilience within complex organizational environments.

Learning Outcomes

LO1: Critically analyze the impact of disruptive technologies on organizational strategies and industry practices.

LO2: Critically evaluate and synthesize complex data and technological trends to propose strategic solutions that address emerging business challenges.

LO3: Critically review sustainable practices in innovation to promote long-term organizational growth and resilience.

LO4: Create leadership strategies that effectively manage technological change and innovation within diverse organizational settings.

Course Content:

- Overview of disruptive innovation and its impact on industries
- Key concepts of Disruptive Innovation Theory with real-world case studies
- Diffusion of Innovation Theory: Technology adoption cycles and drivers
- Analysis of historical and current examples of disruptive innovation
- Examining disruptive technologies such as AI, IoT, and blockchain
- Business strategy implications of disruptive technology adoption
- Leadership roles and responsibilities in navigating disruptive change
- Strategic foresight and adaptive leadership in technology management
- Managing technology-driven changes within diverse organizational structures
- Overview of emerging technologies (e.g., AI, AR/VR, quantum computing) and their potential impacts
- The role of data analytics in identifying and responding to disruptive trends
- Ethical considerations in adopting new technologies
- Agile methodologies (e.g., Scrum, Kanban) for managing tech-driven projects
- Practical application of Design Thinking to foster innovation and solve complex challenges
- Integrating sustainability and resilience practices in technology management strategies

2.3.   Research Perspectives in AI Technology and Knowledge Practices

Module Code: DBATMAI103
Level of study: Level 8
Guided learning hours: 250
Credits: 10
Status: Core Course

Course Description

This course, Research Perspectives in AI Technology and Knowledge Practices, delves into advanced research methodologies and the theoretical underpinnings of artificial intelligence as they pertain to knowledge creation and organizational decision-making. This course provides students with a critical understanding of AI technologies, and their applications, preparing them to drive responsible AI integration within various professional contexts. Students will explore frameworks for analyzing AI's impact on data-driven knowledge practices and develop research skills to examine AI's transformative role in the organizational landscape. At the end of this course, students acquire in-depth research skills and advanced knowledge of AI technology and knowledge practices, enabling them to lead and innovate responsibly in the application of AI for strategic, data-driven decision-making within organizations.

Learning Outcomes

LO1: Critically evaluate the theoretical foundations and emerging trends in AI technology as they relate to knowledge creation and organizational impact.

LO2: Critically analyze the impact of AI on knowledge management systems in facilitating the creation, storage, and retrieval of organizational knowledge.

LO3: Critically analyze innovative strategies for integrating AI-driven knowledge practices to enhance organizational decision-making and operational efficiency.

LO4: Critically review and synthesize findings from research on AI applications to provide actionable insights that address complex business challenges and support sustainable technological development.

Course Content:

- Introduction to AI in knowledge creation and organizational contexts
- Theoretical foundations of AI and their relevance to knowledge practices
- Overview of emerging trends in AI technologies and applications
- Advanced research methodologies for studying AI in organizational settings
- Ethical considerations in the deployment of AI within organizations
- Frameworks for assessing AI's impact on data-driven decision-making
- Techniques for evaluating the social and economic impacts of AI technologies
- Responsible AI integration: Guidelines and best practices
- AI-driven knowledge practices for enhanced organizational efficiency
- Analyzing data-driven insights to inform AI-based strategies
- Case studies on successful AI applications for strategic decision-making
- Practical strategies for addressing complex challenges in AI implementation
- Synthesis of research findings to provide actionable insights
- Sustainable development principles in AI technology deployment
- Applying AI technology for addressing a business challenge

2.4.   Governance, Ethics, and Regulation in AI and Emerging Technologies

Module Code: DBATMAI104
Level of study: Level 8
Guided learning hours: 250
Credits: 10
Status: Core Course

Course Description

This course, Governance, Ethics, and Regulation in AI and Emerging Technologies provides an in-depth examination of the ethical, regulatory, and governance challenges posed by AI and other advanced technologies. This course prepares students to critically analyze and navigate complex issues related to data privacy, fairness, accountability, and transparency in AI-driven systems. Through the study of international regulatory frameworks and governance strategies, students will gain the expertise needed to establish responsible policies and promote ethical AI practices within organizations, balancing innovation with societal and legal considerations. At the end of this course, students gain the expertise to navigate and influence the ethical, regulatory, and governance landscape of AI and emerging technologies, equipping them to lead responsibly in the implementation of technology within organizations.

Learning Outcomes

LO1: Identify the key ethical and regulatory issues associated with AI and emerging technologies.

LO2: Critically review and analyse international frameworks and governance models to assess their effectiveness in regulating AI and other advanced technologies.

LO3: Develop comprehensive assessments of the risks and ethical implications of AI and emerging technologies in organizational settings.

LO4: Design ethical frameworks to be used as interventions to close potential gaps and provide directions for future research on AI ethics.

Course Content:

- Introduction to governance, ethics, and regulation in AI and emerging   technologies
- Key ethical issues in AI: fairness, accountability, transparency, and bias
- Regulatory challenges and frameworks for AI and advanced technologies
- Data privacy and security concerns in AI-driven systems
- Global regulatory standards and initiatives for responsible AI
- Comparative analysis of international AI governance models
- Assessing the effectiveness of current AI regulatory frameworks
- Strategies for promoting accountability in AI and automated decision-making
- Risk assessment techniques for AI and emerging technologies in organizations
- Ethical implications of AI applications in various sectors
- Case studies on AI governance, ethics, and compliance failures
- Developing governance strategies for ethical AI implementation
- Designing organizational policies that align with regulatory standards
- Balancing innovation with societal and legal responsibilities in AI practices
- Creating a governance and ethics framework for AI deployment in a business scenario

2.5. Research Design and Epistemology in Technology Management and AI

Module code: DBATMAI105
Level of study: Level 8
Guided learning hours: 250
Credits: 10
Status: Core Course

Course Description

This module offers critical exploration of the philosophical underpinnings and methodological strategies essential for designing rigorous research in technology and AI management. Learners will investigate how epistemological frameworks influence methodological decisions, developing the capacity to align research design with clearly defined problems and objectives. Through engagement with real-world business scenarios and IT issues, comprehensive literature analysis, and secondary data investigations, the course emphasizes the practical application of research principles. A strong focus is placed on cultivating advanced analytical capabilities, methodological coherence, and reflective thinking, equipping learners to design and execute research that contributes significantly to academic inquiry and evidence-based managerial decision-making.

Learning Outcomes

LO1. Conduct a critical examination of diverse research designs used in technology management and AI research, assessing their methodological robustness, advantages, limitations, and their relevance in advancing theoretical frameworks.

LO2. Demonstrate the capability to integrate research questions, theoretical perspectives, and methodological approaches within a coherent epistemological framework, ensuring alignment throughout the entire research process in both primary and secondary data-driven investigations.

LO3. Critically assess a range of data collection techniques including quantitative, qualitative, and mixed method approaches and justify their suitability for investigating specific research questions within the Technology management and AI context.

LO4. Critically distinguish between various methods and design of research and explain their application, analysis and interpretation in different technology related scenarios.

Course Content

- Epistemology
- Ontology
- Saunder's Research Onion
- Research Philosophy and Approaches
- Designing quantitative research approaches
- Structuring qualitative research methodologies
- Integrating mixed methods into research project design
- Conducting research using both primary and secondary data sources
- Survey Instrument Design
- Interview Guide Development
- Sampling Strategies
- Validity and Reliability Checks
- Key qualitative approaches including ethnography, phenomenology, grounded theory
- Hypothesis Development
- Non-Parametric Test
- Linear Regression Model.

2.6.   Doctoral Research Proposal

Module code: DBATMAI106
Level of study: Level 8
Guided learning hours: 250
Credits: 10
Status: Core Course

Course Description

In this course, students will develop a 3000-word research proposal in technology management and AI. The students will be guided to identify a researchable knowledge gap in their interests and analyze and synthesize the knowledge gap into a problem statement. Students will receive guidance on specific aspects of doing research including literature searching and conducting critical appraisal; framing research questions and research objectives; and application of ethical issues in research. Students will build capacity to develop competence in assessing and appraising evidence in published literature, determining the gaps in the evidence and developing a feasible and valid study design that they can apply in their research. At the end of this course, students will be able to develop a fully guided research proposal.

Learning Outcomes

LO1. Critically review and identify a relevant and suitable knowledge gap in Technology Management and AI research and develop structured research questions to address the knowledge gap.

LO2. Write a literature review to identify existing evidence and knowledge gaps associated with the research problem of interest.

LO3. Critically explore the relevance of existing theory and evidence base to research design.

LO4. Develop a well-structured research protocol/proposal with clear timelines and relevant study methods that comply with the universal principles of research ethics.

Course Content:

- Overview of the process of identifying knowledge gaps in research, developing background information, knowledge gap analysis, writing academic research problem statement, justification and significance of developing good research questions and objectives, developing research hypothesis.

- Overview of the literature review search and appraisal, summarizing evidence in Literature Review, assessing the strength of evidence in published work, citation and referencing and application of computer software (Mendeley desktop, Zotero and EndNote) in reference management.

- Overview of the methodology section of the research proposal; describing: - study area, study design, study population: sample size determination, Sampling procedures, Data collection methods, process and tools, Study quality assurance (Validity and Reliability), data management and analysis, ethical issues in research.

- Overview of the methods used in Secondary Research: conducting scoping reviews, systematic reviews, and meta-analysis.

3. Teaching and Assessment

The programme uses a mixture of assessment methods to develop a range of skills. The assessment matrix below indicates the types of assignment given to candidates.

Module Code	Module Name	Assessment Method
DBATMAI101	Introduction to Research Methods in Technology Management and AI.	Written Assignment/Case Studies/Presentation.
DBATMAI102	Disruption, Innovation and Leadership in Technology Management	
DBATMAI103	Research Perspectives in AI Technology and Knowledge Practices	
DBATMAI104	Governance, Ethics, and Regulation in AI and Emerging Technologies	
DBATMAI105	Research Design and Epistemology in Technology Management and AI	
DBATMAI106	Doctoral Research Proposal	
Final Dissertation	Doctoral Dissertation	50,000 to 80,000 words

3.1. Assessment Submission

All assessments will be submitted electronically via our LMS. Instructions for how to submit your assignments will be included in the respective assessment descriptors and module guides. It is your responsibility to make sure that you submit your assignments correctly and on time.

You should submit all assessments required for each module on or before the final submission date. If you do not do so, you are likely to fail the module overall. There may be occasions when you cannot submit an assessment because of circumstances

beyond your control. In such circumstances, you should contact the Programme Leader in writing, explaining why you are unable to submit an assessment and to request either a short extension or a longer deferral. Where possible, you should add written evidence to support your request. This will then be scrutinized by the Research committee and a decision including, where appropriate, a revised submission date, will be communicated to you in writing. Such requests will be treated sympathetically, but good reasons will be required, and these do not generally include day-today pressure of work if you are not successful at an assessment, either because you have failed it or failed to submit it, then you are eligible to re-sit your assessment, although the final mark will be 'capped' at a 50% pass.

3.2.   Plagiarism

Academic misconduct in respect of assessment constitutes cheating or plagiarism. Academic misconduct is defined as any improper activity or behavior by a student that may give that student, or another student, an unpermitted academic advantage in an assessment. All the assignments and work done come under a critical reflection or Exeed College.

<u>Types of Academic Misconduct</u>

The following is a non-exhaustive list of examples which will be considered as Academic Misconduct (AM):

● Collusion: Cooperation to gain an unpermitted advantage. This may occur where students have consciously colluded on a piece of work, in part or whole, and passed it off as their own individual efforts or where one student has authorized another to use their work, in part or whole, and to submit it as their own. Any similarities found in the work of two or more learners, or with learner's work with that of a sample provided will be considered as a collusion.

● Commissioning Work: There are temptations on the internet to take "short cuts". If a student is tempted to either commission work to be completed on his/ her

behalf or search for completed past academic work. The consequences of academic misconduct depending on the evidence and gravity can range from re-sitting the module to disqualification.

- Plagiarism: A representation of another person's work or ideas as one's own, for example by failing to follow convention in acknowledging sources, use of quotation marks, etc. is plagiarism. This includes:
  - The unauthorized use of one student's work by another student and the commissioning, purchase, and submission of a piece of work, in part or whole, as the student's own is internal plagiarism from within the batch.
  - The unauthorized use of one student's work who has passed out by a current student and submitting it in part or as a whole as a student's own work is also internal plagiarism as the college holds a repository of submissions made.
  - The unauthorized use of Turnitin Software to check the plagiarism with any other university or association and then submitting the same to Exeed College, will highlight the work as plagiarised, even if it is student's own work and will be considered as plagiarized work only. Until and unless a Turnitin Access from Exeed College is not provided to the learners, they are not supposed to go around and get it checked as Turnitin has its own repository and results on Turnitin are taken as final for Exeed College's assessment.
  - Any piece of information taken directly from internet sources without paraphrasing will be termed as plagiarised information. The threshold differs as per the university guidelines and hence, taking exact information as it should be avoided by the learners.

All forms of plagiarism are taken seriously, and any suspected cases will be investigated thoroughly. If a case is found proven, then the work will be graded as a failure and the case will be reviewed by the academic committee.

3.3.   Expectations

Materials Access

All learning materials are provided in the form of a module kit and can be accessed from the Learning Management System (LMS).

Re-sit

Please read the assessment feedback closely and speak with your Research Supervisor(s) or faculty. After consulting the feedback, close attention is essential to rework on the areas of weakness and then resubmit the work at the next opportunity.

Assignment Submission Extensions

Students can apply for extensions via LMS based on extenuating circumstances (if any) with evidence (proof) as per our extensions policy.

4. Entry Requirements

4.1. Admissions Policy

Applicants are normally expected to have:

- A second-class master's degree (or international students holding a qualification recognized as equivalent by the University), plus a minimum of 3 years' IT experience, at an appropriate senior level.

- International students will also be required to demonstrate that they have the appropriate level of written and spoken English (normally IELTS score of 7 with a minimum score of 7 in written English or evidence of education completed in English language at an undergraduate and/or master's level). In keeping with our policy on widening participation and diversity, the programme encourages and welcomes the contribution of older learners and people from the widest range of social, economic and cultural backgrounds.

4.2. Recognition of Prior Learning

Where an applicant has successfully completed one or more appropriate Doctoral level modules in a subject related the college would discuss the chances of eliminating the need to undertake one or more modules in the programme. This, however, depends on the decision of the academic board of the awarding institution.

4.3. Admissions Procedures

All applications are submitted to the admissions department and passed on to the relevant Programme Leader for consideration. In the application form, applicants are required to outline an Intent of Research for their intended thesis. If the application has potential, an interview is scheduled by a panel comprising at least two members of the research committee. Completion of an interview checklist allows for a thorough

rigorous evaluation of the candidate's strengths at the interview. It also means that details about the conditions of the offer are passed back to the Research School, enabling a comprehensive offer letter and contract to be produced. When it is felt that the applicant does not possess the appropriate level of English language, an English language course may be recommended before the student embarks on the programme. The selection and admission processes outlined above ensure that only appropriately qualified students are admitted to the programme and that the students can be satisfactorily supported in their research.