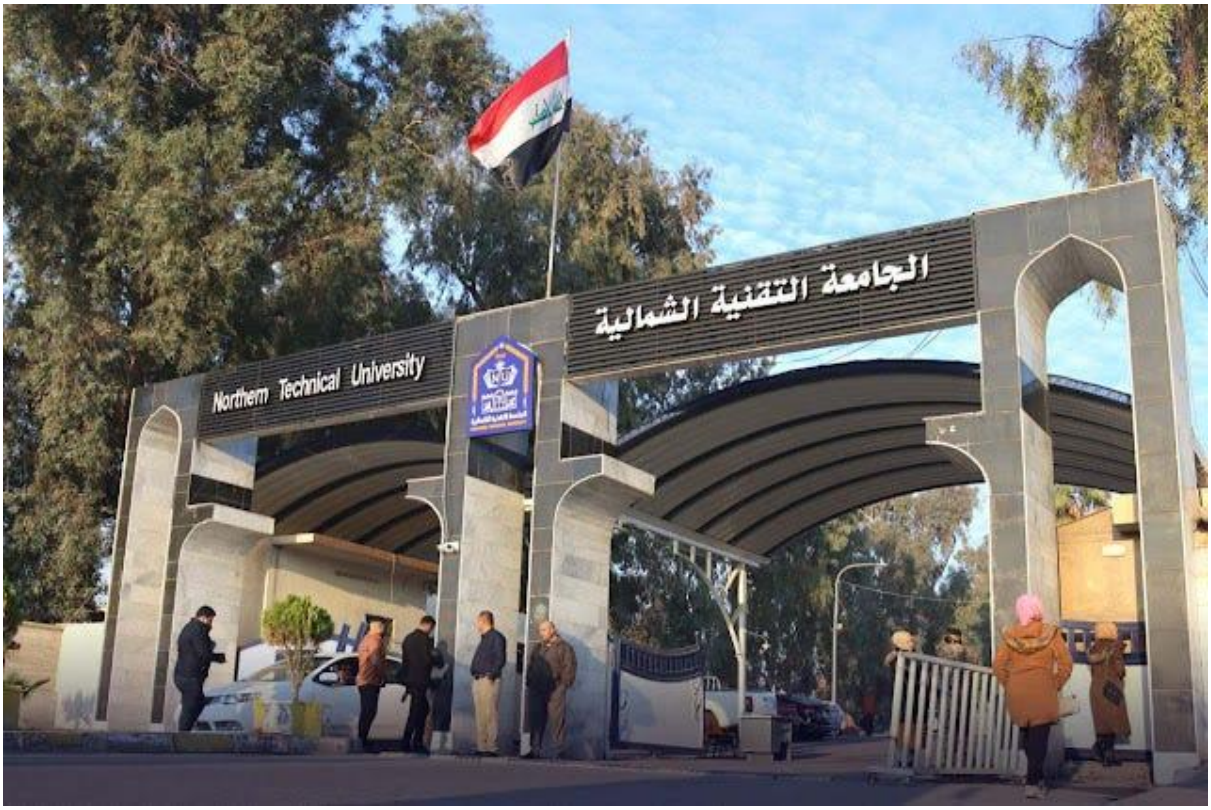
University Northern Technical

الجامعة التقنية الشمالية

First Cycle – Bachelor's degree (B.Tec.) –Information Techniques Management

بكالوريوس إدارة تقنيات المعلومات



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1. Mission & Vision Statement

Vision Statement

The academic staff of Information Techniques Management Department at Northern Technical University believe that students come to understand the discipline of information management through a combination of coursework, hands-on projects, research, and practical applications. This diverse mix of instructional methods equips students with a comprehensive understanding of the techniques and technologies used by professionals to manage information systems effectively, solve complex problems, and drive innovation in the IT sector. Small class sizes within the program foster a close working relationship between academic staff and students, creating an informal and supportive atmosphere that encourages personal growth and academic excellence**.**

Mission Statement

The academic staff of the Information Techniques Management Department at Northern Technical University pursues a multifaceted mission. The program seeks to provide all students with fundamental knowledge of information management, as well as a deeper understanding of selected focus areas within the discipline. The curriculum and advising have been designed to prepare graduates for their professional future, whether they choose to work as IT managers, data analysts, or to pursue advanced degrees in information technology or business management. The program also provides the necessary foundational knowledge in information management to support degrees in Business Administration, Computer Science, and the Associate of Science degree in Network Technology. Additionally, information management courses offer a crucial technical experience for those students seeking to complete their general education requirements.

2. Program Specification

Program code:	B.Tech-ITM	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

Management of Information Techniques is a dynamic and comprehensive field, well-equipped to prepare students for a variety of careers in the information technology sector. The emphasis of the program is on the practical application of IT concepts and techniques to real-world problems, whether it involves data analysis, systems management, or information security. The degree is popular – for some, it's the breadth of the subject that appeals, while for others, it's a path to specialization. All students have the opportunity to transfer onto our specialist degrees in Cybersecurity, Data Science, and Network Management at the end of the first year.

Level 1: This foundational year exposes students to the fundamentals of Information Techniques, suitable for progression to all programs within the Information Techniques Management program group. Program-specific core topics are covered, preparing students for more specialized, research-led modules in subsequent years.

Levels 2, 3, and 4: At these levels, students are free to choose the core and elective module credits, with the proviso that a range of modules reflecting the complexity of IT systems and their applications is selected. This ensures the breadth of knowledge expected of a graduate with a degree in Information Techniques Management. Students can develop their own interests in areas such as database management, software development, and IT project management. Decisions on what to study are made with input from personal tutors.

Research Ethos and Practical Skills: The research ethos is developed and fostered from the start through practical, which are either embedded in lecture modules or taught in dedicated practical modules, research seminars, and tutorials. There is a compulsory project in Level 1 that students must pass to progress into Level 2, and optional projects in Levels 2, 3, and 4. At Level 4, all students carry out an independent research project, which may be a credit-based library or data analysis project, or a field or laboratory-based project.

Academic Tutorials: These are held at Levels 1 and 2 with the same tutor, who is also the personal tutor, providing continuity and progressive guidance. Level 1 and 2 tutorials include a number of workshops to teach skills, such as database use and presentation skills, followed by assessed exercises like essays and presentations, offering opportunities to practice these skills in a subject-specific context.

Field Experience and Practical Application: There is a compulsory practical project in Level 1 that students must pass to progress into Level 2, with optional field projects in Levels 2, 3, and 4. At Level 4, all students undertake an independent research project, which can be a credit-based library or data analysis project, or a field or laboratory-based project.

International Years and Industrial Placements: The program also offers opportunities for international years and industrial placements. Individual needs are discussed with the appropriate tutor and accommodated wherever possible.

The Information Techniques Management graduate is trained to appreciate how research informs teaching, aligning with the University and School Mission statements. This holistic approach ensures that graduates are well-prepared for professional careers and further studies in the IT field.

3. Program Objectives: using Bloom Theory

1- Knowledge:

Recognize the fundamental principles and theories in information management, including data structures, algorithms, and systems analysis.

2-Comprehension:

Describe the latest technologies and tools used in information management, such as database management systems, software development platforms, and network infrastructure.

3-Application:

Apply technical skills to solve complex problems and implement solutions using appropriate information technologies.

4-Analysis:

Analyze complex IT problems, breaking them down into manageable components to design effective solutions.

5-Synthesis:

Create specialized solutions in areas such as cybersecurity, data science, and network management, integrating in-depth knowledge and skills.

6-Evaluation:

Evaluate research findings and innovative IT solutions, assessing their effectiveness and potential for addressing IT challenges.

7-Communication:

Communicate effectively and collaborate in multidisciplinary teams, presenting information clearly and concisely.

8-Professional and Academic Preparedness:

Prepare for professional careers and advanced studies by demonstrating the necessary skills and knowledge required for roles such as IT managers, data analysts, and systems administrators.

9-Ethical and Social Responsibility:

Assess the ethical implications and social impacts of information management practices, ensuring responsible and mindful decision-making.

10-Lifelong Learning:

Commit to continuous learning and professional development, staying current with evolving technologies and industry trends.

International and Industrial Exposure:

Engage in international study and industrial placements, gaining practical experience and a global perspective in the field of information management.

4. Student Learning Outcomes

Information Techniques Management is the study of the design, implementation, and management of information systems and technologies in various organizational contexts. Graduates obtain information on the historical, technical, and social aspects of IT and utilize basic knowledge toward realizing broader concepts. The Department offers a Bachelor of Science in Management of Information Techniques with concentrations in General IT Management, Cybersecurity, Data Science, and a minor in Business Management that leads to various professional certifications. Additionally, the Department offers courses to a large number of students from other departments and supports interdisciplinary programs. The curriculum and experiences are designed to prepare students, in part, for entry into professional IT careers, graduate studies, technical careers, and business management.

Outcome 1: Identification of Complex Systems

Graduates will be able to illustrate the architecture and function of information systems and explain how their components interact within an organizational environment**.**

Outcome 2: Oral and Written Communication

Graduates will be able to formally communicate the results of IT projects and analyses using both oral and written communication skills.

Outcome 3: Practical IT Skills

Graduates will be able to perform practical IT tasks and projects using scientific equipment, software, and computer technology while observing appropriate safety and ethical protocols.

Outcome 4: Scientific and Technological Knowledge

Graduates will be able to demonstrate a balanced understanding of how scientific and technological knowledge develops, including the historical development of foundational theories and practices in IT.

Outcome 5: Data Analysis

Graduates will be able to demonstrate quantitative skills in IT, such as the ability to conduct data analyses and interpret the results.

Outcome 6: Critical Thinking

Graduates will be able to use critical-thinking and problem-solving skills to develop and execute IT projects and/or papers.

5. Academic Staff

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6. Credits, Grading and GPA

Credits

(Northern Technical University) is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Calculation of the Cumulative Grade Point Average (CGPA)

1. The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

   CGPA of a 4-year B.Sc. degree:

   CGPA = [(1st module score x ECTS) + (2nd module score x ECTS) + ……] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
TCMM 106	Principles of Accounting	78	72	6.00	B	Nil
TCMM 105	Principles of Statistics	78	72	6.00	B	Nil
ITM 108	Mathematics	93	82	7.00	C	Nil
ITM 109	Principles of Programing	108	67	7.00	S	Nil
NTU 100	Human rights and democracy	32	18	2.00	B	Nil
NTU 101	English Language	32	18	2.00	B	Nil

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
NTU 102	Computer	62	13	3.00	B	Nil
NTU 103	Arabic Language	32	18	2.00	B	Nil
TCMM 107	Principles of Economics	78	72	6.00	B	Nil
TCMM 104	Principles of Management	78	72	6.00	B	Nil
ITM 110	Object Oriented Programing	108	92	8.00	C	Nil
ITM 111	Logic Design	78	47	5.00	E	Nil
ITM 112	IT Essential	78	47	5.00	E	Nil

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
NTU 200	Crimes of AL-Baath Party in Iraq	32	18	2.00	B	Nil
NTU 201	English Language 2	32	18	2.00	B	Nil
ITM 204	Principles of Marketing	93	82	7.00	S	Nil
ITM 205	Principles of Finical Management	78	72	6.00	S	Nil
ITM 206	Database Design	93	82	7.00	C	Nil
ITM 207	Python Language	93	57	6.00	C	Nil

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
NTU 202	**Computer 2**	62	13	3.00	B	Nil
NTU 203	**Arabic Language 2**	32	18	2.00	B	Nil
ITM 208	**Database Management**	123	102	9.00	C	Nil
ITM 209	**Principles of Computer Networks**	108	92	8.00	C	Nil
ITM 210	**Statistics Analysis (SPSS)**	108	92	8.00	E	Nil
ITM 211	**Matlab**	108	92	8.00	E	Nil

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ITM 301	**Web Design**	108	67	7.00	C	Nil
ITM 302	**Project Management**	63	37	4.00	C	Nil
ITM 303	**Business Process Re-engineering**	78	47	5.00	C	Nil
ITM 304	**Management Information System**	93	57	6.00	C	Nil
ITM 305	**Digital Transformation**	62	38	4.00	C	Nil
ITM 306	**E-Marketing**	63	37	4.00	C	Nil

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ITM 307	**Big Data**	108	67	7.00	C	nil
ITM 308	**Systems Design and Analysis**	78	47	5.00	C	nil
ITM 309	**Operating Systems**	93	57	6.00	C	nil
ITM 310	**Mobile Applications**	93	82	7.00	C	nil
TCMM 300	**Summer Training**				C	nil
ITM 311	**Internet of Things**	77	48	5.00	E	nil
ITM 312	**Cloud Computing**	77	48	5.00	E	nil

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ITM 402	**Artificial Intelligent**	108	67	7.00	S	Nil
ITM 403	**Total Quality Management**	63	62	5.00	C	Nil
ITM 404	**Strategic Management**	78	47	5.00	C	Nil
NTU 400	**Scientific Research Methodology**	62	38	4.00	B	Nil
ITM 405	**Software Engineering**	108	67	7.00	C	Nil
ITM 401	**Professional Ethics**	32	18	2.00	B	Nil

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ITM 406	**Cybersecurity**	108	67	7.00	C	Nil
ITM 407	**Business Intelligence**	93	82	7.00	C	Nil
ITM 408	**Graduation Project**	62	63	5.00	C	Nil
ITM 409	**Data Structure**	123	52	7.00	C	Nil
ITM 410	**Financial Technology**	63	37	4.00	E	Nil
ITM 411	**Entrepreneurship**	63	37	4.00	E	Nil

8. Contact

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