

PROGRAMME DESCRIPTION

Master of Science in Information Systems integrates Information Technology, Business Studies and Computer Technology fields. The students will be introduced to the basic concepts and the latest ideas in IT merging and business management aspects. It also prepares students with deep understanding of the architecture or basic structure of information system within a business organization. The courses in this program aims to provide new knowledge in the perspective of merging three important elements in business organization which are business knowledge, information systems and IT.

The programme is intended to produce innovatively and creatively assured graduates, who have acquired the professional expertise, intellectual skills, and entrepreneurship literate to embark on a rewarding career in the related fields or further study at post-graduate level.

PROGRAMME INFORMATION

Name of the award	:	Master of Science in Information Systems
MQF level	:	Master Degree Level (MQF Level 7)
Credit value	:	43 credits
Type of award	:	Single major
Field of study	:	Computer Use (NEC 482)
Language of Instruction	:	English
Mode of study	:	Full time
Mode of delivery	:	Lectures are delivered to enhance the knowledge of students within the context of learning module. Emphasize given in the hands on approaches to instill the student capability of applying the knowledge in the real world problem. In order to achieve the intended program objectives as per described, tutorial, lab session and communal activity will also included in the teaching method. Each of which will be assessed accordingly by the teaching staff.

Method of delivery : The method of delivery is conventional (face-to-face in classroom) and student centered learning.

Duration of study : 1 year 4 months (4 Semesters)

Calendar

No. of T&L weeks per semester	13 weeks
Revision Week	1 week
Final examination	1 week

Entry requirements :

- i. A bachelor's degree with a minimum CGPA of 2.75 or equivalent, as accepted by KUPTM Senate; or
- ii. A bachelor's degree or equivalent with minimum CGPA of 2.50 and not meeting CGPA of 2.75, can be accepted subject to rigorous internal assessment; or
- iii. A bachelor's degree or equivalent not meeting CGPA of 2.50, can be accepted subject to a minimum of 5 years working experience in relevant field.

Additional requirement for International students :

- *Test of English as Foreign Language (TOEFL) with minimum score of 550*

OR

- *International English Language Testing Services (IELTS) with minimum score of Band 6.0*

Programme
Education Objectives
(PEO)

: The specific program educational objectives are for the students to:

- PEO1 To provide quality education in computer applications to increase student's competency as a preparation to enter field of practice and research.
- PEO2 To increase student's skills in problem solving, application and system development, system analysis and design, project management, software consultancy as well as entrepreneurship.
- PEO3 To integrate professional and ethical attitude, team work, effective communication skills, multidisciplinary approach and ability to relate computer applications to broader social context.

- Program Outcomes : PO1 Effectively evaluate and analyze the effects of technological change in order to manage IS/IT projects.
- (PO) PO2 Utilize, and apply technology to solve complex business challenges.
- PO3 Evaluate business requirements and formulate technology solutions into efficient business processes.
- PO4 Effectively use interpersonal skills to share knowledge and experience with others.
- PO5 Conceptualized the trends in business setting using IS/IT skills with the help of the appropriate business strategies
- PO6 Communicate clearly and effectively in delivery the ideas to the general public
- PO7 Demonstrate a high level of understanding in IS/IT and business ethics when addressing local or global issues within a project
- PO8 Propose solution to business problems from the IS/IT perspective that should general apply to global business sense.

Master of Science in Information Systems CT301
PROGRAM STRUCTURE - JULY/ LONG SEMESTER/ (LLS)
Master of Science in Information Systems (CT301)

NO.	COURSE CODE	COURSE NAME	STATUS	CREDIT	SLT	PRE - REQ	ASSESSMENT	
							COURS E WORK	FINAL EXAM / ASS.
SEMESTER 1 / YEAR 1								
1	ITC4014	Strategic Planning for Information Systems	Common Core	4	160	None	80	20
2	ITC3064	E Commerce	Common Core	4	160	None	70	30
3	BUS501	Advanced Business Process Management	Common Core	4	160	None	80	20
TOTAL				12				
SEMESTER 2 / YEAR 1								
1	ITC4023	Enterprise Architecture	Discipline Core	3	120	None	70	30
	ITC4033	IT Management					80	20
2	ITC4044	Design Science Research in IS	Common Core	4	120	None	60	40
3	ITC4053	Knowledge Management	Discipline Core	3	120	None	80	20
	ITC4063	Innovation Management					70	30
4	ITC4073	Information Service	Discipline Core	3	120	None	80	20
	ITC4083	Software Project Management					70	30
TOTAL				13				
SEMESTER 3 / YEAR 1								
1	ITC4049	Computer Support Cooperative Work	Common Core	4	160	None	70	30
2	BUS502	Business Case for IT projects	Common Core	4	160	None	50	50
TOTAL				8				
SEMESTER 1 / YEAR 2								
1	ITC4150	Project	Common Core	10	400			
TOTAL				10				
GRAND TOTAL				43				

Master of Science in Information Systems CT301
PROGRAM STRUCTURE - NOVEMBER/ LONG SEMESTER (LSL)
Master of Science in Information Systems (CT301)

NO.	COURSE CODE	COURSE NAME	STATUS	CREDIT	SLT	PRE - REQ	ASSESSMENT	
							COURS E WORK	FINAL EXAM / ASS.
SEMESTER 1 / YEAR 1								
1	ITC4014	Strategic Planning for Information Systems	Common Core	4	160	None	80	20
2	ITC3064	E Commerce	Common Core	4	160	None	70	30
3	BUS501	Advanced Business Process Management	Common Core	4	160	None	80	20
TOTAL				12				
SEMESTER 2 / YEAR 1								
1	ITC4049	Computer Support Cooperative Work	Common Core	4	160	None	70	30
2	BUS502	Business Case for IT projects	Common Core	4	160	None	50	50
TOTAL				8				
SEMESTER 3 / YEAR 1								
1	ITC4023	Enterprise Architecture	Discipline Core	3	120	None	70	30
	ITC4033	IT Management			120	None	80	20
2	ITC4044	Design Science Research in IS	Common Core	4	120	None	60	40
3	ITC4053	Knowledge Management	Discipline Core	3	120	None	80	20
	ITC4063	Innovation Management			120	None	70	30
4	ITC4073	Information Service	Discipline Core	3	120	None	80	20
	ITC4083	Software Project Management			120	None	70	30
TOTAL				13				
SEMESTER 1 / YEAR 2								
1	ITC4150	Project	Common Core	10	400			
TOTAL				10				
GRAND TOTAL				43				

PROGRAM STRUCTURE - MARCH/ SHORT SEMESTER (SLL)

Master of Science in Information Systems (CT301)

N O.	COURSE CODE	COURSE NAME	STATUS	CREDIT	SLT	PRE - REQ	ASSESSMENT	
							COURS E WORK	FINAL EXAM / ASS.
SEMESTER 1 / YEAR 1								
1	ITC4014	Strategic Planning for Information Systems	Common Core	4	160	None	80	20
2	BUS501	Advanced Business Process Management	Common Core	4	160	None	80	20
TOTAL				8				
SEMESTER 2 / YEAR 1								
1	ITC3064	E Commerce	Common Core	4	160	None	70	30
2	ITC4049	Computer Support Cooperative Work	Common Core	4	160	None	70	30
3	BUS502	Business Case for IT projects	Common Core	4	160	None	50	50
TOTAL				12				
SEMESTER 3 / YEAR 1								
1	ITC4023	Enterprise Architecture	Discipline Core	3	120	None	70	30
	ITC4033	IT Management			120	None	80	20
2	ITC4044	Design Science Research in IS	Common Core	4	120	None	60	40
3	ITC4053	Knowledge Management	Discipline Core	3	120	None	80	20
	ITC4063	Innovation Management			120	None	70	30
4	ITC4073	Information Service	Discipline Core	3	120	None	80	20
	ITC4083	Software Project Management			120	None	70	30
TOTAL				13				
SEMESTER 1 / YEAR 2								
1	ITC4150	Project	Common Core	10	400			
TOTAL				10				
GRAND TOTAL				43				

COURSE DESCRIPTION**1. ITC4014 STRATEGIC PLANNING FOR INFORMATION SYSTEMS (4 Cr.)**

This course will expose the students how to integrate the concepts and methodologies with skills acquired in the field of information systems and technology in the development of a comprehensive information systems prototype. Measurable benefits in the alignment of business processes with information systems solutions.

Prerequisite: None

2. BUS501 ADVANCED BUSINESS PROCESS MANAGEMENT (4 Cr.)

This course will expose the students to Business Process Management (BPM) concepts, methods and tools surrounding the definition, implementation, measurement and improvement of lateral processes in organizations. BPM emerged as a combination of mature organizational transformation concepts (Business Process Reengineering, Six Sigma, Total Quality Management) and process-supporting technologies such as workflow management, process analysis and automation suites, and service-enabled systems.

Prerequisite: None

3. ITC3064 E-COMMERCE (4 Cr.)

This course will expose the students with the E-commerce success factors. Starting with the concepts and how it evolve over the decade, including key moments in the development of its infrastructure. The features are also will be discussed and specific business models against traditional commerce. The issues of security, privacy are also explained.

Prerequisite: None

4. ITC4044 DESIGN SCIENCE RESEARCH IN IS (4 Cr.)

This course will expose the students with the skills of conducting design research in information systems. This kind of research aims at designing artifacts such as tools, methods and techniques that make information systems more effective and efficient. Students will also acquire skills in writing research proposals and articles that follow the design research paradigm

Prerequisite: None

5. ITC4049 COMPUTER SUPPORT COOPERATIVE WORK (4 Cr.)

This course will introduce students to the CSCW and groupware field. It will cover basic concepts in the field and include an examination of software systems designed to support cooperative work - their design, use and evaluation. Issues such as peripheral awareness, ownership of information, common information spaces, media spaces, group support systems, coordination mechanisms and contextual factors in the workplace will be studied. Students will use some groupware technologies, and do a project in the course

Pre-requisite: None

6. **BUS502 BUSINESS CASE FOR IT PROJECTS (4 Cr.)**

This course will expose the students how to analyse and build a successful business case to meet organization's needs and enable organization to make better decisions. The student will also write a business case and align it with business requirements and drivers.

Pre-requisite: None

7. **ITC 4023 ENTERPRISE ARCHITECTURE (3 Cr.)**

This course will expose the students to the architecture continuum and the relation between software, applications, and technology and solution architectures. The role of information technology in shaping and delivering business goals and strategies. Student also will be able to understand the role of enterprise architecture and the path to building enterprise level architecture models.

Pre-requisite: None

8. **ITC 4053 KNOWLEDGE MANAGEMENT (3 Cr.)**

This course provides a holistic view of knowledge management. It integrates theory with practice to prepare current and future leaders to manage knowledge and to lead people in learning organizations. It introduces integral concepts of knowledge management (KM), and look at organizational and societal KM from a variety of perspectives HR, IT, personal strategic, and general management. The implications of KM in public and private organizations will be highlighted through the use of case studies.

Pre-requisite: None

9. **ITC 4073 INFORMATION SERVICE (3 Cr.)**

This course will expose the students to the roles played by information professionals to help diverse users define and negotiate their information needs, navigate user-system interfaces, formulate effective search strategies for information retrieval, and evaluate and select information. Attention is also given to the skills necessary to plan for, implement, and evaluate the delivery of information services in a wide variety of

organizational contexts. The ethical foundations of information services are also considered.

Pre-requisite: None

10. **ITC 4033 IT MANAGEMENT (3 Cr.)**

This course will expose the students to IT services from the disciplines of management, information technologies, engineering and science. The strong interest in developing this area is shared among major industry entities and academia thereby giving it an applied focus. This course will take multiple, perspectives on service science: design, management, delivery and evaluation.

Pre-requisite: None

11. **ITC 4063 INNOVATION MANAGEMENT (3 Cr.)**

This course combines lectures, case analyse and student presentations. The readings are drawn from research in the management of technological innovation and technology-based entrepreneurship as well as from economics and organizational theory. The cases provide an extensive opportunity to integrate and apply these tools in a practical, business context, and draw from a wide variety of firms and industries: established and entrepreneurial, mainly from high technology.

Pre-requisite: None

12. **ITC 4083 SOFTWARE PROJECT MANAGEMENT (3 Cr.)**

The course will expose the students with a preparation of project with project management skills to better manage IT projects. Built along the IT project management lifecycle, this course covers detailed topics of the basic concepts of IT project management, including initiating, planning, controlling, executing, and closing projects. The course also shows how IT projects should be managed, from inception to post implementation review. The audience who take this course will likely improve their management skills and abilities to define the project scope, create a workable project plan, and manage within the budget and schedule.

Pre-requisite: None

13. **ITC 4150 PROJECT (10 Cr.)**

The course allow students to complete a research and/or development project via an individual work. To provide students with an opportunity of in-depth exploration of a particular topic in the chosen topic, and to allow them to illustrate their expertise in a chosen area. To further develop students' creativity and overall skills of problem formulation, development of appropriate solution methods, design and

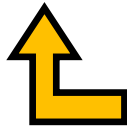
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implementation of a final chosen solution. To develop students with the ability to write scientific report and present their research results.

Pre-requisite: None

STUDY PATH

EMPLOYMENT

PhD in related fields such as
Information systems, Information
Science, Business IT



MASTER OF SCIENCE IN
INFORMATION SYSTEMS



DEGREE OR RELATED
CERTIFICATION/WORK
EXPERIENCE RECOGNISED BY
MQA