

Master of Engineering Program in Computer Engineering

Research Focus

- Digital Image Processing
- Computer Vision
- Artificial Intelligence
- Software Engineering
- Hardware Technology
- Computer Networks
- Information Engineering

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.1	Option 1.2
Coursework	-	24
- Core Courses	-	9
- Electives	-	15
Required Non-credit Courses	5	5
Thesis	36	12
Total	36	36

* Minimum credits required

2. Core Courses

Requirements	Option 1.1		Option 1.2	
	Course No.	Cr.	Course No.	Cr.
Mathematics for Computer Engineering	-	-	305500	3
Advanced Computer Architectures	-	-	305501	3
Advanced Algorithm Analysis and Design	-	-	305502	3
Total	-	-	3	9

3. Electives

Requirements	Option 1.1		Option 1.2	
	Course No.	Cr.	Course No.	Cr.
Group 1: General Courses in Computer Engineering				
Advanced Computer Programming	-	-	305503	3
Theory of Computation	-	-	305504	3
Advanced Operating Systems	-	-	305505	3
Parallel and Distributed Computing	-	-	305506	3
Special Topics in Computer Engineering and Applied Computing	-	-	305507	3
Group 2: Artificial Intelligence and Signal Processing				
Advanced Digital Signal Processing	-	-	305510	3
Matching Learning and Applications	-	-	305511	3
Human and Computer Interaction Analysis and Design	-	-	305512	3
Advanced Digital Image Processing	-	-	305513	3
Advanced Computer Graphics and Animation	-	-	305514	3
Multimedia Signal Processing	-	-	305515	3
Multimedia Standards and Applications	-	-	305516	3
Computer Vision and Applications	-	-	305517	3
Special Topics in Digital Image Processing	-	-	305518	3
Group 3: Software Engineering				
Software Engineering Design and Management	-	-	305520	3
Engineering Requirements	-	-	305521	3
Software Analysis and Design	-	-	305522	3
Software Architecture Concept and Design	-	-	305523	3
Software Product Line Concept and Design	-	-	305524	3
System Verification and Validation	-	-	305525	3
Computer System Quality	-	-	305526	3

Requirements	Option 1.1		Option 1.2	
	Course No.	Cr.	Course No.	Cr.
Special Topics in Software and System Engineering	-	-	305527	3
Group 4: Hardware Technology and Computer Networks				
Advanced Computer Networks	-	-	305530	3
Embedded and Real Time Systems	-	-	305531	3
Wireless and Mobile Networking	-	-	305532	3
Multicast Protocols and Applications	-	-	305533	3
Computer and Network Security	-	-	305534	3
Computers and Sensors Interfaces	-	-	305535	3
Sensor Networks and Applications	-	-	305536	3
Mechatronic and Robotic Systems	-	-	305537	3
Special Topics in Embedded and Real Time Systems	-	-	305538	3
Group 5: Data and Information Engineering				
Advanced Database Management Systems	-	-	305540	3
Data and Web Mining	-	-	305541	3
Data Integration	-	-	305542	3
Enterprise Information Systems	-	-	305543	3
Service Oriented Architectural Design and Development	-	-	305544	3
Knowledge Engineering	-	-	305545	3
Information Retrieval and Web Search	-	-	305546	3
Special Topics in Data and Information Engineering	-	-	305547	3
Total	-	-	≥5	≥15

4. Required Non-credit Courses

Requirements	Option 1.1		Option 1.2	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Science and Technology	305550	3	305550	3
Seminar 1	305558	1	305558	1
Seminar 2	305559	1	305559	1
Total	3	5	3	5

5. Thesis Credit Requirements

Requirements	Option 1.1		Option 1.2	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.1	305551	9	-	-
Thesis 2, Option 1.1	305552	9	-	-
Thesis 3, Option 1.1	305553	9	-	-
Thesis 4, Option 1.1	305554	9	-	-
Thesis 1, Option 1.2	-	-	305555	3
Thesis 2, Option 1.2	-	-	305556	3
Thesis 3, Option 1.2	-	-	305557	6
Total	4	36	3	12