

# Master of Science Program in Computer Science

## Research Focus

- Bioinformatics
- Intelligent Systems
- Knowledge Representation and Reasoning
- Machine Learning

## Structure of the Program

### 1. Credit Requirements\*

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Core Courses	12	12
- Electives	12	18
Required Non-credit Courses	4	4
Thesis	12	-
Independent Study	-	6
<b>Total</b>	<b>36</b>	<b>36</b>

\* Minimum credits required

Note: Option 2.1 runs for 3 semesters per academic year.

### 2. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Theory of Computation and Algorithms	254511	3	254511	3
Principles of Computer Architecture	254521	3	254521	3
Principles of Operating Systems	254522	3	254522	3
Computer Security and Cryptography	254524	3	254524	3
<b>Total</b>	<b>4</b>	<b>12</b>	<b>4</b>	<b>12</b>

### 3. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Principles of Programming Language	254512	3	254512	3
Distributed Processing Systems	254523	3	254523	3
Database Design and Administration	254531	3	254531	3
Software Engineering Methodology	254532	3	254532	3
Object-oriented Technology and Application	254534	3	254534	3
Web-based Technology	254535	3	254535	3
Principles of Computer Networks	254541	3	254541	3
Information and Network Security Management	254542	3	254542	3
Cloud Computing Fundamentals and Technologies	254543	3	254543	3
Principle of Artificial Intelligence	254552	3	254552	3
Data Warehousing and Data Mining	254553	3	254553	3
Mechatronic Design	254554	3	254554	3
Machine Learning	254555	3	254555	3
Theory and Principle of Information Retrieval	254556	3	254556	3
Intelligent Decision Support System	254557	3	254557	3
Multimedia Systems	254558	3	254558	3
Ontology Design and Modeling	254559	3	254559	3
Selected Topic in Computer Science	254561	3	254561	3
<b>Total</b>	<b>≥4</b>	<b>≥12</b>	<b>≥6</b>	<b>≥18</b>

### 4. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Seminar 1	254591	1	254591	1
Research Methodology in Science and Technology	254593	3	254593	3
<b>Total</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>4</b>

### 5. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	254594	3	-	-
Thesis 2, Option 1.2	254595	3	-	-
Thesis 3, Option 1.2	254596	6	-	-
Independent Study 1	-	-	254597	3
Independent Study 2	-	-	254598	3
<b>Total</b>	<b>3</b>	<b>12</b>	<b>2</b>	<b>6</b>