

Master of Science in Computer Science

PRE-REQUISITES		Units
CS 21A	Introduction to Computing I	3
CS 21B	Introduction to Computing II	3
AMC 124	Math for Computer Science	3
MA 20.2	Calculus for Computer Science	6
CS 110	Data Structures and Algorithms	3
CS 112	Structure of Programming Languages	3
CS 122	Database Systems	3
CS 123	Introduction to Software Engineering	3
CS 150	Computer Architecture	3
CS 161	Operating Systems	3
TOTAL:		33
All graduate students are required to take the following subjects:		
I. CORE SUBJECTS		Units
CS 240	Advanced Data Structures and Algorithms	3
CS 242	Theory of Automata and Formal Languages	3
CS 255	Computer Architecture and Operating Systems	3
CS 280	Programming Languages and Paradigms	3
TOTAL:		12
II. TRACKS The department offers five tracks. The courses that are currently available for each of the tracks are given below:		
1.Theoretical Computer Science		Units
CS 242	Theory of Automata and Formal Languages	3
CS 243	Computational Complexity	3
CS 244	Compiler Design and Theory	3
CS 268	Computer Simulations	3
CS 295	Special Topics in Computer Science	3
CS 295.L3	Special Topics: Advanced Algorithms	3
CS 295.S51	Special Topics in Computer Science: Data Mining	3
TOTAL:		18/21
2. Computational Science		Units
CS 268	Computer Simulations	3
CS 271	Introduction to Artificial Intelligence	3
CS 295.C2	Special Topics: Parallel Processing	3
CS 295.C5	Special Topics: Internet-Based Parallel Programming	3
CS 295.O7	Special Topics: Bioinformatics	3
CS 295.S37	Special Topics: Application in Medicine and Public Health Informatics	3
CS 295.S38	Special Topics in Knowledge Management Science: Knowledge Management	3
CS 295.S51	Special Topics in Computer Science: Data Mining	3
TOTAL:		18/21
3. Software Engineering		Units
CS 214	User Modeling	3
CS 219	Learning Theory and Instructional Software Design	3
CS 231	Introduction to Software Engineering	3
CS 232	Advanced Database Systems	3
CS 233	Advanced Systems Analysis and Design	3

CS 235	Technology and Project Management	3
CS 295.B1	Special Topics: Business Programming	3
CS 295.S12	Special Topics: Information Systems Administration	3
CS 295.S14	Special Topics in Software Engineering: Advanced Database Systems	3
CS 295.S19	Special Topics: Enterprise Resource Planning	3
CS 295.S20	Special Topics: Contemporary Databases	3
CS 295.S21	Special Topics: Enterprise and Distributed Software	3
CS 295.S22	Special Topics: Accounting Information Systems	3
CS 295.S23	Special Topics: Introduction to Information Engineering	3
CS 295.S25	Special Topics: MIS Practice	3
CS 295.S28	Special Topics: Object-Oriented Programming for Mobile Systems	3
CS 295.S29	Special Topics: Financial Information Systems	3
CS 295.S30	Special Topics: Systems Analysis and Design	3
CS 295.S32	Special Topics: Web Programming	3
CS 295.S34	Special Topics: Survey of ICT Management Standards	3
CS 295.S35	Special Topics In Management Science: Business Process Reengineering	3
CS 295.S36	Special Topics: Introduction To Software Testing	3
CS 295.S37	Special Topics: Application in Medicine and Public Health Informatics	3
CS 295.S39	Special Topics in Programming: Web Programming in PHP	3
CS 295.S40	Special Topics in Software Engineering: Business Intelligence	3
CS 295.S43	Special Topics in Management Science: Business Process Management	3
CS 295.S44	Special Topics in Management Science: Service Oriented Architecture	3
CS 295.S50	Special Topics in Software Engineering: Pattern Recognition	3
CS 295.S52	Special Topics in Languages: Enterprise Systems Programming	3
		TOTAL: 18/87
4. Computer Networks and Data Communications		Units
CS 250	Computer Architecture	3
CS 261	Operating Systems	3
CS 262	Networks I	3
CS 263	Networks II	3
CS 295.C2	Special Topics: Parallel Processing	3
CS 295.C5	Special Topics: Internet-Based Parallel Programming	3
CS 295.O6	Special Topics: Cryptography and Network Security	3
CS 295.S13	Special Topics: Basic Systems and Network Administration	3
CS 295.S31	Special Topics: Systems Programming	3
CS 295.S42	Special Topics in Systems: Network Security and Hacking Countermeasures	3
CS 295.S60	Special Topics: Telecommunications Technology	3
CS 295.S65	Special Topics: Survey of Contemporary Technologies	3
		TOTAL: 18/36
5. Intelligent Systems		Units
CS 214	User Modeling	3
CS 217	Human-Computer Interaction	3
CS 219	Learning Theory and Instructional Software Design	3
CS 271	Introduction to Artificial Intelligence	3
CS 295.O15	Special Topics: Advanced Computer Aided Instruction	3
CS 295.S37	Special Topics: Application in Medicine and Public Health Informatics	3
CS 295.S38	Special Topics in Knowledge Management Science: Knowledge	3

	Management	
CS 295.S51	Special Topics in Computer Science: Data Mining	3
		TOTAL: 18/24
*Students must take 6 courses from a chosen track.		
**Elective courses not included in the list and/or offered by other departments may be taken subject to the approval of the DISCS Graduate Program Director.		
III. Thesis Writing Requirement		Units
CS 300	Thesis Writing 1	3
CS 300	Thesis Writing 2	3
		TOTAL: 6
* Note: Thesis must be presented in a national or international IT conference.		

SUMMARY

Core Courses 12 units
Track 18 units
Thesis Writing Requirement 6 units

Total 36 units