

Doctorate of Philosophy in Computer Science

Effective Fall 2019 term (subject to change)

Required courses - 9 credits:

Student must obtain a grade of B or better in these courses. A grade of B- and C is not acceptable in any course to satisfy program reequipments. *Overall GPA must remain above a 3.0 in order to graduate.*

Required courses			
Course # & name:	Credits:	Grade:	Term & Year:
COP 5614: Operating Systems	3		
COT 5310: Theory of Computation	3		
COT 6405: Analysis of Algorithms	3		

Only students with the telecommunications and networking focus may opt for the TCN based core curriculum.

CIS ELECTIVE COURSES – at least 21 credits:

See below for possible options

Elective courses			
Course # & name:	Credits:	Grade:	Term & Year:

ELECTIVE COURSES – at least 30 credits:

See 2nd page for course options

Elective courses: Typically consist of CIS 7910: Grad research, taken with major professor			
Course # & name:	Credits:	Grade:	Term & Year:

Dissertation – at least 15 credits:

Dissertation credits			
Course CIS 7980 – at least 15 credits, 3 per semester once candidacy is reached.			

- Program consist of 75 total credit hours beyond a bachelor’s degree. 30 credit hours must be in actual SCIS course work. Graduate Research or Independent Study courses may be used towards the 75 credits.
- Must satisfy seminar attendance requirements.
- Please check for deadline dates for D form submissions: <http://gradschool.fiu.edu/students/#studentforms>

- Qualifying exams may be taken as early as having 15 credits of graduate coursework completed but no later than the first 2 years of the PhD program. Must have the D1 approved, or submitted in that same term.
- PhD students who have completed the requirements of the MS in Computer Science, have reached candidacy and defends dissertation proposal will be eligible to receive a master's en route.
 - In order to be eligible, the student cannot have *any* transfer credits and *must have* an approved D-3 form.

Courses offered by School of Computing and Information Sciences:

<i>Course # & name:</i>	<i>Course # & name:</i>
CAP 5011: Multimedia Systems and Applications	CIS 6931: Special Topics Adv Topics in Info Processing
CAP 5109: Adv Human-Computer Interaction	CNT 6207: Distributed Processing
CAP 5507: Game Theory	CNT 6208: Adv Topics Concurrent & Distributed Sys
CAP 5510C: Introduction to Bioinformatics	COP 5621: Compiler Construction
CAP 5602: Introduction to Artificial Intelligence	COP 5725: Principles of Database Management Systems
CAP 5610: Introduction to Machine Learning	COP 6556: Semantics of Programming Languages
CAP 5627: Affective Intelligent Agents	COP 6611: Adv Operating Systems
CAP 5640: Grad Intro to Natural Lang Processing	COP 6727: Adv Database Systems
CAP 5701: Adv Computer Graphics	COP 6795: Special Topics on Databases
CAP 5738: Data Visualization	COT 5443: Opt Methods for Comp: Theory & App
CAP 5768: Intro to Data Science	COT 6421: Theory of Computation II
CAP 5771: Principles of Data Mining	COT 6446: Randomized Algorithms
CAP 6736: Geometric Modeling & Shape Analysis	COT 6930: Special Topics: Adv Topics in Theory
CAP 6776: Adv Topics in Information Retrieval	COT 6931: Topics in Cognitive Science
CAP 6778: Adv Topics in Data Mining	COT 6936: Topics in Algorithms
CDA 5655: Virtualized Systems	TCN 5010: Telecomm Tech and Applications
CDA 6939: Special Topics: Adv Topics Comp Arch	TCN 5030: Computer Comm & Networking Tech
CEN 5011: Advanced Software Engineering	TCN 5060: Telecomm Software & Methodologies
CEN 5064: Software Design	TCN 5080: Secure Telecomm Transactions
CEN 5076: Software Testing	TCN 5150: Multimedia Computer Comm
CEN 5079: Secure Security	TCN 5421: Theory of Network Comp
CEN 5082: Grid Enablement of Scientific App	TCN 5440: Software Dev for Telecomm Net
CEN 5120: Expert Systems	TCN 5445: Telecommunication Network Programming
CEN 6070: Software Verification	TCN 5455: Information Theory
CEN 6075: Software Specification	TCN 5640: Telecomm Enterprise Planning & Strategy
COT 5428: Formal Foundations for Cybersecurity	TCN 5710: Cyber Sustainability
COT 5520: Computational Geometry	TCN 6210: Telecomm Network Analysis & Design
COT 5407: Introduction to Algorithms	TCN 6215: Advanced Network Algorithms
CIS 5208: Social, Eco, & Policy Aspects of CyberSecurity	TCN 6230: Optical Networks
CIS 5346: Storage Systems	TCN 6260: Internetworking
CIS 5370: Principles of Cybersecurity	TCN 6270: Mobile and Wireless Networks
CIS 5372: Fundamentals of Computer Security	TCN 6275: Mobile Computing
CIS 5373: Systems Security	TCN 6420: Modeling & Perf Eval of Telecomm Net
CIS 5374: Information Security and Privacy	TCN 6430: Networks Man & Control Standards
CIS 5432: Advanced IT Automation	TCN 6450: Wireless Information Systems
CIS 5931: Special Topics	TCN 6820: Industrial Dev of Telecomm
CIS 6612: Special Topics: Adv Topics in Software Eng	TCN 6880: Telecomm Public Policy Dev & Standards
CIS 6930: Adv Special Topics	CNT 5415: Practical Applied Sec
	CNT 5109: Computing for Smart Sensing

Other approved electives, Non_SCIS courses (section 7.2 of the handbook): maximum of 1 course from here.

<i>Course # & name:</i>	<i>Course # & name:</i>
EEL 6167: VLSI Design	EEE 5348: Digital Electronics
EEL 5500: Digital Communication Systems I	EEL 5718: Computer-Communication Network Eng
EEL 5813: Neural Networks-Algorithms & Applications	EEL 5820: Digital Image Processing
EEL 6787: Network Security	ESI 6546: Network Flow Analysis
STA 5236: Regression Analysis	STA 6807: Queuing & Stat Models