Computer Science PhD - Electives

University of Washington Tacoma | School of Engineering & Technology | PhD in Computer Science & Systems

PhD students will choose from a broad variety of TCSS 500-level elective courses on their way to the PhD Degree. These courses cover many different areas in Computer Science, including Data Science, Bioinformatics, Distributed Systems, Cyber-Physical Systems, GIS, and Cybersecurity. Students will need to complete at least 20 credits of elective coursework chosen from at least three concentrations

BIOINFORMATICS

TCSS 555
Machine Learning

TCSS 556
Advanced Machine Learning

TCSS 588
Bioinformatics

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

TCSS 565
Spatial Databases with Applications in Geographic Information Systems

DATA SCIENCE

TCSS 551
Big Data Analytics

TCSS 554
Information Retrieval & Web Search

TCSS 555
Machine Learning

TCSS 556
Advanced Machine Learning

CYBERSECURITY

TCSS 576
Wireless and Systems Security

TCSS 581
Cryptology

TCSS 582
Cryptographic Protocols

TCSS 583
Post-Quantum Cryptosystems

TCSS 584
Testing VLSI Circuits and Hardware Security

Cyber-Physical Systems

TCSS 569
Intro to Cyber-Physical Systems

TCSS 570
Intro to Parallel Computing

TCSS 571
Wireless & Mobile Networking

TCSS 573
Internet of Things

TCSS 574
Cyber Electromagnetics

TCSS 576
Wireless and Systems Security

DISTRIBUTED SYSTEMS

TCSS 531
Cloud & Virtualization Systems Engineering

TCSS 559
Services Computing

TCSS 562
Software Engineering for Cloud Computing

TCSS 570
Intro to Parallel Computing

TCSS 571
Wireless & Mobile Networking

TCSS 573
Internet of Things

TCSS 576
Wireless and Systems Security

INTERDISCIPLINARY ELECTIVES

TCSS 510
Enterprise Architecture Foundations

TCSS 511
Advanced Enterprise Architecture

TCSS 535
AI and Knowledge Acquisition

TCSS 540
Theory of Computing

TCSS 544
Linear Algebra

TCSS 545
Database Systems Design

TCSS 552
Interaction Design

TCSS 564
Database Systems Internals

TCSS 578
Virtual Reality

TCSS 580
Information Theory