I-Courses\(^1\)

Full-time Ph.D. students must take at least 2 foundation courses and at least 1 "I" course in first year. However, it is expected that most students will take all 3 foundation courses in first year. Students should contact course instructors to ensure they have the necessary background.

**Interaction Core**
- GCCIS-HCIN-600 Research Methods (HCI)
- GCCIS-HCIN-610 Foundations of HCI
- GCCIS-HCIN-660 Fundamentals of Instructional Technology
- GCCIS-HCIN-700 Current Topics in HCI
- GCCIS-CSCI-610 Foundations of Computer Graphics
- GCCIS-ISTE-782 Visual Analytics

**Infrastructure Core**
- GCCIS-SWEN-610 Foundations of Software Engineering
- GCCIS-CSEC-741 Sensor and SCADA Security
- GCCIS-CSCI-651 Foundations of Computer Networks
- GCCIS-CSCI-652 Distributed Systems
- GCCIS-CSCI-654 Foundations of Parallel Computing
- KGCOE-CMPE-661 Hardware and Software Design for Cryptographic Applications

**Informatics Core**
- GCCIS-CSCI-620 Introduction to Big Data
- GCCIS-CSCI-630 Foundations of Intelligent Systems
- GCCIS-CSCI-662 Foundations of Cryptography
- GCCIS-CSCI-740 Programming Language Theory
- GCCIS-CISC-862 Computational Modeling and Simulation
- GCCIS-CISC-863 Statistical Machine Learning

**Alternative I-courses to fulfill the I-courses requirement**

When I-courses listed above are not available, appropriate graduate courses can be used to fulfill the I-courses requirement if they are selected from the Golisano College Ph.D. program or graduate programs in Golisano College, the College of Engineering, or the College of Science, and approved by the advisor and the Ph.D. director.

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\(^1\) This list was updated by the Curriculum and Assessment Committee and PhD faculty in May, 2017.