Information Science and Technology

Interdisciplinary Minor program of study

istec.colostate.edu Contact: **Journalism and Media Communication Department | Clark C244**

The **Information Science & Technology minor** (IS&T) is designed to serve students seeking an instructional program that provides a broad foundation in information technology, but not seeking to earn a full degree in a specific I.T.-related field. As with all minors at CSU, a minimum of 12 credits must be **upper division** (300 or higher) courses.

The 21-credit minor consists of **one required course** (3 credits) and **six elective courses** (18 credits minimum). Most elective courses also have prerequisites (see back for details). The courses are offered by four departments in three CSU colleges:

- Computer Information Systems, College of Business
- Computer Science, College of Natural Sciences
- Journalism and Media Communication and English, College of Liberal Arts

Note: Majors in Computer Information Systems, Computer Science, or Electrical and Computer Engineering may NOT enroll in the minor. Majors in Journalism and Media Communication may not count JTC credits for the minor.

Prerequisite *Complete one before declaring the minor:* credits

- ☐ BUS 150 Business Computing Concepts and Applications* 3
  Test-out option available at the beginning of each term
- ☐ CS 110 Personal Computing* 4

Required Course

- ☐ JTC 413 New Communication Technologies and Society* 3

Elective Courses *Six of the following:*

- ☐ CIS 210 Information Technology in Business 3
- ☐ CIS 240 Application Design and Development 3
- ☐ CIS 340 Advanced Application Design and Development 3
- ☐ CIS 355 Business Database Systems 3
- ☐ CIS 410 Web Application Development 3
- ☐ CS 150 Interactive Programming with Java 3
- ☐ CS 163 Java (CS1) No Prior Programming 4
- ☐ CS 164 Java (CS1) Prior Programming 4
- ☐ CT 310 Web Development 4
- ☐ CT 320 Network and System Administration 4
- ☐ JTC 300 Professional and Technical Communication* 3
- ☐ JTC 335 Digital Photography* 3
- ☐ JTC 365 Trends In Digital Communication 3
- ☐ JTC 372 Web Design and Management* 3
- ☐ JTC 417 Information Graphics 3
- ☐ CO 402 Principles of Digital Rhetoric and Design 3

**Also offered online*

For major restriction overrides, please contact that department's adviser:

Academic adviser for the minor and Journalism (JTC) course overrides:	Computer Information Systems (CIS) course major overrides:	Computer Science (CS and CT) course major overrides:
Dakota Cotner, Undergraduate Coordinator Journalism and Media Communication Clark C244 Dakota.Cotner@colostate.edu	Tonja Rosales, Undergrad Asst. Director Business Rockwell Hall 110 Tonja.Rosales@colostate.edu	Albert Lionelle, Counselor and Adviser Computer Science CS Building 274 Albert.Lionelle@colostate.edu

Elective Courses: six courses required; at least nine credits must be upper division. Pay attention to required prerequisites and plan carefully—prerequisites will not be waived unless noted.

Programming Courses

- **CS 150 Interactive Java Programming** – Introduction to object-oriented programming with Java; problem-solving, creating applets for Web pages, and graphical user interfaces. *Prerequisite: 1 credit MATH.*
- **CS 163 Java No Prior Programming** – Computer programming in Java for students without previous programming experience. Topics include variables, assignment, expressions, operators, booleans, conditionals, characters and strings, control loops, arrays, objects and classes, file input/output, interfaces, recursion, lists, and sorting. *Prerequisite: MATH 124 with a minimum grade of C.*
- **CS 164 Java Prior Programming** – Computer programming in Java for students with limited programming experience. Problem decomposition for good design; expressions, operators, booleans, conditionals, characters and strings, control loops, arrays, objects and classes, file input/output, interfaces, recursion, lists, and sorting. *Prerequisite: MATH 124 with a minimum grade of C.*
- **CIS 210 Information Technology in Business** – Introduction to information systems: the IS profession; hardware, software, and programming; web and database applications; data analysis tools. *Prerequisite: One of CS 150, 160, 163, 260, or 267. CIS 200 is waived.*
- **CIS 240 Application Design and Development** – Software engineering methods including design, implementation, and testing using structured and event-driven techniques, logic, and data structures. *Prerequisite: CIS 210 and one of CS 150, 160, 163, 260, or 267.*
- **CIS 340 Advanced Application Design and Development** – Design and construction of business applications using object-orientation and advanced data structures. *Prerequisite: CIS 240.*

Business and Communication Applications.

- **CIS 355 Business Database Systems** – Physical and logical design, implementation, and administration of databases. *Prerequisite: CIS 210 and one of CS 150, 160, 163, 260, or 267.*
- **CT 320 Network and System Administration** – Installation of network and operating system services, management and support; upgrades, security, backups. *Prerequisite: CS 155 and CS 156 or CS 253.*

Specialty Courses

- **JTC 300 Professional and Technical Communication** – Professional writing and presentation skills applied to students' major fields. *Prerequisite: CO 150 or HONR 193.*
- **JTC 335 Digital Photography** – Basic photographic theory and practice using digital camera and image processing technology. *Prerequisite waived.*
- **JTC 365 Trends in Digital Communication** – Issues and research in computer-mediated communication relating to individuals, groups, community and society. *Prerequisite waived.*
- **JTC 417 Information Graphics** – Static and interactive data visualization and information design using charts, graphs, maps and other visual elements. *Prerequisite waived.*
- **CO 402 Principles of Digital Rhetoric and Design** – Advanced study of rhetorical contexts shaping online texts. Includes instruction in coding and digital design.

Web Design and Development Courses

- **JTC 372 Web Design and Management** – Design, development, and management of World Wide Web content. *Prerequisite waived.*
- **CT 310 Web Development** – Web development languages used to create fully functional dynamic web sites; server and client scripting, database access and security issues. *Prerequisite: CS 220 and CS 165.*
- **CIS 410 Web Application Development** – Web development techniques and strategies including Active Server Pages using VBScript, JavaScript, ColdFusion; security, web design. *Prerequisite: CIS 355 and CIS 240.*

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