Numbering of the INFX courses
The first digit of the course number represents the level of the course.
The second digit of the course number represents a knowledge area within Informatics:

<table>
<thead>
<tr>
<th>Course Number Code</th>
<th>Knowledge Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>“0”</td>
<td>Of general interest to all areas</td>
</tr>
<tr>
<td>“1”</td>
<td>Human computer interaction</td>
</tr>
<tr>
<td>“2”</td>
<td>Information assurance and security</td>
</tr>
<tr>
<td>“3”</td>
<td>Information management</td>
</tr>
<tr>
<td>“4”</td>
<td>Information technology infrastructure</td>
</tr>
<tr>
<td>“5”</td>
<td>System administration and maintenance</td>
</tr>
<tr>
<td>“6”</td>
<td>Entertainment, multimedia</td>
</tr>
<tr>
<td>“7”</td>
<td>Web systems and technologies</td>
</tr>
<tr>
<td>“8”</td>
<td>Systems integration and architecture</td>
</tr>
<tr>
<td>“9”</td>
<td>Special courses</td>
</tr>
</tbody>
</table>

INFORMATICS (INFX S300)
Michael W. Totaro, Program Coordinator; James R. Oliver Hall 203

COURSE DESCRIPTIONS

101. INFORMATICS FUNDAMENTALS. (3, 0, 3). Pervasive themes in informatics, history of information technology, related disciplines, and application domains. Prereq: Eligibility for MATH 143.

210. HUMAN-COMPUTER INTERACTION. (3, 0, 3). Human factors in the design of computer application interfaces; survey of web-based HCI and emerging technologies; interactive software and styles; design principles and considerations; development methods; and tools, interface quality and evaluation methods. Prereq: “C” or better in INFX 101 and MATH 143.

240. INFORMATION TECHNOLOGY INFRASTRUCTURE. (3, 0, 3). Computer and systems architecture; communication networks, organizational services and capabilities enablement through IT infrastructure solutions; emphasis on Internet-based solutions. Prereq: “C” or better in INFX 101 and MATH 143.

To register for an Informatics course numbered 300 and above, Informatics majors must be in Upper Division and meet course prerequisites; non-majors must receive approval from the Informatics Program Coordinator. Not all classes are offered every semester.

301. COMPUTATIONAL THINKING. (3, 0, 3). Human thinking and mental tools that are influenced by the nature of computing processes and the concepts of computer science: computability, algorithmic thinking, symbol processing, heuristic reasoning, searching, parallel and distributed thinking, abstraction, hierarchical organization, rationality and its limits, complexity, languages of thought, knowledge and its representation.

320. INFORMATION ASSURANCE AND SECURITY. (3, 0, 3). Computing communication and organizational systems; emphasis on vulnerabilities, threat analysis, models, attacks and recovery.

321. NETWORK SECURITY. (3, 0, 3). Threats to information confidentiality, integrity, and availability in the various Internet layers; emphasis on cryptographic, primitives/protocols, authentication, authorization and access control technologies. Prereq: INFX 320.

330. INFORMATION MANAGEMENT. (3, 0, 3). Database systems, including conceptual design and implementation, management; emphasis on the relational database model.

343. DISTRIBUTED INFORMATION SYSTEMS. (3, 0, 3). Distributed and object models of computation; advanced concepts such as remote method invocations, object brokers, object services, open systems, and future trends. Pre or coreq: INFX 330 or permission of instructor required.
361. FUNDAMENTALS OF VIDEO GAME DESIGN. (3, 0, 3). Design and production; business and documentation of design; user interface and storytelling. Prereq: VIAR 235 or permission of instructor required.

"INFX 370 and INFX 371 are new courses, still undergoing final approval. Course descriptions for these two are "unofficial."

370. Interactive Website Development. (3,0,3). Web standards and behavioral layer of Web development. Client-side scripting and scripting languages. Pre or Coreq: INFX 330. Restr: If prerequisites are not met permission of program coordinator required.

371. Database-backed Website Development. (3,0,3). Server-side scripting methodologies and database design for interactive web sites. Prereq: INFX 370. Restr: If prerequisites are not met permission of program coordinator required.

380. SYSTEMS INTEGRATION AND ARCHITECTURE. (3, 0, 3). Traditional and structural approaches to analysis and design; project initiation, planning, requirements gathering and requirements modeling; project management fundamentals; IT applications and organizational processes.

"INFX 410 is a new course, still undergoing final approval. Course description for this course is "unofficial."

410. Interactive Narrative. (3,0,3). Aesthetics of the electronic narrative and games as narrative structures; Web assignments and creation of electronic stories using authoring systems and multimedia software tools. Prereq: Six hours junior-level Informatics course credits and six hours of Visual Arts course credits, including VIAR 365, all with a grade of “C” or better. Restr: If prerequisites are not met permission of program coordinator required.

412. VISUAL ANALYTICS. (3, 0, 3). Visualization of data and information for different platforms using software tools. Prereq: Six hours junior-level Informatics course credits with a grade of “C”. Restr: If prerequisites not met permission of program coordinator required.

435. BUSINESS INTELLIGENCE AND ADVANCED DATABASES. (3, 0, 3). Emphasis on query language. Prereq: Six hours junior-level Informatics course credits with a grade of “C”, including INFX 330. Restr: If prerequisites not met permission of program coordinator required.

440. ADVANCED NETWORK INFRASTRUCTURES. (3, 0, 3). Evaluation, planning, design, deployment, and maintenance. Prereq: Six hours junior-level Informatics course credits with a grade of “C”. Restr: If prerequisites not met permission of program coordinator required.

450. SYSTEMS ADMINISTRATION AND MAINTENANCE. (3, 0, 3). Installation, management, and administration of computing infrastructures. Prereq: Six hours junior-level Informatics course credits with a grade of “C”, including INFX 320. Restr: If prerequisites not met permission of program coordinator required.

451. UNIX SYSTEM ADMINISTRATION. (3, 0, 3). History, operation use and services, applications, administrative tasks, and related topics. Prereq: INFX 450 with a grade of “C”. Restr: If prerequisites not met permission of program coordinator required.

470. WEB SYSTEMS AND TECHNOLOGIES. (3, 0, 3). Design, implementation, and testing of Web-based applications, and software. Prereq: Six hours junior-level Informatics course credits with a grade of “C”, including INFX 330. Restr: If prerequisites not met permission of program coordinator required.

"INFX 471 is a new course, still undergoing final approval. Course description for this course is "unofficial."

471. Media for Electronic Commerce. (3,0,3). Applications of server-side Internet programming languages and media theory to e-commerce, Internet security, and online portals. Prereq: INFX 371 with a grade of “C” or better. Restr: If prerequisites are not met permission of program coordinator required.

481. BUSINESS PROCESS ANALYSIS AND DESIGN. (3, 0, 3). Use of information technology to manage, transform, and improve business processes. Prereq: Six hours junior-level Informatics course credits with a grade of “C”, including INFX 380. Restr: If prerequisites not met permission of program coordinator required.
490. **INFORMATICS CAPSTONE. (3, 0, 3).** Integrative, supervised group project in which students analyze, specify, design, construct, evaluate, and implement a significant information processing system. Prereq: Grade of "C" in all required junior-level Informatics courses and a grade "C" in 6 hours of senior-level Informatics courses, including either INFX 450 or INFX 470. Restr: Must be taken in student's final semester.

491. **INTERNSHIP. (3, 0, 3).** Professional work experience. Prereq: Completion of all Informatics core courses with a grade of "C". Restr: Permission of internship coordinator required. If prerequisites not met permission of program coordinator required.

497. **SPECIAL PROJECT. (3, 0, 3).** Prereq: GPA of 3.00 or better; six hours junior-level Informatics course credits, including INFX 301, with a grade of "C"; and permission of instructor. Restr: If prerequisites not met permission of program coordinator required. Instruction Type: Directed Project.

499. **SPECIAL TOPICS IN INFORMATICS. (3, 0, 3).** May be repeated for credit. Alternate subtitles will appear on students' transcripts. Prereq: Six hours junior-level Informatics course credits with a grade of "C". Restr: Permission of instructor required. If prerequisites not met permission of program coordinator required.