

BACHELOR of Science in Informatics

College of Liberal Arts & Sciences

For students who entered the program starting Fall 2005

Total Credits Required: 122

NAME:	ID#:	DATE:
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Course No.	Title	Credit	Grade	Semester	Notes:
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FUNDAMENTAL LITERACIES: (13 to 19 credits)

A		English Composition	(3 cr.)			ENG-W 131 or W140, A grade of C or better is required.
B		Critical Thinking	(3 cr.)			e.g., PHIL- P 105, P 110, P 150, ENG-W270, HPSC-X200, PSY-P211
C		Oral Communication	(3 cr.)			e.g., SPCH-S 121, S 223, S 324
D		Visual Literary	(3 cr.)			e.g., INFO-I310, FINA A100, JOUR J210, SPEA-V 450
E		Quantitative Reasoning	(3 cr.)			Satisfied by required Mathematics courses
F	COAS Q110	Information Literacy	(1 cr.)			Should be taken with ENG W131
G		Computer Literacy	(3 cr.)			Satisfied by required Computer Science courses

COMMON CORE (12 Credits) At least one of the following must be at the 300 level.

A		The Natural World	(3 cr.)			N190 or N390, Satisfied by science requirements (BIOL, CHEM, GEOL, PHYS)
B		Human Behavior & Social Institutions	(3 cr.)			B190 or B399 (POLS, PSY, SOC)
C		Literary and Intellectual Traditions	(3 cr.)			T190 or T390 (CMLT, ENG, FINA, HIST, PHIL)
D		Art, Aesthetics and Creativity	(3 cr.)			A190 or A399 (FINA, MUS, THTR)

CONTEMPORARY SOCIAL VALUES (8 Credits)

A		Non-Western Cultures	(3 cr.)			(e.g., ANTH E105, POLS Y109)
B		Diversity in U.S. Society	(3 cr.)			(e.g., SOC S161, ENG L379, PSY P391, AFRO-A 150, REL-R160)
C		Health and Wellness	(2 cr.)			(e.g., HPER N220, NURS B233)

For additional GEN-ED courses please see: www.iusb.edu/~lasi/campusgened.xls

LANGUAGE Studies (6 Credits)

		(3 cr.)				Two semesters in a single language, or equivalent. (Chosen from Japanese, French, German, Chinese, Spanish)
		(3 cr.)				

PHYSICAL & LIFE SCIENCES (13 Credits) Courses in at least two different sciences must be taken.

N190 or N390	Natural World	(3 cr.)				N190 or N390. Also satisfied by completing the General Education Requirement (See Common Core A)
		(3 cr.)				Electives chosen from astronomy, biology, chemistry, geology, and physics. Courses in at least two different sciences must be taken.
		(3 cr.)				
		(4 cr.)				

QUANTITATIVE AND ANALYTICAL SKILLS (6 Credits) (A grade of C or better is required)

MATH- M118	Finite Mathematics	(3 cr.)			(Grade of C or better)
	Statistics (300 level)	(3 cr.)			e. g. MATH M365 , SOC-S 351, MATH-K 300, MATH-K 310 (Grade of C or better)

INFORMATICS CORE (34 Credits) (A grade of C- or better is required)

INFO-I 101	Introduction to Informatics	(4 cr.)			or A106 + A290
INFO-I 201	Math. Found. of Informatics	(4 cr.)			or CSCI-C 251
INFO-I 202	Social Informatics	(3 cr.)			or SOC-S 260
INFO-I 210	Information Infrastructure I	(4 cr.)			or CSCI-C 101
INFO-I 211	Information Infrastructure II	(4 cr.)			or CSCI-C 201
INFO-I 308	Information Representation	(3 cr.)			
		(3 cr.)			Two of the following four courses: I300 Human-Computer Interaction (3 cr.) I303 Organizational Informatics (3 cr.) I310 Multimedia Arts and Technology (3 cr.) I320 Distributed Systems and Collaborative Computing (3 cr.)
		(3 cr.)			
		(3 cr.)			One of the following capstone options: I450 / I451 Design & Development of an Information System or I460 / 461 Thesis / Senior Project
		(3 cr.)			

INFORMATICS ELECTIVES (6 Credits) (A grade of C or better is required)

Electives: at least 6 credits chosen from Informatics electives (300 level or higher). Prerequisite courses may be required.

		(3 cr.)			<p>Two of the following list of courses:</p> <p>BIOL-L 311 Genetics (3 cr.) BUS-K 301 Enterprise Resource Planning (3) BUS-K 321 Management Information Systems (3 cr.) CHEM-C 371 Chemical Informatics I (3 cr.) CSCI-A 340 Introduction to Web Programming (3) CSCI-C 335 Computer Structures (3 cr.) CSCI-B 424 Parallel and Distributed Programming (3 cr.) CSCI-C 435 Operating Systems I (3 cr.) CSCI-B 438 Computer Networks (3 cr.) CSCI-C 442 Database Systems (3 cr.) CSCI-C 463 Artificial Intelligence (3 cr.) CSCI-C 481 Interactive Computer Graphics (3 cr.) ENGL-W XXX Web-Based Instruction (3 cr.) ENG-W 315 Writing for the Web (3 cr.) FINA-P XXX Advanced Digital Production (3 cr.) FINA-P 374 Computer Arts and Design II (3 cr.) INFO-I 300 Human Computer Interaction (3 cr.) INFO-I 303 Organizational Informatics (3 cr.) INFO-I 310 Multimedia Arts and Technology (3 cr.) INFO-I 320 Distrib. Sys & Collaborative Computing (3 cr.) INFO-I 400 Topics in Informatics (3 cr.) e.g., Bioinformatics. MATH-M 365 Probability and Statistics (3 cr.) PHIL-P 338 Philosophy of Technology (3 cr.) PHYS-P 303 Digital Electronics (4 cr.) PHYS-P 334 Fundamentals of Optics (3 cr.) PSY-P 335 Cognitive Psychology (3 cr.) PSY-P 438 Language and Cognition (3 cr.) SOC-S 319 Sociology of Science (3 cr.) SOC-S 451 Web Based Survey Techniques (3 cr.)</p>
		(3 cr.)			

The selection of Informatics electives will be expanded as additional cognate areas develop.

COGNATE AREA (15-18 Credits)

		(3 cr.)			
		(3 cr.)			
		(3 cr.)			
		(3 cr.)			
		(3 cr.)			
		(3 cr.)			

NOTE:

No course can be counted to fulfill both a major requirements (e.g. Informatics Core or Elective courses) as well as a cognate requirements.

Currently the following Cognates are available:

<p>Computer Science: (Established in 2003)</p> <p>I.) Required Core Courses CSCI-C 243 Data Structures (4 cr.) CSCI-C 335 Computer Structures (3 cr.)</p> <p>II.) Required Upper Level Courses (choose three from the following list) CSCI-C 311 Organization of Prog. Lang. (3 cr.) CSCI-B 438 Computer Networks (3 cr.) CSCI-C 463 Artificial Intelligence (3 cr.) CSCI-C 481 Interactive Computer Graphics (3 cr.) CSCI-C 490 Computer Science Seminar (3 cr.)</p> <p>III.) Prerequisites: Some upper level courses may require the following prerequisites: MATH-M 208 Calculus 1 (3 cr.) or M215 (5 cr.) MATH-M 301 Linear Algebra CSCI-C 151 Multiuser Operating Systems (2 cr.) CSCI-C 251 Foundations of Digital Comp. (3 cr.)</p>	<p>Life Sciences: (Established in 9/2007)</p> <p>I.) Required Core Courses BIOL-L 211 Molecular Biology (3 cr.) CHEM-C 106 Principles of Chemistry II (3 cr.) CHEM-C 126 Experimental Chemistry II (2 cr.)</p> <p>II.) Required Upper Level Courses (choose two from the following list) BIOL-L 311 Genetics (3 cr.) BIOL-L 312 Cell Biology (3 cr.) BIOL-L 318 Evolution (3 cr.)</p> <p>III.) Required upper level Courses BIOL-L473 Ecology (3 cr.)</p> <p>Prerequisites: BIOL-L 101 Intro. to Biological Sciences I (5 cr.) BIOL-L 102 Intro. to biological Sciences II (5 cr.) CHEM-C 105 Principles of Chemistry I (3 cr.) CHEM-C 125 Experimental Chemistry I (2 cr.)</p> <p>Recommended Elective: Check with Department of Biological Sciences</p>	<p>Business: (Established in 11/2006)</p> <p>I.) Required Core Courses A201 Foundations of Accounting (3 cr.) L201 Legal Environments of Business (3 cr.) K201 Computers in Business (3 cr.)</p> <p>II.) Required Upper Level Courses (choose 3 courses) BUS-J 404 Business and Society (3 cr.) BUS K 301 Enterprise Resource Planning (3 cr.) BUS-K 302 Management Sciences (3 cr.) BUS W 311 New Venture Creation (3 cr.) BUS W 406 Venture Growth Management (3 cr.) BUS-Z 302 Managing & Behavior in Orgs. (3 cr.) BUS Z440 Human Resources Mangmnt (3 cr.)</p> <p>III.) Prerequisites: PSY-P103, SOC-161, Check with the School of Business for additional prerequisite requirements.</p>
<p>Bioinformatics: (Under Review)</p> <p>I.) Required Core Courses BIOL-L100 Introduction to Bioinformatics (NEW)</p> <p>II.) Upper Level Courses (choose two from the following list) BIOL-L 211 Molecular Biology (3 cr.) BIOL-L 311 Genetics (3 cr.) BIOL-L 312 Cell Biology (3 cr.) BIOL-L 318 Evolution (3 cr.)</p> <p>III.) Required upper level Courses INFO-I 400 Advanced Bioinformatics (3 cr.) BIOL-L XXX Biostatistics</p> <p>Prerequisites: BIOL-L 101 Intro. to Biological Sciences I (5 cr.) BIOL-L 102 Intro. to biological Sciences II (5 cr.) CHEM-C 105, 106 (6 cr.)</p> <p>Recommended Elective: Check with Department of Biological Sciences</p>	<p>Cognitive Science: (Established 9/2006)</p> <p>I.) Required Core Courses COGS Q240 – Found. of Cognitive Science</p> <p>II.) Required Upper Level Courses (choose one from the following list) P312 – Topics in the Theory of Knowledge P313 – Theories of Knowledge P320 – Philosophy and Language P360 – Introduction to Philosophy of Mind P366 – Philosophy of Action</p> <p>III.) Required Psychology Courses (choose one from the following list) P325 – The Psychology of Learning P326 – Behavioral Neuroscience P329 – Sensation and Perception P335 – Cognitive Psychology P438 – Language and Cognition</p> <p>IV.) Required upper level Courses (choose one) PHIL P250 – Introductory Symbolic Logic HPSC X200 – Scientific Reasoning CSCI C463 – Artificial Intelligence CSCI C490 – (cogsci – related topics, e.g. Biomorphic Computing, Computer Vision)</p> <p>Prerequisites: Check with the Cogsci committee chair</p>	<p>New Media/Arts (Established in 10/2006)</p> <p>I.) Required Core Courses FINA-S 250 Graphic Design 1 (3 cr.) FINA-P 273 Computer Art and Design I (3 cr.) FINA-P 323 Introduction to Web Design (3 cr.)</p> <p>II.) Required Upper Level Courses (choose 2 courses) FINA-S 300 Video Art (3 cr.) FINA-S 323 Intermediate Photoshop (3 cr.) FINA-S 324 Page Layout and Design (3 cr.) FINA-P 324 Intermediate Web Design (3 cr.) TEL-T 336 Digital Video Production TEL-T 430 Topical Seminar in Design & Production TEL-T 430 Advanced Multimedia</p> <p>III.) Recommended Elective: CSCI-A 340 Introduction to Web Programming</p> <p>IV.) Prerequisites: FINA-F 102 Fundamental 2D Design Check with the School of the Arts for additional prerequisites</p>
<p>Physics: (Established in 10/2006)</p> <p>I.) Required Courses PHYS P221 Physics 1 (5 cr) PHYS P222 Physics 2 (5 cr) PHYS P323 Physics 3 (3 cr)</p> <p>II.) Electives (choose two from the following list) PHYS P303 Digital Electronics (4 cr) PHYS P309 Modern Physics Laboratory (3 cr) PHYS P324 Physics 4 (3 cr) PHYS P410 Computing Applic. In Physics (3 cr)</p> <p>Prerequisites: MATH-M 215 Calculus 1 (5 cr.) MATH-M 216 Calculus 2 (5 cr.)</p>	<p>Music/ Arts: (Under Review)</p> <p>I.) Required Courses MUS-A 101, Audio Technology 1 MUS-T 120 Computer Skills for Musicians (3 cr)</p> <p>II.) Electives (choose three from the following list) MUS-K 403 Electronic Studio Resource I (3 cr) MUS-K 404 Electronic Studio Resource II (3 cr) MUS-K 406 Projects in Electronic Music (3 cr) MUS-M 430, Music since 1945</p> <p>Prerequisites: MUS-A 190 Arts, Aesthetics, & Creativity (3 cr.) PHYS-N 190 The Natural World (3 cr.) Check with the School of the Arts for additional prerequisites</p>	<p>Social Informatics: (Established in 12/2006)</p> <p>I.) Required Core Course SOC-S 161 Principles of Sociology (3 cr.) SOC-S 348 Introduction to Sociological Theory (3 cr.)</p> <p>II.) Electives (choose three from the following list) SOC-S 210 Economy, Orgs. & Work (3 cr.) SOC-S 314 Social Aspects of Health and Medicine (3 cr.) SOC-S 319 Sociology of Science (3 cr.) SOC-S 451 Web-based survey techniques, problems and solutions (3 cr.) SOC-S 410 Topics: Sociology and Philosophy of Technology (3 cr.) SOC-S 460 Topics: Gender & Work in Global Economy. (3 cr.)</p>

<p>English: (Established 10/2008)</p> <p>I.) Required Courses ENG-W 231 Professional Writing (3 cr) (or W232) ENG-W 234 Technical Writing (3 cr) ENG-W 315 Writing for the Web (3 cr)</p> <p>II.) Electives (choose two from the following list) ENG-W 367 Writing for Multiple Media (3 cr) ENG-L 202 Literary Interpretation (3 cr) ENG-W 350 Expository Writing (3 cr) Any 300-400 level creative writing, film or linguistics class (3 cr)</p> <p>Prerequisites: ENG-W 131 Composition (3 cr.) Some 300-400 level creative writing classes may require additional prerequisites.</p>		
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**** Course substitutions must be approved by the director of Informatics.**

GENERAL ELECTIVES (approximately 12 Credits)

For further information, please contact: Department of Computer and Information Sciences, Northside 301A, 520-5521. **Please visit us on the World Wide Web at www.cs.iusb.edu**

Any student who intends to major in computer science should contact the chairperson of the Department of Computer and Information Sciences as soon as possible.

Please refer to: [IU South Bend Bulletin](#).