

BS, Computer Science – Purdue Degree at IUPUI

120 Credit Hours

Requirements for Fall 2014 to Current

Name: _____

Date: _____

GENERAL EDUCATION CORE	61 credits	COMPUTER SCIENCE MAJOR COURSES	59 credits
First Year Seminar		Minimum Grade=C-, Minimum 2.0 Average	
____ CSCI12000 Windows on Comp. Science* (1)		Core Courses	
*CSCI12000 is required for freshmen and transfer students with fewer than 30 earned hours		____ CSCI 23000 Computing I [C: MATH 15300] (4)	
Foundational Intellectual Skills		SP, SU1, FA	
<u>Core Communication</u>		____ CSCI 24000 Computing II [P:23000 & MATH 15300] (4)	
____ ENG-W 131 or W140 Elementary Comp I** (3)		SP, SU2, FA	
____ TCM32000 Written Communication in Science & Industry (requires junior status)** (3)		____ CSCI 34000 Discrete Computational Structures [P: MATH 15300; C: 24000] SP, FA (3)	
**C or above is required in ENG-W131/140 and TCM32000		<hr/>	
____ COMM-R 110 Speech (3)		____ CSCI 36200 Data Structures [P:24000 & 34000] SP, FA (3)	
<u>Analytical Reasoning</u>		<hr/>	
____ MATH16500 Calculus I (4)		____ CSCI 40200 Computer Architecture [P:34000] SP, FA (3)	
____ MATH16600 Calculus II (4)		____ CSCI 40300 Operating Systems [P:36200] SP, FA (3)	
____ MATH17100 Multidimensional Math (3)		____ CSCI 48400 Theory of Computation [P:36200] SP, FA (typically taken in senior year) (3)	
____ STAT35000, 41600 or 51100 Statistics (3)		<hr/>	
____ MATH35100 or 51100 Linear Algebra (3)		____ Capstone Experience (Senior Year): (3)	
Intellectual Breadth and Adaptiveness		Students may take the capstone research project course (CSCI 49500) or may complete capstone internship (CSCI 49600) per approval	
<u>Life and Physical Sciences</u> – see department list		<hr/>	
NOTE: Not all courses on the university list are approved for this program.		Computer Science and Supporting Course Electives	
____ _____ (3)		Computer Science majors take 11 major elective courses. A minimum of 6 CSCI electives at the 400 level or higher is required. No more than 3 courses can be from the select list of N-series courses. No more than 2 courses can be chosen from the list of supporting electives outside of computer science.	
____ _____ (3)		____ CSCI4 _____ (3)	
____ _____ (3)		____ CSCI4 _____ (3)	
____ PHYS15200 Mechanics (4)		____ CSCI4 _____ (3)	
<u>Arts, Humanities & Social Sciences</u> —must choose 1-2 from Arts and Humanities list and 1-2 from Social Science list		____ CSCI4 _____ (3)	
____ _____ (AH) (3)		____ CSCI4 _____ (3)	
____ _____ (SS) (3)		____ _____ (3)	
____ _____ (AH or SS) (3)		____ _____ (3)	
<u>Cultural Understanding</u>		____ _____ (3)	
____ _____ (3)		____ _____ (3)	
For the list of approved General Education Core courses in Cultural Understanding, Arts & Humanities, and Social Sciences, please see:		____ _____ (3)	
http://uc.iupui.edu/UndergraduateEducation/GeneralEducationCurriculum/GeneralEducationCore.aspx		____ _____ (3)	
General Electives (Required # of general elective credit hours varies based on how many credit hours needed to reach 120 credits)		____ _____ (3)	
____ _____ (3)		Total _____	
____ _____ (3)			
____ _____ (3)			

1. Must earn minimum 120 hours
2. Must take minimum 32 hours of 300/400 level courses at IUPUI
3. Only 6 credits of Studio, Clinical, Athletic, or Performing Arts can be applied to the 120 hours
4. No more than 8 credits of military credit can count toward degree.
5. One grade of D+ or D is allowed in Math and one grade of D+ or D is allowed in Life and Physical Sciences.

Life and Physical Science electives

Please refer to the CS Science List for approved life and physical science electives. NOTE: Not all courses on the university list are approved for this program.

Students pursuing the BS in CS should also avoid PHYS-P201, P202, PHYS21800 and 21900.

The following courses do not appear on the General Education Core but will count as Baccalaureate Competencies Life and Physical Science electives:

ECE20100 Linear Circuit Analysis
ECE20200 Linear Circuit Analysis II
ECE27000 Intro to Digital Logical Design

Computer Science and Supporting Course Electives

May Take Up to 3 Courses

From N-Series List:

CSCI-N Series

CSCI-N300 Mobile Computing Fundamentals (spring)
CSCI-N311 Advanced Database Programming, Oracle
CSCI-N317 Comp. for Scientific Applications
CSCI-N341 Client Side Web Programming
CSCI-N342 Server Side Web Development (fall only)
CSCI-N361 Software Project Management
CSCI-N410 Mobile Computing Application Development (fall)
CSCI-N431 E-Commerce with ASP.NET
CSCI-N499 Topics in Applied Computing (topic varies)

May Take Up to 2 Courses

From List:

Supporting Electives*

NEWM-N 220 – Intro to Media Application Development
NEWM-N230 Intro to Game Design & Development
NEWM-N255 Intro to Digital Sound
NEWM-N 285 Interactive Design
NEWM-N 320 – Intermediate Media Application Development
NEWM-N330 Game Design, Development, and Production
NEWM-N 335 Character Modeling and Animation

CIT-402 Design & Implementation of Local Area Networks
CIT-406 Advanced Network Security
CIT-420 Digital Forensics
CIT-440 Computer Network Design
HER-L 210 Visual Design for the Web
HER-A 261 Intro to Computer Imagery
INFO-I300 Human Computer Interaction
INFO-I310 Multimedia Arts: History, Criticism & Technology
INFO-I320 Distributed Systems & Collaborative Comp
BUS-S302 Management Information Systems
BUS-L203 Commercial Law I
BUS-L303 Commercial Law II
ECE-204 Intro Electrical & Electron Circuits
ECE-270 Intro to Digital System Design
ECE-362 Microprocessor Systems & Interfacing
ECE-471 Embedded Systems
STAT-514 Design of Experiments
MATH-261 Multivariate Calculus
MATH-266 Differential Equations
MATH-353 Linear Algebra II with Applications

*Please note that the courses above may require pre-requisites. Be sure to plan accordingly.

Computer Science Electives

CSCI 300-Level Options

CSCI-300 Systems Programming (Spring)
CSCI-355 Intro to Programming Languages (Fall)
CSCI-363 Software Design (Fall, Spring)

CSCI 400-Level Options

CSCI-414 Numerical Methods (fall)
CSCI-432 Security in Computers (Spring)
CSCI-433 Introduction to Internet of Things (Fall)
CSCI-435 Multimedia Info Systems (Spring)
CSCI-436 Princ. Of Computer Networking (Fall)
CSCI-437 Intro to Comp Graphics (Fall)
CSCI-438 Adv. Game Development (Spring)
CSCI-443 Database Systems (Fall and Spring)
CSCI-448 Biometrics (Spring)
CSCI-450 Software Engineering (fall)
CSCI-481 Data Mining (Spring)
CSCI-487 Artificial Intelligence (Spring)
CSCI-489 Data Science (Spring)
CSCI-490 Variable Topics (Fall, Spring)

Admission requirements to the computer science major in the School of Science – complete CSCI 23000 with grade of C+ or better and overall GPA of 2.0 or higher