### GENERAL EDUCATION CORE 64 Credits

**First Year Seminar**
- [ ] CSCI12000 Windows on Comp. Science*  (1)
  *CSCI12000 is required for freshmen and transfer students with fewer than 30 earned hours

**Foundational Intellectual Skills**

**Core Communication**
- [ ] ENG-W 131 or W140 Elementary Comp I*  (3)
- [ ] TCM32000 Written Communication in Science & Industry (junior standing required)*  (3)
  *C or above is required in ENG-W131/140 and TCM32000

**Analytical Reasoning**
- [ ] MATH15300 College Algebra  (3)
- [ ] MATH15400 Trigonometry  (3)
- [ ] STAT30100 Elementary Statistics  (3)

**Intellectual Breadth and Adaptiveness**

**Life and Physical Sciences** — see department list

**Arts, Humanities & Social Sciences** — must choose 1-2 from Arts and Humanities list and 1-2 from Social Science list

**Cultural Understanding**

For the list of approved General Education Core courses in Cultural Understanding, Arts & Humanities, and Social Sciences, please see: [http://uc.iupui.edu/UndergraduateEducation/GeneralEducationCurriculum/GeneralEducationCore.aspx](http://uc.iupui.edu/UndergraduateEducation/GeneralEducationCurriculum/GeneralEducationCore.aspx)

### World Language Requirement

**World Language First Year Proficiency:**

Via:

- A. 131(4), 132(4)
- B. 200 level or above world language course with C or above

### Computer Science Major Courses 56 Credits

Minimum Grade=C-, Minimum 2.0 Average

**Core Courses**

- [ ] CSCI 23000 Computing I [C: MATH 15300] SP, SU1, FA  (4)
- [ ] CSCI 24000 Computing II [P: 23000 and MATH 15300] SP, SU2, FA  (4)
- [ ] CSCI 34000 Discrete Computational Structures [P: MATH 15300, C: CSCI 24000] SP, FA  (3)
- [ ] CSCI 36200 Data Structures [P: 24000 & 34000] SP, FA  (3)
- [ ] Capstone Experience (Senior Year):  (3)

Students may take the capstone research project course (CSCI 49500) or may complete capstone internship (CSCI 49600) per approval

**Applied Computer Science Core**

- [ ] CSCI N-211 Introduction to Databases or CIT 21400 Introduction to Data Management  (3)
- [ ] CSCI N-241 Fundamentals of Web Development or CIT21200 Web Site Designs  (3)
- [ ] CSCI N-361 Fund. Software Project Management or INFO-I402 Project Management  (3)

**Applied Computer Science Electives**

Applied Computer Science majors take 9 major elective courses. No more than 2 courses can be chosen from the list of electives outside of computer science (CSCI). Students must complete one two-course sequence in applied CSCI using Applied CSCI Core and Electives.

**Traditional Computer Science Courses (300-400 level)**

**Human-Computer Interaction**

**General, Open Electives**

Required # of general elective credit hours varies based on how many credit hours needed to reach 120 credits

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Total______
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. One grade of D/D+ is allowed in Math and one grade of D/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.

**Applied CSCI Electives – 4 required, up to 2 can be from supporting elective list**

**Applied Computer Science Electives**
- CSCI-N300 Mobile Computing Fundamentals (spring only)
- 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-N410 Mobile Computing Application Development
- CSCI-N431 E-Commerce with ASP.NET
- CSCI-N499 Topics in Applied Computing (topic varies)

**Supporting Electives**
(MAY CHOOSE NO MORE THAN 2)
- NEWM-N 220 – Intro to Media Application Development
- NEWM-N230 Intro to Game Design & Development
- NEWM-N241 Stop Motion Animation
- 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
- NEWM-N431 Game On
- NEWM-N450 Usability Practices for New Media Interfaces
- CIT 202 Network Fundamentals
- CIT 312 Advanced Web Design
- CIT 313 Commercial Web Site Development
- CIT 329 Java Server Programming
- CIT 347 Advanced ASP.NET Programming
- CIT 356 Network Operating System Administration
- CIT-402 Design & Implementation of Local Area Networks
- CIT-406 Advanced Network Security
- CIT 412 XML-Based Web Applications
- CIT-420 Digital Forensics
- CIT 436 Advanced E-Commerce Development
- CIT-440 Computer Network Design
- HER-L 210 Visual Design for the Web
- HER-A 261 Intro to Computer Imagery
- INFO-I202 Social Informatics
- INFO-I270 Intro to HCI Principles & Practices
- INFO-I275 Intro to HCI Theory
- INFO-I310 Multimedia Arts: History, Criticism & Technology
- INFO-I320 Distributed Systems & Collaborative Comp
- INFO-I480 Experience Design & Evaluation of Ubiquitous Computing
- 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-165 Calculus I
- MATH-166 Calculus II
- MATH-261 Multivariate Calculus
- MATH-266 Differential Equations
- MATH 353 Linear Algebra II with Appl.

**Traditional CSCI Electives – can be CSCI 300 or 400-level**
- CSCI-300 Systems Programming (Spring)
- CSCI-355 Intro to Programming Languages (Fall)
- CSCI-363 Software Design (Fall, Spring)
- CSCI-402 Architecture of Computers (Fall, Spring)
- CSCI-403 Operating Systems (Fall, Spring)
- 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 Computer 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-484 Theory of Computation (Fall, Spring)
- CSCI-487 Artificial Intelligence (Spring)
- CSCI-489 Data Science (Spring)
- CSCI-490 Variable Topics (Fall, Spring)

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

**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**