# Computer Science (120 Hours)

**Effective: S2020**

## Freshman
- **CIS 115 (3)** Intro. Comp. Sci  
  PR/CO: MATH 205 or 220  
  PR: CIS 110 or CIS 115 or ECE 241
- **ECON 110 (3)** Princ. Of Mac. Econ
  PR: MATH 220
- **ENGL 100 (3)** Writing 1
- **MATH 220 (4)** Calculus I  
  PR: MATH 220
- **MATH 221 (3)** Calculus II  
  PR: MATH 220
- **COMM 105 (2)/** COMM 106 (3) Public Speaking
  Humanities/ Social Science Elective (3)

## Sophomore
- **CIS 200 (4)** Programming Fund.
  PR/CO: MATH 205 or 220  
  PR: CIS 111 or CIS 115 or ECE 241
- **CIS 300 (3)** Data & Pgm Structures  
  PR: CIS 200  
  PR: MATH 205 or 220
- **CIS 301 (3)** Log. Found of Prog.  
  PR: CIS 200
- **CIS 300 (3)** Object-Oriented Design, Imp., & Testing  
  PR: CIS 300
- **CIS 308 (1)** C/C++, Lang, Lab  
  PR: CIS 300
- Communications Elective
- **CIS 415 (3)** Ethics & Comp Tech (F)  
  PR: CIS 300
- **CIS 501 (3)** SW Arch. & Design  
  PR: CIS 400
- **ENGL 200 (3)** Writing 2  
  PR: ENGL 100  
  PR: MATH 221
- **Math 510 (3)** Discrete Math  
  PR: MATH 221
- **Humanities/ Social Science Elective (3)**

## Junior
- **CIS 450 (3)** Comp. Arch & Ops  
  PR: ECE 241  
  PR/CO: CIS 308
- **CIS 501 (3)** Intro to Alg. Analysis  
  PR: CIS 300 and 301  
  PR: MATH 510
- **CIS 560 (3)** Database System  
  PR: CIS 300 and 301  
  PR: MATH 312, 510
- **CIS 575 (3)** Intro to Alg. Analysis  
  PR: CIS 300 and 301  
  PR: MATH 510
- **Humanities/ Social Science Elective (3)**

## Senior
- **CIS 520 (3)/** CIS 625 (3)  
  *CIS 500 is offered in the Spring & CIS 625 in the Fall.
- **Tech Elective (3)**
- **Unrestricted (3)**

## Additional Courses
- **CIS 015 (0)** Undergrad Seminar
- **CIS 018 (0)** Professional Development Seminar
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## Notes:
- This course is a part of the pre-professional Program
- This course is a part of the professional Program

**Advisor: ____________________________ Student ID: __________________________**
Rules for Mathematics and Science Electives

Math/Science Electives (17 Hours)

1. One of the following 2-semester sequences must be included:
   - BIOC 198 and 201 (9 Hours)
   - CHM 210 and 230 (8 Hours)
   - PHYS 213 and 214 (10 Hours)
   - PHYS 223 and 224 (10 Hours)

2. One of the following mathematics courses must be included:
   - MATH 222 Analytic Geometry and Calculus III (4)
   - MATH 340 Elementary Differential Equations (4)
   - MATH 506 Introduction to Number Theory (3)
   - MATH 511 Introduction to Algebraic Systems (3)
   - MATH 512 Introduction to Modern Algebra (3)
   - MATH 513 Advanced Calculus I (3)
   - PHYS 111 General Physics (4)
   - PHYS 213 Engineering Physics I (5)
   - PHYS 223 Physics I, Mechanics, & Thermodynamics (5)
   - PHYS 224 Physics II, Electromagnetism, & Sound (5)
   - PHYS 225 Physics III, Relativity, and Quantum Physics (4)
   - STAT 111 Introductory Probability and Statistics I (3)

Options:
- COMM 322 Interpersonal Communications (3)
- COMM 326 Small Group Discussion Methods (3)
- MANGT 420 Principles of Management (3)
- THTRE 261 Fundamentals of Acting (3)
- THTRE 265 Fundamentals of Improvisation (3)

Communications Elective Choices

Humanities/Social Science Electives + K-State 8

Suggestions:
- AMETH 160 Intro. to American Ethnic Studies (3)
- AMETH 461 Transformative Thought (3)
- COMM 420 Gender Communication (3)
- GEOG 310 Geography of Kansas (3)
- GWSS 105 Intro. to Gender, Women, and Sexuality Studies (3)
- LEAD 212 Intro. to Leadership Concepts (3)
- MUSIC 420 History of Jazz (3)
- SOCIO 211 Intro. to Sociology (3)
- THTRE 665 Drama Therapy with Special Populations (3)

Aesthetic Experience & Interpretive Understanding

Suggestions:
- ARCH 301 Appreciation of Architecture (3)
- COMM 323 Nonverbal Communication (3)
- ENGL 270 American Literature (3)
- GWSS 350 Gender in American Film (3)
- GWSS 550 Women and Popular Culture (3)
- MUSIC 170 History of Rock and Roll (3)

Human Diversity/Social Science

Suggestions:
- AMETH 160 Intro. to American Ethnic Studies (3)
- ARCH 301 Appreciation of Architecture (3)
- GEOG 310 Geography of Kansas (3)
- HIST 151 History in the U.S. to 1877 (3)
- HIST 152 History in the U.S. since 1877 (3)
- POLSC 115 U.S. Politics (3)
- THTRE 270 Intro. to Theatre (3)

Historical Perspectives