CS Major Requirements:

Systems/Scientific Applications Concentration

The major in computer science requires a minimum of 53 semester hours. To be admitted to the computer science major, students must complete CS 180, CS 290, and CS 331 with grades of C or better. In addition, all CS courses counting toward the CS program major must be completed with a grade of "C" or better. Computer Science electives may include from 0-3 hours of 200-level courses. Students must adhere to all University Policies as indicated in the WKU catalog section "Academic Information." Additional requirements are as follows:

Requirements: CS 180 Computer Science I CS 290 Computer Science II CS 331 Computer Science III S 331 Computer Science III S 352 Computer Organization and Architecture S 325 Computer Organization and Architecture S 36 325 Computer Structures S 36 Software Engineering S 36 Software Project S 36 Software Project S 36 Software Project S 421 Data Structures and Algorithm Analysis S 425 Operating Systems I S 405 Soperating Systems I S 406 Senior Project and Professional Practice S Elective* S 5 Technical Course Total Other requirements: MATH 136 Calculus I ENG 307 Technical Writing Math Elective* S 3 or 4 Math Elective* S 40 or 21 List of Courses to Satisfy CS Elective* CS 372 Mobile App Development S 5 S 381 Introduction to Computer Networks S 3 S 3 S 3 S 3 S 3 S 3 S 3 S 3 S 3 S	Systems/Scientific Applications Concentration	
CS 290 Computer Science II CS 331 Computer Science III S3 CS 325 Computer Organization and Architecture S 39 Discrete Structures S 39 Discrete Structures S 30 Discrete Structures S 30 Side Database Management Systems I S 360 Software Engineering S 360 Software Engineering S 361 Intermediate Software Project S 362 Programming Languages S 363 Intermediate Software Project S 364 Senior Project and Algorithm Analysis S 425 Operating Systems I S 496 Senior Project and Professional Practice S Elective* S 496 Senior Project and Professional Practice S Elective* S 58 Elective* S 58 Elective* S 58 Elective* S 58 Elective* S 59 CS Elective* S 50 CS Elective* S 5	Requirements:	
CS 331 Computer Science III CS 325 Computer Organization and Architecture CS 339 Discrete Structures 3 CS 339 Discrete Structures 3 CS 361 Database Management Systems I CS 360 Software Engineering 3 CS 362 Programming Languages 3 CS 396 Intermediate Software Project 3 CS 421 Data Structures and Algorithm Analysis CS 425 Operating Systems I CS 496 Senior Project and Professional Practice SElective* 3 CS Elective* 3 CS Elective* 3 CS Elective* 3 Technical Course Total Other requirements: MATH 136 Calculus I ENG 307 Technical Writing 3 Two natural science courses (at least 6 hrs; at least one course must include a lab) designed for Science/Engineering majors 7 Other Hours Total List of Courses to Satisfy CS Elective* CS 372 Mobile App Development 3 CS 381 Introduction to Computer Networks 3 CS 443 Database Management Systems 3	CS 180 Computer Science I	4
CS 325 Computer Organization and Architecture 3 CS 339 Discrete Structures 3 CS 339 Discrete Structures 3 CS 351 Database Management Systems I 3 CS 360 Software Engineering 3 CS 382 Programming Languages 3 CS 396 Intermediate Software Project 3 CS 421 Data Structures and Algorithm Analysis 3 CS 425 Operating Systems I 3 CS 496 Senior Project and Professional Practice 3 CS Elective* 3 CS Electi	CS 290 Computer Science II	4
CS 339 Discrete Structures CS 351 Database Management Systems I CS 360 Software Engineering CS 382 Programming Languages CS 396 Intermediate Software Project CS 421 Data Structures and Algorithm Analysis CS 425 Operating Systems I CS 496 Senior Project and Professional Practice CS 496 Senior Project and Professional Practice CS Elective* CS	CS 331 Computer Science III	3
CS 351 Database Management Systems I 3 CS 360 Software Engineering 3 CS 382 Programming Languages 3 CS 396 Intermediate Software Project 3 CS 421 Data Structures and Algorithm Analysis 3 CS 425 Operating Systems I 3 CS 496 Senior Project and Professional Practice 3 CS Elective* 4 CS Elective* 5 CS Elective* 5 CS Elective* 5 CS Elective* 6 CS Elective* 7 COther requirements: 7 Cother requirements: 8 CS Elective* 8 CS 30 or 4 CS Elective* 9 CS Trechnical Writing 9 CS Elective* 9 CS Trechnical Writing 9 CS Elective* 9 CS Elective* 9 CS Trechnical Writing 9 CS Elective* 9 CS 372 Mobile App Development 9 CS 381 Introduction to Computer Networks 1 CS 443 Database Management Systems 3	CS 325 Computer Organization and Architecture	3
CS 360 Software Engineering CS 382 Programming Languages CS 396 Intermediate Software Project CS 421 Data Structures and Algorithm Analysis CS 425 Operating Systems I CS 496 Senior Project and Professional Practice CS Elective* CS 372 Mobile App Development CS Elective* CS 373 Mobile App Development CS Elective* CS 443 Database Management Systems SELECTIVE SELECTIVE SELECTIVE* CS 374 Database Management Systems SELECTIVE SELECTIVE* CS 375 Mobile App Development CS Elective* CS 372 Mobile App Development CS 443 Database Management Systems	CS 339 Discrete Structures	3
CS 382 Programming Languages 3 CS 396 Intermediate Software Project 3 CS 421 Data Structures and Algorithm Analysis 3 CS 425 Operating Systems I 3 CS 496 Senior Project and Professional Practice 3 CS Elective* 3 CS E	CS 351 Database Management Systems I	3
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CS 421 Data Structures and Algorithm Analysis 3 CS 425 Operating Systems I 3 CS 496 Senior Project and Professional Practice 3 CS Elective* 3 CS 30 C Elective* 3 CS 372 Mobile App Development 3 CS 381 Introduction to Computer Networks 3 CS 443 Database Management Systems 3	CS 382 Programming Languages	3
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CS 443 Database Management Systems 3	** *	
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CS 445 Operating Systems II 3	CS 445 Operating Systems II	3

CS 446 Interactive Computer Graphics	3
CS 450 Computer Networks	3
CS 456 Artificial Intelligence	3
List of Courses to Satisfy Math Elective*	
MATH 137 Calculus II	4
MATH 305 Introduction to Mathematical Modeli	ng 3
MATH 307 Introduction to Linear Algebra	3
MATH 331 Differential Equations	3
MATH 405 Numerical Analysis I	3
MATH 406 Numerical Analysis II	3
MATH 470 Introduction to Operations Research	3
MATH 473 Introduction to Graph Theory	3
STAT 401 Regression Analysis	3
STAT 402 Experimental Design	3