

**Mesabi Range Community & College**  
**University of Minnesota, Duluth**

**Transfer Program in Electrical & Computer Engineering**

Listed below are the courses offered at Mesabi Community College that apply to the Bachelor of Science in Electrical and Computer Engineering at the University of Minnesota, Duluth.

<b>Mesabi Community College Courses to Complete</b>	<b>cr</b>	<b>UMD Requirements satisfied by Mesabi courses</b>	<b>cr</b>
Engl 1511 College Writing I	4	Comp 1120 College Writing	3
CSci 2467 Advanced Pascal	3	CS 1511 Computer Science I	5
CSci 2471 "C" Language	3	CS 1521 Computer Science II	5
CSci 2472 Advanced "C" Language	3		
Chem 1522 General Chemistry I *	5	Chem 2172 General Chemistry	4
Chem 1523 General Chemistry II*	5		
Econ 1556 Microeconomics	3	Econ 1023 Microeconomics	3
Math 1561 Calculus I	5	Math 1296 Calculus I	5
Math 1562 Calculus II	5	Math 1297 Calculus II	5
Math 2564 Diff Equations % W Linear Algebra	5	Math 3280 Diff Equations w/ Linear Algebra	4
Math 2563 Calculus III	5	Math 3298 Calculus III	4
Stat 2551, 2552 Statistics I, II	6	Stat 3611 Probability & Statistics	4
Phys 1571, 1581 Engineering Physics I & Lab	5	Phys 1201 Mechanics	4
Phys 1572, 1582 Engineering Physics II & Lab	5	Phys 1202 Heat and Electricity	4
Phys 2575 Intro to Digital & Design	3	ECE 1315 Digital System Design	4
Phys 2576, 2586 Circuit Analysis and Lab	4	ECE 2006 Electrical Circuit Analysis	4
Liberal Education courses		Liberal Education courses	

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**Courses to be Completed at UMD:**

ECE 1001 Intro to ECE, 2 cr  
 ECE 1315 Digital System Design, 4 cr  
 ECE 2325 Microcomputer System Design, 4 cr  
 ECE 2111 Linear System Signal Analysis I, 4 cr  
 ECE 2212-3235 Electronic I-II, 8 cr  
 ECE 3151 Control Systems, 3 cr  
 ECE 3341 Digital Computer Circuits, 4 cr  
 ECE 3445 Electromagnetic Fields, 3 cr  
 ECE 3611 Intro Solid State Semiconductors, 3 cr  
 ECE 4305 Computer Architecture, 4 cr

ECE 4899-4999 Senior Project I-II, 4 cr  
 ECE electives  
 CS 2111 Intro Programming in C++, 3 cr  
 CS 2511 Software Development, 4 cr  
 CS 5631 Operating Systems, 4 cr  
 Comp 3130 Advanced Writing, 3 cr  
 Advanced Liberal Education (for engineering)  
 Liberal Education courses  
 \*Chem-students may prefer to take the one-semester  
 Chem 2172, 4 credit course at UMD

**Bachelor of Science in Electrical and Computer Engineering:**

This program of study Combines topics from traditional electrical engineering with current topics that focus on computer design and analysis. Electrical and Computer Engineering is concerned with the theory design and application of electrical phenomena and digital computers, including electronic circuits, signal analysis, system design and computer architecture. Minors in both mathematics and computer science are automatically satisfied with this major.

**Transfer Program in Electrical & Computer Engineering**

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