**Combined 4+1 Bachelors and Masters Degrees with the Wilkes Honors College (WHC) and the College of Engineering and Computer Science (CECS)**

Honors College students interested in computer science and engineering can pursue a joint Bachelor of Arts or Sciences degree at the Honors College and a Masters of Science degree through the College of Engineering and Computer Science. Students complete the prerequisite coursework for the Masters degree while at the Honors College in their first 4 years, and complete the Masters coursework in an additional year in this “4+1” program. Many of the prerequisite CECS courses are available online.  
The following Masters degrees are available:

MS Computer Science  
MS Computer Engineering  
MS Electrical Engineering  
MS Information Technology & Management (ITM) with Concentrations in either Data Analytics, or Advanced Information Technology  
MS in Bioengineering

The MS in Bioengineering is limited to students with concentrations at the Honors College in the following areas who successfully complete the prerequisites for the MS program and meet other admissions requirements for the combined program, listed below:   
Biology  
Biological chemistry  
Chemistry (must successfully complete Biochemistry and BSC 1010/L and BSC 1011/L)  
Marine Biology (must successfully complete Organic Chemistry and Biochemistry)  
Physics (must successfully complete Organic Chemistry and Biochemistry)  
Neuroscience (must successfully complete Organic Chemistry and Biochemistry)

In addition, Pre-med students can apply to the MS in Bioengineering program regardless of their HC concentration if they successfully complete all the courses required for the MCAT exam and the prerequisites for the MS, and meet other admissions requirements for the combined program, listed below.

The other MS programs are open to students pursuing a B.A. or B.S. at the Honors College in any concentration so long as they complete the prerequisites for the chosen Masters program and meet other admissions requirements for the combined program, listed below.

Other Admission Requirements for the Combined Program

Students with a cumulative GPA of at least 3.25 at the end of their junior year (90 credits or more of coursework completed) in the Honors College are eligible to apply to the MS program in the College of Engineering and Computer Science. The cumulative GPA of 3.25 or better must be maintained until the completion of the bachelor's degree in the Honors College. The GRE requirement is waived.

Students in the combined program may count up to 9 credits of approved graduate coursework (5000 level or higher) toward both their bachelor's and master's degrees as long as the combined program totals a minimum of 150 credits:

1. The student has met the minimum 120 credits for the bachelor's degree; and

2. The student has taken a minimum of 30 credits in 5000 level or higher courses for the master's program.

Prerequisite courses for the MS degree:

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| **M.S. Bioengineering** | | |
| Available to students concentrating at the HC in Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, Neuroscience, or to premed students with required Premed coursework.  Chemistry students must take BCH 3033/L and BSC 1010/L.  Marine Biology, Physics, and Neuroscience students must take CHM 2210/L and 2210/L and BCH 3033/L | | |
| **MS Bioengineering prereqs** | College taken at | Prereqs |
| COP 2220 | CEECS (online) |  |
| CHM 2210/L, CHM 2211/L Organic Chemistry I and II with labs | HC | CHM 2045/L, CHM 2046/L |
| BCH 3033/L H Biochemistry with lab | HC |  |
| PCB 3063 H Genetics | HC | BSC 1010/L, CHM 2045/L |
| PHY 2048/L H Physics I with lab | HC | MAC 2311 |
| MAC 2312 H Calculus II | HC |  |

The following MS degrees are available to students at the Honors College in any concentration.

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| **MS in Information Technology & Management (ITM)** | | |
| **Concentration in Data Analytics** | | |
| **Data Analytics prereqs** | College taken at | Prereqs |
| COP 2220 | CEECS (online) |  |
| MAD 2104 | CEECS (online) |  |
| COP 3014 | CEECS (online) | COP 2220 |
| COP 3530 | CEECS (online) | MAD 2104, COP 3014, COP 2220 |
| CDA 3201C | CEECS | COP 2220 |
| CDA 4102  or CDA 3331C  or CDA 4204 | CEECS (online)  CEECS  CEECS | CDA 3201C, COP 2220  CDA 3201C, COP 2220  CDA 3201C, CDA 3331C |
| COP 3540 | CEECS (online) |  |
| MAC 2312 | HC | MAC 2311 |
| STA 2023 | HC |  |

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| **MS in Information Technology & Management (ITM)** | | |
| **Concentration in Advance Information Technology** | | |
| **Advanced Info Tech Prereqs** | College taken at | Prereqs |
| COP 2220 | CEECS online |  |
| MAD 2104 | HC or CoS |  |
| COP 3014/L | CEECS online | COP 2220 |
| CDA 3201C | CEECS online | COP 2220 |
| CDA 3331C  or CDA 4102 | CEECS  CEECS online | COP 2220, CDA 3201C  COP 2220, CDA 3201C |
| COP 3530 | CEECS online | MAD 2104, COP 3014, COP 2220 |
| COP 3540 | CEECS online | CDA 3331C and COP 3530 |
| COP 4610 | CEECS online | CDA 3331C and COP 3530 |
| COP 3813 | CEECS online | COP 3014/L |
| MAC 2312 | HC | MAC 2311 |
| STA 2023 | HC |  |

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| **MS in Computer Engineering** | | |
| **Comp Engineering prereqs** | College taken at | Prereqs |
| COP 2220 | CEECS online |  |
| CDA 3201C | CEECS online | COP 2220 |
| CDA 4102 | CEECS online | COP 2220, CDA 3201C |
| CDA 3331C | CEECS | COP 2220, CDA 3201C |
| COP 3014 | CEES online | COP 2220 |
| MAD 2104 | HC or CoS | MAC 2311 |
| COP 3530 | CEECS online | MAD 2104, COP 2220, COP 3014 |
| PHY 2049/L | HC | PHY 2048/L |
| EGN 1002 | CEES online |  |
| EEL 3111 | CEES | PHY 2049, MAP 3305 |
| MAP 3305 | CoS | MAC 2312 |
| EEE 3300 | CEECS online | EEL 3111, PHY 2049, EGN 1002, MAC 2313, MAP 3305 |
| STA 4821 | CEECS online | MAC 2312 |
| MAC 2313 | HC | MAC 2312, MAC 2311 |

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| **MS in Computer Science** | | |
| **Comp Science prereqs** | College taken in | Prereqs |
| COP 2220 | CEECS online |  |
| MAD 2104 | HC or CoS |  |
| COP 3014 | CEECS online | COP 2220 |
| CDA 3201C | CEECS online | COP 2220 |
| CDA 3331C  or CDA 4102 | CEECS  CEECS | COP 2220, CDA 3201C  COP 2220, CDA 3201C |
| COP 3530 | CEECS online | MAD 2104, COP 2220, COP 3014 |
| COP 4610 | CEECS online | CDA 3331C and COP 3530 |
| COT 4400 | CEECS online | COP 3530 |
| STA 4821 | CEECS online | MAC 2312 |
| MAC 2312 | HC | MAC 2311 |

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| **MS in Electrical Engineering** | | |
| **Electrical Engineering prereqs** | College takin in | Prereqs |
| COP 2220 | CEECS online |  |
| CDA 3201C | CEECS online | COP 2220 |
| CDA 3331C | CEECS | COP 2220, CDA 3201C |
| MAC 2312 | HC | MAC 2311 |
| PHY 2049/L | HC | PHY 2048/L |
| EGN 1002 | CEECS online |  |
| EEL 3111 | CEECS | PHY 2049, MAC 2312, MAP 3305, EGN 1002 |
| MAP 3305 | CoS | MAC 2312 |
| EEL 3470 | CEECS, recorded | EEL 3111, MAC 2313 |
| EEE 3300 | CEECS |  |
| EEE 4361 | CEECS | EEE 3300 |
| EEL 3112 | CEECS | EEL 3111 |
| EEL 4656 | CEECS recordings | EEL 3112 |
| EEL 4512 | CEECS recordings | EEL 4656 |
| EEL 4652 | CEECS recordings | EEL 3112 |
| EEL 3118L | CEECS | EEE 3300 |