

# COMPUTER ENGINEERING PROGRAM (3+2, B.S-COMPUTER SCIENCE PROGRAMMING TRACK/M.S.-COMPUTER ENGINEERING)

## Recommended

- A Global Learning (GL) experience (<http://catalog.walsh.edu/undergraduate/academic-services/#globallearning>)

## Required

- General Education Requirements (<http://catalog.walsh.edu/undergraduate/general-education-curriculum/>)
- Internship

Code	Title	Hours
<b>Computer Science Programming</b>		
CS 108	Found of Computer Science I	3
CS 111	Intro to Obj-Oriented Program	3
CS 112	Introduction to Networking	3
CS 114	Introduction to Cybersecurity	3
CS 212	Intro Object-Oriented Prg II	3
CS 220	Discrete Patterns for Comp Sci	3
CS 221	Database Techniques	3
CS 298	Computer Sci Career Seminar I	1
CS 306	Computer Organization	3
CS 425	Software Engineering I	3
CS 426	Software Engineering II	3
CS 498	CS Career Seminar II	1
<b>Mathematics Minor</b>		
MATH 210A	Calculus I	3
MATH 211	Calculus II	3
MATH 310A	Calculus III	3
MATH 311A	Calculus IV	3
MATH 313	Linear Algebra I	3
MATH 410	Elem Differential Equations	3
<b>Physics</b>		
PHYS 201	Physics with Calculus I	3
PHYS 101L	Principles of Physics I: Lab	1
PHYS 202	Physics with Calculus II	3
PHYS 102L	Principles of Physics II: Lab	1
<b>Computer Engineering (Year 4 at University of Dayton)</b>		
ECE 201	Circuit Analysis	3
ECE 201L	Circuit Analysis Lab	1
ECE 215	Introduction to Digital Systems	3
ECE 215L	Digital Systems Lab	1
ECE 203	Introduction to MatLab	1
ECE 303	Signals and Systems	3
ECE 340	Engineering Probability and Random Process	3

ECE 501	Contemporary Digital Design	3
_____	CPS Core Course or Course from Concentration	3
CS 385	Computer Science Internship (summer after Walsh preferred)	3
ECE 334	Discrete Signals and Systems	3
ECE 532	Emedded Systems	3
_____	CPS Core or Course from Concentration	3
_____	Course from Concentration	3
_____	General Education Course Counting for Walsh	3
_____	General Education Course Counting for Walsh	3
<b>Total for Summer, Fall and Spring of Year 4</b>		<b>42</b>

\*Math and Science requirements in major also fulfill core requirements; Math 155 and Math 156 are prerequisites for Math 207.

Year 4 at the University of Dayton may start with courses in summer following the Walsh junior year. The summer, fall and spring of year 4 will be at the University of Dayton. Total credits at UD, including summer, fall and spring for year 4 will be 27 credit hours of engineering courses.

The first 3 years at Walsh will include the first page of this curriculum sheet as well as the majority of the general education curriculum. It may require some summer courses to complete this major in the 3 + 2 window. Check with your advisor for details.

At the end of the spring semester in year 4, the BS in Computer Science from Walsh will have been earned and you will graduate from Walsh.

You will then need to apply to the UD Master's program (see advisor for details) to complete the 5th year at UD. Once accepted into the UD Master's program, you will complete summer, fall and spring courses at UD (and thesis work if chosen) to finish an MS in Computer Engineering from UD in the spring of year 5.

During year 4, the Walsh pre-engineering student will have both a Walsh and a UD advisor. Special considerations will be made to work with athletes and honors students.

The exact courses involved in this program are subject to change between 2017-2020 as we optimize this new process. All changes will benefit students enrolled.