MATERIALS ENGINEERING PROGRAM (3+2, B.S.-CHEMISTRY/M.S.-MATERIALS 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
Chemistry		
CHEM 101	FD:T1:Princ of Chemistry I	3
CHEM 101L	Principles of Chemistry I: Lab	1
CHEM 102	Principles of Chemistry II	3
CHEM 102L	Principles of Chemistry II:Lab	1
CHEM 198	Chem Career Seminar IA	0.5
CHEM 208	Organic Chemistry I	2
CHEM 201L	Organic Chemistry I: Lab	1
CHEM 209	Organic Chemistry II	2
CHEM 202L	Organic Chemistry II: Lab	1
CHEM 210	Organic Chemistry III	2
CHEM 303	Modern Analytical Chem	3
CHEM 303L	Modern Analytical Chem Lab	1
CHEM 305	Inorganic Chemistry	3
CHEM 310	Found of Physical Chem	4
CHEM 398	Premier Skills/Professionalism	0.5
CHEM 415L	Integrated Lab Experience I	2
CHEM 416L	Integrated Laboratory Exp II	2
CHEM 450	Environmental Chemistry	3
CHEM 470	Nano and Fuel Chemistry	3
Mathematics Minor		
MATH 210A	Calculus I	3
MATH 211	Calculus II	3
MATH 221	Statistics	3
MATH 310A	Calculus III	3
MATH 311A	Calculus IV	3
MATH 410	Elem Differential Equations	3
Physics		
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 (Materials Engineering (Year 4 at University of Dayton))	1
Materials Engineering (Year 4 at University of Dayton)		
EGR 201 Mechanics		3
EGR 202 Engineering Thermodynamics		3
MAT 501 Principles of Materials I (graduate)		3
MAT 502 Principles of Materials II (graduate)		3
MAT 504 Techniques of Materials Analysis		3
MAT 506 Mechanical Behavior of Materials		3
MAT 509 Polymers		3
Electives: 6 Hours of Engineering Courses		**6**
_____ Engineering Course (graduate)		
_____ Engineering Course (graduate)		
CHEM 390	DV:Chemistry Internship	3
_____ General Education Course Counting for Walsh		3
_____ General Education Course Counting for Walsh		3
Total for Summer, Fall and Spring of Year 4		**36**

*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 25 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 Chemistry 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 Materials 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.