

Prerequisite courses for non-engineers to qualify for MCE, MEVE, MSCE or MSEV degrees

Students without an ABET accredited undergraduate engineering degree who wish to qualify for the MCE, MEVE, MSCE or MSEVE degree must complete the following prerequisite courses. These requirements conform to the Florida Board of Professional Engineering (PE) Licensure Requirements (<http://www.fbpe.org/>). Students normally complete some of these courses prior to applying to USF and complete the remaining coursework concurrent with the master’s program requirements.

Basic Math and Sciences: 32 credits required		Semester	
MAC 2281 Calculus I (4)			
MAC 2282 Calculus II (4)			
MAP 2302 Differential Equations (3)			
A Course in Statistics (3)			
PHY 2048 Calculus-based General Physics I (3)			
CHM 2045 General Chemistry I (3)			
CHM 2046 General Chemistry II <u>or</u> PHY 2049 General Physics II (3)			
Biological <u>or</u> Earth Science Course (3)			
Additional Science/Math: linear algebra, numerical analysis, advanced calculus, biology, geology, chemistry, or physics, demonstration of laboratory experience (6)			
Total Basic Math and Science		32	
Engineering Science and Design: 48 credits required			
Core Courses: 12 credits required		Additional courses: STR/GEO/MAT	
EGN 3311 Statics (3)		EGN 3321 Dynamics (3)	
EGN 3343 Thermodynamics I (3)		EGN 3331 Mechanics of Materials (3)	
EGN 3353 Fluid Mechanics (3)		EGN 3365 Materials Engineering I (3)	
EGN 3615 Engineering Economy (3)		EGN 3373 Electrical Systems (3)	
Additional courses: EVE/WR		Additional courses: TTE	
ENV 4001 Env Engineering I (3)		TTE4004 Transportation Engineering (3)	
CWR 4202 Hydraulics (3)		TTE4004 Transportation Engineering (3)	
CWR 4812/Env 6564 Capstone WR/EVE Design (3)		CEG4850 Capstone GEO/TTE Design (3)	
CGN 4122 Prof/Ethical Issues (1)		CGN 4122 Prof/Ethical Issues (1)	
Additional undergraduate and graduate level engineering science and design courses including up to 6 credits of thesis: attach master’s plan of study form			
Total Engineering Science and Design		48	
Humanities and Social Sciences: 16 credits required		16	

STR = structural engineering, **GEO** = geotechnical engineering, **MAT** = materials engineering, **EVE** = environmental engineering, **WR** = water resources engineering, **TTE** = transportation engineering