

DUAL DEGREE PROGRAM Physics/Engineering

UW-Milwaukee College of Engineering and Applied Science

and

UW-Whitewater

Civil Engineering

Course Equivalency Table

UW-Milwaukee Courses				Credits	UW-Whitewater Equivalent*			Credits
Math	231	Calculus & Analytic Geometry	4	Math	253	Calculus & Analytic Geometry I	5	
Math	232	Calculus & Analytic Geometry	4	Math	254	Calculus & Analytic Geometry II	5	
Math	233	Calculus & Analytic Geometry	4	Math	255	Calculus & Analytic Geometry III	5	
ElecEng	234	Analytical Methods in Engineering	4	Math	355	Matrices and Linear Algebra	3	
				Math	361	Differential Equations	3	
Chem	102	General Chemistry (Group C Tech Elective)	5	Chem	102	Introductory Chemistry	5	
Chem	104	General Chemistry (Group C Tech Elective)	5	Chem	104	Introductory Chemistry	5	
Physics	209/214	Physics for Engineers I/Lab	4	Physics	180	Physics for Scientists/Engineers I	5	
Physics	210/215	Physics for Engineers II/Lab	4	Physics	181	Physics for Scientists/Engineers II	5	
Civil Eng	201	Statics	3	Physics	305	Engineering Mechanics: Statics	3	
Civil Eng	202	Dynamics	3	Physics	310	Engineering Mechanics: Dynamics	3	
CompSci	201	Introductory Computer Programming (Group D Technical Elective)	3	CompSci	172, 174 or 347	Programming course	3	
Elec Eng	306	Introduction to Electrical Engineering	4	Physics	330/331	Analog and Digital Electronics	4	
Mech Eng	301	Basic Engineering Thermodynamics	3	Physics	364	Thermodynamics and Kinetic Theory	3	

General Education							
Art (3 credits required at UWM)							
Art	105	Art Survey	3	GenEd	110	World of the Arts	3
Music	XXX	(Meets UWM Cultural Diversity Requirement)	3	Music	144	Cultural Music of the Americas	3
Humanities (6 credits required at UWM)							
Commun	103	Public Speaking	3	Comm	110	Fundamentals of Speech	3
L&S	XXX			GenEd	390	World of Ideas	3
Social Science (6 credits required at UWM)							
Econ	104	Macroeconomics	3	Econ	211	Economic Prin/Pblms/Policies	3
Hist	XXX		3	History	120	The US Experience in World Context	3
Psych	XXX		3	GenEd	130	Individual and Society	3
L&S	XXX		3	GenEd	140	Global Perspectives	
English	101	Intro to College Writing	3	English	101	Freshman English	3
English	102	College Writing and Research	3	English	102	Freshman English	3
English	206	Technical Writing (Grp D Tech Elective)	3	English	372	Technical and Seicneific Writing	3

*Some courses may not be direct equivalents but will be allowed as substitutions for the Civil Engineering Major.

**UW-Whitewater/UW-Milwaukee
Physics/Engineering Dual Degree Program**

Sample 2-year Study Plan at UWM

Civil Engineering Major

Year Four (senior year)							
Fall Semester			Credits	Spring Semester			Credits
Ind Eng	112	Engineering Drawing and CAD/Drafting	3	MechEng	320	Introduction to Fluid Mechanics	3
EAS	200	Professional Seminar	1	CivEng	335	Soil Mechanics	3
Matl Eng	201	Engineering Materials	4	CivEng	372	Introduction to Structural Design	3
Civ Eng	303	Strength of Materials	4	Approved Technical Electives			6
Civ Eng	250	Engineering Surveying	3				
Civ Eng	280	Computer Based Engineering Analysis	3				
			18				16
Fifth Year							
Fall Semester				Spring Semester			
Civ Eng	411	Water Resources Design	3	Civ Eng	495	Senior Design	3
Civ Eng	413	Environmental Engineering	3	Civ Eng	494	Principles of Civil Engineering Design	1
Civ Eng	490	Transportation Engineering	3	Approved Technical Electives			8
Ind Eng	360	Engineering Economic Analysis	3				
Approved Technical Electives			3				
			15				12