### **DUAL DEGREE PROGRAM Physics/Engineering**

### UW-Milwaukee College of Engineering and Applied Science

and

#### **UW-Whitewater**

# **Industrial Engineering**

**Course Equivalency Table** 

UW-Milwaukee Courses			<u>Credits</u>	UW-WU	<b>Credits</b>		
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	3	CompSci	172, 174	or 347 Programming course	3
Elec Eng	301	Electricial Science I	4	Physics	330/331	Analog and Digital Electronics	4
Mech Eng	301	Basic Engineering Thermodynamics	3	Physics	364	Thermodynamics and Kinetic Theory	3

1)					
	3	GenEd	110	World of the Arts	3
WM Cultural Diversity Requirement)	3	Music	144	Cultural Music of the Americas	3
required at UWM)					
aking	3	Comm	110	Fundamentals of Speech	3
		GenEd	390	World of Ideas	3
required at UWM)					
nomics	3	Econ	211	Economic Prin/Pblms/Policies	3
	3	History	120	The US Experience in World Context	3
	3	GenEd	130	Individual and Society	3
	3	GenEd	140	Global Perspectives	
ollege Writing	3	English	101	Freshman English	3
riting and Research	3	English	102	Freshman English	3
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

## **Industrial Engineering Major**

Year Four	(senior ye	ear)						
Fall Semester			Credits		Spring Semester			Credits
EAS	200	Professional Seminar	1		Ind Eng	350	Manufacturing Processes	3
Ind Eng	111	Introduction to Engineering	3		Ind Eng	455	Operations Research I	3
Ind Eng	112	Engineering Drawing and CAD/Drafting	3		Ind Eng	467	Into Statistics for Phy Sci/Eng Students	3
Ind Eng	370	Introduction to Operations Analysis	3		Ind Eng	580	Introduction to Ergonomics	3
Matl Eng	201	Engineering Materials	4		Approved Technical Electives		3	
Ind Eng	360	Engineering Economic Analysis	3					
			17					15
Fifth Year				┢				
Fall Semester					Spring Semester			
Ind Eng	465	Operations Research II	3		Ind Eng	470	Methods Engineering	3
Ind Eng	571	Quality Control	3		Ind Eng	475	Intro to Simulation Methodology	3
Ind Eng	575	Design of Experiments	3		Ind Eng	485	Senior Design Project	3
Approved	proved Technical Electives		6		Ind Eng	583	Facility Layout & Meterial Handling	3
			15		Approved Technical Electives			3
								15