DUAL DEGREE PROGRAM Physics/Engineering

UW-Milwaukee College of Engineering and Applied Science

and

UW-Whitewater

Materials Engineering

Course Equivalency Table

UW-Milwaukee Courses			<u>Credits</u>	UW-Wł	nitewate	tewater Equivalent*	
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	151/201	Intro Scienctific/Computer Programming	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 E	ducation							
Art (3 cre	dits requi	red 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
Humanitie	es	(6 credits required at UWM)						
Commun	103	P:ublic Speaking	3		Comm	110	Fundamentals of Speech	3
l&S	XXX				GenEd	390	World of Ideas	3
Social Scie	nce	(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	\square	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 Materials Engineering Major.

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

Sample 2-year Study Plan at UWM

Materials Engineer

Year Four (senior ye	ear)						
Fall Semester			Credits		Spring Sen	nester		Credits
EAS	200	Professional Seminar	1		Matl Eng	443	Transport Phenom in Matl Processing	3
Ind Eng	360	Engineering Economic Analysis	3		Matl Eng	330	Materials Processing	3
Civ Eng	303	Strength of Materials I	4		Matl Eng	442	Thermodynamics of Materials	3
Matl Eng	201	Engineering Materials	4		Matl Eng	410	Mechanical Behavior of Materials	3
Physics	411	Mechanics I	<u>4</u>		Approved Technical Electives			<u>3</u>
			16					15
Fifth Year								
Fall Semest	Fall Semester				Spring Semester			
Matl Eng	402	Physical Metallurgy	3		Matl Eng	490	Senior Design Projects	4
Matl Eng	411	Materials Laboratory	3		Matl Eng	461	Environmental Degradation of Matl	3
Matl Eng	452	Ceramic Materials	3		Approved Technical Electives			<u>6</u>
Matl Eng	453	Polymeric Materials	<u>3</u>	Ī				
			12					13