

**Addendum C to the 2019 Dual Degree Agreement between WMU and INTEC
Industrial and Entrepreneurial Engineering Program**

Below are the degree requirements for WMU's Industrial and Entrepreneurial Engineering Program as of July 2019. WMU will award a degree to all students who successfully complete all of the degree requirements (as detailed in the current degree catalog on the WMU Registrar's Office website <https://wmich.edu/registrar>) and who meet all of WMU's graduation requirements. Students are encouraged to meet with their academic advisor at WMU to ensure they will meet all of the requirements to graduate.

IEE Program			INTEC courses			Courses to be taken at WMU and credit hours
WMU code	WMU name	WMU Credits	INTEC code	INTEC Course Equivalent	Credits Transferred	
First Semester						
MATH 1220 or MATH 1700	Calculus I	4	CBM 102	Differential Calculus	4	
CHEM 1100	General Chemistry I	3	CBQ 207	Chemistry I	3	
CHEM 1110	General Chemistry Laboratory I	1	CBQ 207L	Chemistry I Lab	1	
IEE 1020	Technical Communication	3	AHH-201	Rhetoric and Composition	3	
EDMM 1420	Engineering Graphics	3	INM 201	Mechanical Drawing I	3	
			INM 202	Mechanical Drawing II		
Second Semester						
WMU code	WMU name	WMU Credits		INTEC Course Equivalent	Credits	
MATH 1230	Calculus II	4	CBM-201	Calculus II	4	
PHYS 2050	University Physics I	4	CBF 210	Mechanical Physics I	4	
PHYS 2060	University Physics I Laboratory	1	CBFL 210L	Mechanical Physics I Lab	1	
IEE 2010	Entrepreneurial Engineering I: Cost & Financial Analysis	3				3
TGE D1	General Education Area I - Fine Arts	3	AHA 201	Art Appreciation I	3	
Third Semester						
WMU code	WMU name	WMU Credits		INTEC Course Equivalent	Credits	
MATH 2720	Multivariate Calculus and Matrix Algebra	4	CBM-202	Calculus III	4	
PHYS 2070	University Physics II	4	CBF 211	Mechanical Physics II	4	
PHYS 2080	University Physics Lab II	1	CBF 211L	Mechanical Physics Lab II	1	
IEE 2610	Engineering Statistics	3	CBM 302	Statistical Inference	3	
ME 2560	Statics	3	ING 216	Statics	3	
			ING 216L	Statics Lab		
Fourth Semester						
WMU code	WMU name	WMU Credits		INTEC Course Equivalent	Credits	
IEE 2050	Work Design	4				4
IEE 2621	Probability for Engineers	3				3
IEE 2622	Statistical Quality Control	2				2
ECON 2010	Principles of Microeconomics	3	ECO 201	Principles of Microeconomics	3	
ELEC	Minor Elective	3				3
TGE D2	General Education Area II - Humanities	4	CSS 101	Human Being and Society	4	
Fifth Semester						
WMU code	WMU name	WMU Credits		INTEC Course Equivalent	Credits	
MATH 3740	Differential Equations and Linear Algebra	4	CBM-203	Differential Equations	4	
IEE 3010	Entrepreneurial Engineering III: Product & Service Design	3				3
IEE 3100	Engineering Economy	3				3
IEE 3160	Report Preparation	3				3
ELEC	Minor Elective	3				3
Sixth Semester						
WMU code	WMU name	WMU Credits		INTEC Course Equivalent	Credits	
IEE 3110	Intro to Operations Research	3				3
IEE 3300	Simulation Modeling Analysis	3				3
IEE 3420	Ergonomics and Design	3				3
ECE 2100	Circuit Analysis	4	INE 377	Electric Circuits I	4	
			INE 377L	Electric Circuits I Lab		
			OR			
	Minor Elective	3	INE 319	Electrical Circuits		3
Seventh Semester						
WMU code	WMU name	WMU Credits		INTEC Course Equivalent	Credits	

INE 319 is equivalent to INE 377 and INE 377L (all of these courses still exist)

IEE 4010	Entrepreneurial Engineering III: Facilities Planning & Logistics	3				3
IEE 4160	Operations Control in Industry	4				4
IEE 4190	IE Senior Design	1				1
	Approved Technical Elective (see below)	3			3	
ELEC	Minor Elective	3				3
TGE D3	General Education Area III -U.S. Cultures and Issues	3				3
Eighth Semester						
WMU code	WMU name	WMU Credits		INTEC Course Equivalent		Credits
IEE 4190	IE Senior Design	3				3
	Approved Technical Elective (see below)	3			3	
	Approved Technical Elective (see below)	3			3	
ELEC	Minor Elective	3				3
TGE D4	General Education Area IV - Other Cultures	3				3
TGE D8	General Education Area VIII- Health & Well Being	2	AHD 101	Physical Education and Sport		2
Required Credits to graduate		129				67
Total credits accounted for in this program		129				62

APPROVED TECHNICAL ELECTIVES (PICK THREE)						
ME 2500	Materials Science	3	INI 383	Science and Engineering of Materials	3	
	AND/OR		INI 383L	Science and Engineering of Materials Lab		
			AND/OR			
ME 2580	Dynamics	3	ING 212	Dynamics	3	
	AND/OR		ING 212L	Dynamics Lab		
			AND/OR			
ME 2320	Thermodynamics I	3	INM 300	Thermodynamics	3	
	AND/OR		AND/OR			
ME 2570	Mechanics of Materials	3	ING 217	Mechanics of Materials	3	
			ING 217L	Mechanics of Materials Laboratory		
			OR			
			INC 213	Mechanics of Deformable Solids	3	
			INC 213L	Mechanics of Deformable Solids Laboratory		
	AND/OR		AND/OR			
IEE 2990	Cooperative Education	3	As a fourth option of the Approved Technical Elective, students can do an internship in the US (IEE 2990). The student must find the internship position, so if they are not successful, they would need to complete another course at WMU.			3

Both ING 217 and INC 213 are equivalent courses, but students generally pick the one that suits their schedule

- Courses to be taken at WMU in the 3rd and 4th year
- Courses with alternative options
- Multiple courses need to be transferred to be equivalent

At the time of the signing of this addendum, WMU is undergoing changes to its general education curriculum. The courses highlighted in green may or may not change during this curriculum revision, and therefore any green courses taken at INTEC may not count for this program beginning Fall 2020. If changes are made, WMU will work with students to help them understand their options to complete the program.

Approved By

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