

**Agreement for an Intercollegiate Dual Degree Program  
between  
University of Wisconsin-Stout  
and  
University of Wisconsin-La Crosse**

This document states the terms of an agreement between the College of Science, Technology, Engineering, Mathematics and Management at the University of Wisconsin-Stout and the University of Wisconsin-La Crosse.

Beginning with the first semester of the 2018-19 school year, a dual program leading to a bachelor's degree in Physics from the University of Wisconsin-La Crosse and a bachelor's degree in a branch of engineering from the University of Wisconsin-Stout was available to qualified students. *This is an updated version of that agreement.* This dual degree program requires completion of appropriate coursework at both the University of Wisconsin-La Crosse (typically 3 academic years or roughly 90 credits) and the University of Wisconsin – Stout (typically 2 academic years or roughly 60 credits dependent on engineering program). Students transferring to the University of Wisconsin – La Crosse are eligible to participate. Transfer credits accepted by the University of Wisconsin-La Crosse count towards the physics degree. To be awarded a bachelor's degree from the University of Wisconsin-Stout a minimum of 32 credits must be earned in residence.

University of Wisconsin-La Crosse students will be selected for entrance into the University of Wisconsin-Stout College of Science, Technology, Engineering, Mathematics and Management based on the calculation of a cumulative grade point averaging using all grades and upon the positive recommendation of the Chair of the Department of Physics (or designee) at the University of Wisconsin-La Crosse. The minimum cumulative grade point average for admission will be 2.0 however, as part of ABET accreditation, a grade of B or higher is required in Calculus 1 or a 2.0 average across Calculus 1, Calculus 2, College Chemistry I is required. Students not meeting those requirements are admitted as pre-engineering until said requirements are met when the 'pre' designation will be dropped.

In the first three years of work taken at the University of Wisconsin-La Crosse, students must complete appropriate courses in chemistry, computer science, mathematics, and physics for the sought-after degrees at both schools. The College of Science, Technology, Engineering, Mathematics and Management will work with the University of Wisconsin-La Crosse advisors to recommend appropriate courses. Attendance during the summer or winter term at the University of Wisconsin-Stout may be recommended in some cases to reduce credit load during the fall and spring semesters.

Dual degree students should also take general education courses to meet the graduation requirements at the University of Wisconsin-La Crosse. Dual degree students will then "automatically" meet the general education requirements for the University of Wisconsin-Stout except for the specifically required general education course, ETECH 100 Impacts of Engineering - 3 credits. This is identified in table 2. UW-Stout's graduation requirements of Racial & Ethnic Studies and Global Perspective are also met with completion of the UWL degree.

Courses passed with a D or better will be transferred to the University of Wisconsin-Stout as credit for equivalent courses, even though they may not be required in the engineering curriculum selected by the student.

During the period at the University of Wisconsin-Stout, students will complete the requirements specified in the College of Science, Technology, Engineering, Mathematics and Management bulletin at the time of

admission to their engineering degree programs. The coursework passed with a D or better at the University of Wisconsin-Stout will also be transferred to the University of Wisconsin-La Crosse to complete the requirements for the selected degree.

When transferring to the University of Wisconsin-Stout from the University of Wisconsin-La Crosse the student is expected to submit application for admission to include the application fee, high school transcripts, and official transcripts from all institutions of higher education attended.

Changes in curricula, at both institutions, will be accommodated as they occur. Students will be eligible to participate in commencement ceremonies at both the University of Wisconsin-Stout and University of Wisconsin-La Crosse.


The University of Wisconsin-Stout College of Science, Technology, Engineering, Mathematics and Management commits to report on a regular basis the performance of dual degree students currently enrolled. This will be sent to the Chair of the Physics Department at the University of Wisconsin-La Crosse.

Recruitment of students for this program will be the responsibility of the University of Wisconsin-La Crosse, with the cooperation of the University of Wisconsin-Stout.

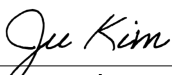
This agreement constitutes a declaration of intent and is subject to renegotiation as conditions change and experience dictates. This agreement will be reviewed by both parties six months prior to five years after signing of the agreement. This agreement may also be reviewed, and changes made if there are curriculum changes in programs at either institution.

IN WITNESS WHEREOF the parties hereto have executed two copies of this instrument, each of which shall be considered an original.

**Glendali Rodriguez 05/12/2023**  
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Glendali Rodriguez, Provost Date  
University of Wisconsin-Stout

 5/15/23  
\_\_\_\_\_  
Dr. Betsy Morgan Date  
Provost and Vice Chancellor  
University of Wisconsin-La Crosse

**Gindy Neidermyer 05/10/2023**  
\_\_\_\_\_  
Dr. Gindy Neidermyer, Interim Dean Date  
College of Science, Technology, Engineering,  
Mathematics and Management  
University of Wisconsin-Stout

 0515/2023  
\_\_\_\_\_  
Dr. Ju Kim, Dean Date  
College of Science & Health  
University of Wisconsin-La Crosse

**Thomas Lacksonen 05/10/2023**  
\_\_\_\_\_  
Dr. Thomas Lacksonen, Chair Date  
Engineering and Technology Department  
University of Wisconsin-Stout

 05/15/2023  
\_\_\_\_\_  
Dr. Shelly Leshner, Chair Date  
Physics Department  
University of Wisconsin-La Crosse

Table 1: University of Wisconsin-La Crosse – Physics

Dual Degree Program between University of Wisconsin-La Crosse Physics and University of Wisconsin-Stout					
UNIVERSITY OF WISCONSIN-LA CROSSE REQUIREMENTS					
Courses/Credits Required for UWL Physics Degree			UW-Stout Equivalent Course		
Course	Title	Credits	Course	Title	Credits
<b>Required General Education – 37 Credits</b>			<b>Required General Education – 40 credits</b>		
ENG 110	College Writing	3	ENGL 101	Composition I	3
CST 110	Communicating Effectively	3	COMST 100	Fundamentals of Speech	3
MTH 207	Calculus I	5	MATH 153/156	Calculus I/Calculus & Analytic Geometry I	4/5
	Minority Cultures or Multiracial Women’s Studies	3		Equivalent will vary depending on course completed at UWL	3
ECO 110 OR ECO 120	Microeconomics & Public Policy Global Macroeconomics	3	FCON 215 OR ECON 210	Principles of Microeconomics Principles of Macroeconomics	3
	International & Multicultural Studies (2 courses)	6		Equivalent depends on course completed at UWL	6
PHYS 203 OR PHYS 103	General Physics I Fundamental Physics I	4	PHYS 281 PHYS 211 PHYS 212	University Physics I Introductory Physics Introductory Physics Lab	4 3 1
	Humanistic Studies	3		Arts & Humanities general education	3
ART 102 MUS 105 THA 110	CHOOSE 2: Art Appreciation Music Appreciation Theatre Appreciation	2 2 2	ARTH 222 MUSIC 130 THEA 232	Introduction to Art Music Appreciation Theatre in our World	2 2 2
HPR 105	Healthy Active Lifestyle	3	PE 205	Lifelong Wellness	3
<b>Required Physics – 51 credits of coursework including:</b>					
MTH 208	Calculus II	4	MATH 154/156	Calculus II/Calculus & Analytic Geometry II	4/5
STAT 245	Probability and Statistics	4	STAT 330	Probability & Statistics for Engineering and the Sciences	3
MTH 308	Linear Algebra w/Differential Equations	4	MATH 250	Differential Equations with Linear Algebra	3(+1)
MTH 310	Calculus III: Multivariate Calculus	4	MATH 158	Calculus III	4
PHY 204 OR PHYS 104	General Physics II Fundamentals Physics II	4	PHYS 282 PHYS GLX	University Physics II Physics Lab Electives	4
PHYS 306	Modern Physics	3	PHYS XXX	Physics Electives	3
PHY 305	General Physics III	3	PHYS XXX	Physics Electives	3
PHY 311	Experimental Physics (Writing Emphasis course)	2	PHYS 3XX	Physics Electives	2
PHY 320	Statics	3	PHYS 291	Statics	3
PHY 321	Classical Mechanics	3	PHYS 381	Computational Classical Mechanics	3
PHY 334	Electrical Circuits (Writing Emphasis course)	3	ENGR 290	Circuits and Devices	3
PHY 343	Thermodynamics	3	ME 390	Engineering Thermodynamics	3
CHM 103	General Chemistry I	5	CHEM 135	College Chemistry I	5
CS 120	Software Design I	4	CS 144	Computer Science I	4

\*course does not meet Stout required physics course for major



Table 3-1: Major Requirements – Computer and Electrical Engineering

<p style="text-align: center;"><b>Dual Degree Program between University of Wisconsin-La Crosse Physics and University of Wisconsin-Stout COMPUTER AND ELECTRICAL ENGINEERING</b></p> <p style="text-align: center;"><b>UNIVERSITY OF WISCONSIN-STOUT MAJOR REQUIREMENTS</b></p>			
Major Course/Credits required to earn the UW-Stout Degree	Credits	Fulfilled by UWL Degree (X=yes, blank=no)	Still to be completed at UW-Stout (X=yes, blank=no)
<b>Mathematics and Basic Sciences (20 credits)</b>			
MATH 270 Discrete Mathematics	3		X
MATH 250 Differential Equations with Linear Algebra	3	X	
ENGR 292 Dynamics	3		X
PHYS 291 Statics	3	X	
STAT 330 Probability and Statistics for Engineering and the Sciences	3	X	
PHYS 282 University Physics II	5	X	
<b>Computer Engineering Concentration</b>			
<b>Engineering Core (11 credits)</b>			
CEEL 205 Circuit Analysis and Design	4		X
CEE 349 or 449 Cooperative Education Experience	2		X
INMGT 300 Engineering Economy	2		X
ENGR 275 Thermodynamics & Heat Transfer	3		X
<b>Computer Engineering (57 credits)</b>			
CEE 225 Digital Logic	3		X
CEE 215 Electronics	4		X
CEE 235 Signals & Systems	3		X
CEE 325 Digital System Design	3		X
CEE 461 Automatic Control Systems	3		X
CEE 345 Microprocessor System Design	3		X
CEEL 355 Applied Electromagnetics	4		X
CEEL 405 Capstone I: Computer Engineering Design	3		X
CEEL 410 Capstone II: Computer Engineering Design	3		X
CEEL 425 Data Communications & Computer Networks	3		X
CEEL 435 Digital Signal Processing <b>OR</b>	3		X
CEE 455 Fundamentals of Wireless Communication			
CEE 445 Embedded System Design	3		X
CS 144 Computer Science I	4	X	
CS 145 Computer Science II	4		X
CS 244 Data Structures	4		X
CS 441 Computer Architecture	4		X
CS 442 Systems Programming	3		X
<b>Electrical Engineering Concentration</b>			
<b>Engineering Core (7 credits)</b>			
CEEL 205 Circuit Analysis and Design	4		X
CEE 349 <b>OR</b>			
CEEL 449 Cooperative Education Experience	1		X
INMGT 300 Engineering Economy	2		X
<b>Electrical Engineering (61 credits)</b>			
CEEL 215 Electronics	4		X
CEE 225 Digital Logic	3		X
CEEL 235 Signals and Systems	3		X

CEEL 315 Power Electronics and Renewable Energy Systems	4		X
CEE 325 Digital System Design	3		X
CEEL 345 Microprocessor System Design	3		X
CFE 355 Applied Electromagnetics	4		X
CEE 361 Electric Machines and Control	3		X
CFE 405 Capstone I: Computer Engineering Design	3		X
CEEL 410 Capstone II: Computer Engineering Design	3		X
CFE 445 Embedded System Design	3		X
CEE 461 Automatic Control Systems	3		X
ENGR 363 Controls and Instrumentation	4		X
ENGR 463 Robotics Design and Analysis	3		X
CS 144 Computer Science I	4	X	
CS 145 Computer Science II	4		X
CS 244 Data Structures	4		X
Technical Elective (Any 400-level course with prefixes: CEE, CS, ENGR, ETECH, ME)	3		X

Table 3-2: Major Requirements – Manufacturing Engineering

<b>Dual Degree Program between University of Wisconsin-La Crosse Physics and University of Wisconsin-Stout MANUFACTURING ENGINEERING</b>			
<b>UNIVERSITY OF WISCONSIN-STOUT MAJOR REQUIREMENTS</b>			
Major Course/Credits required to earn the UW-Stout Degree	Credits	Fulfilled by UWL Degree (X=yes, blank=no)	Still to be completed at UW-Stout (X=yes, blank=no)
<b>Mathematics and Basic Sciences (21 credits)</b>			
CHEM 241 Chemistry of Materials	4		X
STAT 330 Probability and Statistics for Engineering And the Sciences	3	X	
MATH 250 Differential Equations with Linear Algebra	3	X	
PHYS 291 Statics	3	X	
ENGR 292 Dynamics	3		X
PHYS 282 University Physics II	5	X	
<b>Engineering Core (14 credits)</b>			
ENGR 290 Circuits and Devices	4	X	
ENGR 294 Mechanics of Materials	3		X
ENGR 275 Thermodynamics & Heat Transfer	3		X
ENGR 391 Fluid Mechanics	3		X
MFGLE 349/449 Cooperative Education Experience	1		X
<b>Materials &amp; Manufacturing Processes (18 credits)</b>			
ENGR 315 Metallurgy	3		X
MFGLE 351 Manufacturing Process Engineering I	3		X
MFGLE 352 Manufacturing Process Engineering II	3		X
ETECH 251 Fund of Plastics Materials & Processing	3		X
ETECH 252 Material Removal and Forming Processes	3		X
ETECH 253 Joining and Casting Processes	3		X
<b>Process, Assembly and Product Engineering (9 credits)</b>			
ETECH 201 Comm of Engineering Design I	3		X
MFGLE 405 Capstone I: Concurrent Design	3		X
MFGLE 441 Design of Jigs, Fixtures, and tooling	3		X
<b>Manufacturing Integration Methods and System Design (19 credits)</b>			
ETECH-230 Industrial Robotics & Internet of Things Fundamentals	3		X
ENGR 325 Computer Aided Manufacturing for Mfg Engineers	3		X
MFGLE 410 Capstone II: Senior Design Experience 2	3		X
ETECH-435 Advanced Industrial Robotics & Vision Systems Integration	3		X
ENGR 363 Controls and Instrumentation	4		X
MFGLE 450/650 Industry 4.0 & Cyber Physical Systems	3		X
<b>Manufacturing Competitiveness (9 credits)</b>			
INMGT 300 Engineering Economy	2		X
INMGT 335 Lean Manufacturing Systems	4		X
INGMT 422/622 Quality Engineering	3		X

Table 3-3: Major Requirements – Mechanical Engineering

<b>Dual Degree Program between University of Wisconsin-La Crosse Physics and University of Wisconsin-Stout MECHANICAL ENGINEERING</b>			
<b>UNIVERSITY OF WISCONSIN-STOUT MAJOR REQUIREMENTS</b>			
Major Course/Credits required to earn the UW-Stout Degree	Credits	Fulfilled by UWL Degree (X=yes, blank=no)	Still to be completed at UW-Stout (X=yes, blank=no)
<b>Mathematics and Basic Sciences (23 credits)</b>			
MATH 158 Calculus III	4	X	
MATH 250 Differential Equations with Linear Algebra	3	X	
ME 352 Intro to Numerical Methods in Engineering	4		X
STAT 330 Probability and Statistics for Engineering & the Sciences	3	X	
PHYS 282 University Physics II	5	X	
CHEM 241 Chemistry of Materials	4		X
<b>Engineering Core (9 credits)</b>			
ENGR 290 Circuits and Devices	4	X	
ENGR 363 Controls and Instrumentation	4		X
ME 349/449 Cooperative Education Experience	1		X
<b>Engineering Graphics (3 credits)</b>			
ETECH 201 Communication of Engineering Design	3		X
<b>Engineering Mechanics (13 credits)</b>			
PHYS 291 Statics	3	X	
ENGR 292 Dynamics	3		X
ENGR 294 Mechanics of Materials	3		X
ME 492 System Dynamics	4		X
<b>Thermal and Fluid Sciences (11 credits)</b>			
ME 390 Engineering Thermodynamics	4	X	
ENGR 391 Fluid Mechanics	3		X
ME 392 Engineering Heat Transfer	4		X
<b>Materials and Manufacturing Processes (12 credits)</b>			
ETECH 251 Fund of Plastics Materials & Processing	3		X
ETECH 252 Material Removal and Forming Processes	3		X
ETECH 253 Joining and Casting Processes	3		X
ENGR 315 Metallurgy	3		X
<b>Competitive Manufacturing (2 credits)</b>			
INMGT 300 Engineering Economy	2		X
<b>Design (13 credits)</b>			
ME 342 Machine Component Design	4		X
ME 405 Capstone I	3		X
ME 410 Capstone II	3		X
<b>Technical Electives</b>			
	7	X	



Table 3-4: Major Requirements – Plastics Engineering

<b>Dual Degree Program between University of Wisconsin-La Crosse Physics and University of Wisconsin-Stout PLASTICS ENGINEERING</b>			
<b>UNIVERSITY OF WISCONSIN-STOUT REQUIREMENTS</b>			
Major Course/Credits required to earn the UW-Stout Degree	Credits	Fulfilled by UWL Degree (X=yes, blank=no)	Still to be completed at UW-Stout (X=yes, blank=no)
<b>Mathematics and Basic Sciences (21 credit)</b>			
CIEM 245 Chemistry of Polymers	4		X
MATH 250 Differential Equations with Linear Algebra	3	X	
ENGR 292 Dynamics	3		X
PHYS 282 University Physics II	5	X	
PHYS 291 Statics	3	X	
STAT 330 Probability and Statistics for Engineering & the Sciences	3	X	
<b>Engineering Core (14 credits)</b>			
ENGR 290 Circuits and Devices	4	X	
ENGR 294 Mechanics of Materials	3		X
ENGR 275 Thermodynamics & Heat Transfer	3		X
ENGR 391 Fluid Mechanics	3		X
PLE 349/449 Cooperative Education Experience	1		X
<b>Polymer/Plastic Materials, Processes, Analysis and Testing (24 credits)</b>			
ETECH 250 Introduction to Plastics	3		X
ETECH 341 Injection Molding Technology	3		X
ETECH-343 Extrusion Technology	3		X
ETECH 460 Advanced Manufacturing with 3D Printing	3		X
PLE 310 Injection Molding Theory, Design & Application	3		X
PLE 340 Process Simulation and Analysis	3		X
PLE 360 Testing and Analysis of Plastics	3		X
PLE 380 Extrusion Theory and Design	3		X
<b>Product and Production System Design (22 credits)</b>			
ETECH 201 Comm of Engineering Design I	3		X
ETECH 252 Material Removal and Forming Processes	3		X
ETECH 415 Robotic System Integration	3		X
ENGR 325 Computer Aided Manufacturing for Mfg Engineers	3		X
ENGR 363 Controls and Instrumentation	4		X
PLE 405 Capstone I: Process/Product Design	3		X
PLE 410 Capstone II: Process/Product Development	3		X
<b>Engineering and Professional Competitiveness (8 credits)</b>			
INMGT 300 Engineering Economy	2		X
INMGT 335 Lean Manufacturing Systems	3		X
INMGT 422 Quality Engineering	3		X