

Accelerated Graduate Program in Statistics (BS) and Applied Statistics (MS)

Major requirements

(All catalogs, excluding teacher education programs)

The Accelerated Graduate Program in Statistics (B.S.) and Applied Statistics (M.S.) enables a UWL student to earn both a Bachelor of Science degree with a statistics major and a Master of Science degree in applied statistics in five years.

Curriculum

Students in this accelerated graduate degree program should complete the following by the end of their junior year.

Required courses by end of junior year

Code	Title	Credits
Core		
MTH 207	Calculus I	4
MTH 208	Calculus II	4
MTH 308	Linear Algebra with Differential Equations	4
STAT 245	Probability and Statistics	4
STAT 271	Mathematics and Statistics Seminar	1
STAT 345	Statistical Computing	3
STAT 445	Correlation and Regression Analysis	3
STAT 446	Analysis of Variance and Design of Experiments	3
Electives		
Select one course from the following:		3-4
CST 365	Communication in Teams	
ECO 307	Introduction to Econometrics	
ENG 308	Technical Writing	
ENG 309	Writing in the Sciences	
FIN 437	Financial Modeling	
IS 320	Artificial Intelligence for Decision Making and Data Analytics	
IS 360	Management of Business Analytics	
MTH 310	Calculus III: Multivariable Calculus	
PSY 420	Advanced Research Methods	
SOC 350	Methods of Social Research II	
Select one course from the following:		3
MTH 371	Scientific Computing and Numerical Methods	
MTH 407	Real Analysis I	
STAT 443	Categorical Data Analysis	
STAT 444	Environmental Statistics	
STAT 447	Nonparametric Statistics	
STAT 449	Applied Multivariate Statistics	
Total Credits		32-33

Senior year & fifth year courses

During the senior year, students will complete the Group I courses and two courses from Group II. In the fifth year, students will complete an additional four courses from Group II. Slash courses taken at the 400-level cannot be taken again at the 500-level. Undergraduates may take up to nine graduate credits total while still undergraduate students.

Code	Title	Credits
Group I		
STAT 541	Mathematical Statistics I	3
STAT 542	Mathematical Statistics II	3
Group II		
STAT 543	Categorical Data Analysis	3
STAT 544	Environmental Statistics	3
STAT 547	Nonparametric Statistics	3
STAT 549	Applied Multivariate Statistics	3
STAT 762	Bayesian Statistics	3
STAT 763	Survey of Modern Statistical Software	3
STAT 764	Statistical Learning	3
STAT 766	Biostatistics	3

Graduate project portfolio (6 credits):

Students enrolling in STAT 543, STAT 544, STAT 547, STAT 549, STAT 762, STAT 763, STAT 764, or STAT 766 must enroll at the same time in one credit of STAT 796 per accompanying course. In STAT 796, students complete a project related to the content of the accompanying class. STAT 796 can be taken multiple times in the same term. A total of six credits of STAT 796 are required for completion of the program.

Code	Title	Credits
STAT 796	Graduate Project in Applied Statistics (one credit, repeated six times)	6

Students may be accepted into the accelerated graduate degree program anytime before they have completed 75 undergraduate credit hours. Applicants for undergraduate admission to UWL may request admission into the accelerated program. In order to remain in the program, students must maintain a 2.75 GPA in all undergraduate major courses and 3.00 GPA in all graduate courses. Award of the Bachelor of Science degree will occur upon completion of 120 credits, the statistics major requirements, any other declared major requirements, college core requirements, and general university requirements. Students interested in double majoring with this accelerated program as an undergraduate must complete the college core of their primary major and select a Bachelor of Science program as their primary major.

Students are allowed to take up to nine graduate credits as undergraduate students but must have degree-seeking graduate student status before registering for additional graduate credits (normally in the second semester of the senior year). Award of the Master of Science degree in applied statistics will occur after the completion of the B.S. and the M.S. in applied statistics requirements.

Contact the M.S. in Applied Statistics Program (<https://www.uwlax.edu/grad/statistics/>) Director for application information. See the online graduate catalog for more information about the Applied Statistics Master of Science Program.

Degree requirements

All students must complete the general education, college core, major/minor, and university degree requirements to qualify for a degree. All

enrolled students have access to a degree audit to track all of these requirements.

- Core general education requirements (<https://catalog.uwlax.edu/undergraduate/generaleducation/>)
- College core (p. 2)
- Baccalaureate degree requirements (p. 2)

College of Science and Health (CSH) Bachelor of Science core requirements

B.S. students graduating from the College of Science & Health are required to take:

- Two MTH/STAT courses or one MTH/STAT course and one CS course

Code	Title	Credits
CS 101	Introduction to Computing ¹	
CS 115	Introduction to Python Programming ¹	
CS 120	Software Design I ¹	
CT 100	Introduction to Computational Thinking ¹	
MTH 115	Mathematics for Early Childhood and Elementary Teachers I ¹	
MTH 116	Mathematics for Early Childhood and Elementary Teachers II ¹	
MTH 123	Mathematics for Decision Making ¹	
MTH 150	College Algebra ¹	
MTH 151	Precalculus ¹	
MTH 160	Mathematics for Business ¹	
MTH 175	Applied Calculus ¹	
MTH 207	Calculus I ¹	
MTH 208	Calculus II ¹	
MTH 215	Mathematics for Middle School Teachers I ¹	
MTH 216	Mathematics for Middle School Teachers II ¹	
MTH 265	Mathematical Models in Biology ¹	
STAT 145	Elementary Statistics ¹	

¹ Course may also satisfy a Core General Education Requirement.

- Two laboratory science courses, one of the two courses must be from a department outside of the student's major department:

Code	Title	Credits
ANT 102	Introduction to Biological Anthropology ¹	
BIO 100	Biology for the Informed Citizen ¹	
BIO 105	General Biology ¹	
BIO 203	Organismal Biology	
BIO 210	Animal Biology	
BIO 304	Plant Biology	
CHM 103	General Chemistry I ¹	
CHM 104	General Chemistry II	
ESS 205	Human Anatomy and Physiology for Exercise and Sport Science I	
GEO 101	Earth Environments ¹	
GEO 221	Weather and Climate	
GEO 222	Earth Surface Processes and Landforms	
MIC 100	Microbes and Society ¹	

PHY 103	Fundamental Physics I ¹
PHY 104	Fundamental Physics II
PHY 106	Physical Science for Educators ¹
PHY 155	Solar System Astronomy ¹
PHY 160	Stars, Galaxies and the Universe ¹
PHY 203	General Physics I ¹
PHY 204	General Physics II

Notes: Mathematics courses can be pairs, i.e. MTH 150 and MTH 151.

- In addition to all other College of Science and Health core requirements, students from non-exempted programs² must complete one of the following options. It is recommended that courses are selected in consultation with students' academic advisor.
 - Complete a second major; or
 - Complete a minor outside the major; or
 - Complete two certificates outside the major with at least 12 combined credits at the 300/400 level; or
 - Complete an individualized option, consisting of 18 credits
 - At least 12 credits must be earned at the 300/400 level outside the major department.
 - The remaining six credits should come from
 - 100 level or higher courses outside the major (all courses used to meet these requirements must be in addition to the minimum credits required in the Core General Education Requirements); or
 - 300/400 level courses inside major not being used to fulfill major requirements.
 - Internship credits may not count toward the individualized option.

² The list of exempted CSH programs is on the CSH catalog page (<https://catalog.uwlax.edu/undergraduate/scienceandhealth/#exemptions>).

Baccalaureate degree requirements

Candidates for the Bachelor of Arts or the Bachelor of Science degrees must accomplish the following:

- Fulfill the Core General Education Requirements (CGER) (<https://catalog.uwlax.edu/undergraduate/generaleducation/#generaleducationrequirementstext>).
- Complete the courses prescribed by the Undergraduate Curriculum Committee for the degree desired in the respective school or college.
- Earn a minimum of 120 semester credits with at least a 2.00 cumulative GPA.^{1,2}
- At least 40 credits must be earned in 300/400 level courses. Transfer courses earned or transferred at the 300/400 level apply to this requirement.
- Complete major and minor requirements with at least a 2.00 GPA^{1,2} in each major and minor (and concentration or emphasis, if selected).
- A minimum of 30 semester credits in residence at UWL is required for graduation. (See undergraduate resident requirement (<https://catalog.uwlax.edu/undergraduate/academicpolicies/graduation/#undergraduate-residence-requirement>)).
- Submit an application for graduation via the "Submit Intent to Graduate" link in the WINGS Student Center as soon as the student

has registered for his or her final semester or summer term in residence. December and winter intersession graduates should apply by May 1. May and summer graduates should apply by December 1.

¹ Grade point average requirements for some programs will be considerably higher than 2.00. Re-entering students may be required to earn credits in excess of the 120 needed for graduation in any curriculum to replace credits earned in courses in which the content has changed substantially in recent years. Each case will be judged on its own merit.

² The grade point average recorded at the time the degree is awarded will not be affected by future enrollment.

No degree will be awarded unless all requirements are fulfilled and recorded within 30 days after the official ending date of each term.

Sample degree plan

Below is a sample degree plan that can be used as a guide to identify courses required to fulfill the major and other requirements needed for degree completion. A student's actual degree plan may differ depending on the course of study selected (second major, minor, etc.). Also, this sample plan assumes readiness for each course and/or major plan, and some courses may not be offered every term. Review the course descriptions or the class timetable (<http://www.uwlax.edu/records/registration/>) for course offering information.

The sample degree plans represented in this catalog are intended for first-year students entering UWL in the fall term. Students should use their degree audit and work closely with their advisor(s) and college dean's office to ensure declaration and completion of all requirements in a timely manner.

Core General Education Program

The Core General Education Requirement (CGER) is the common educational experience for all undergraduates at UWL. Sample degree plans include CGER placeholders to ensure completion of the core general education requirements. The CGER category listed in parentheses indicated the recommended course to help complete CGER and the program requirements. Transferred courses may alter the plan. Courses may be rearranged to fit the needs or recommendations of the student's program of study. CGER courses may be taken during winter term (January between the semesters) and summer to reduce the course load during regular terms (fall and spring). Students should consult with their advisor and/or the college academic services director in their college/school for assistance with course and schedule planning. Refer to the Core General Education Requirements (<https://catalog.uwlax.edu/undergraduate/generaleducation/>) for more specific details.

At least 40 credits of the 120 credits required must be earned at the 300/400-level.

Note: New students and transfer students with less than 12 credits earned are required to take The Eagle Advantage for College Success (UWL 100, 2 cr.) or FYS 100 First-Year Seminar (3 cr.) during one of their first two semesters at UWL.

This sample degree plan does not establish a contractual agreement. It identifies the minimum requirements a student must successfully complete, to qualify for a degree, in a format intended to assist the student in planning their academic career. Actual degree plans may differ.

Year 1		
Fall	Credits Spring	Credits
MTH 207 (CGER MQR-QR Mathematics & Quantitative Reasoning: Quantitative Reasoning) ¹	4 MTH 208 (CSH Core) ¹	4
STAT 271	1 ENG 110 (CGER CL-WL Communication & Literacy: Written Literacy)	3
CST 110 (CGER CL-SL Communication & Literacy: Spoken Literacy)	3 CGER HA-AA Humanities & Arts: Arts & Aesthetics	3
UWL 100 or FYS 100 (CGER SBS-FS Social & Behavioral Science: Social Foundation for Success)	2 CGER NSW-MBP Natural Science & Wellness: Mind, Body, & Planet	3
CGER NSWL-ES Natural Science & Wellness: Experiential Science	4 CSH Core (Lab Science)	4
	14	17
Year 2		
Fall	Credits Spring	Credits
STAT 245 ¹	4 STAT 345 ¹	3
MTH 308 ¹	4 Stats Elective	3-4
CGER CL-SWT Communication & Literacy: Stories We Tell	3 CGER SBS-BS Social & Behavioral Science: Social & Behavioral Studies	3
CGER CP-CW Civics & Perspective: Cultures of Our World	3 CGER CP-CU Civics & Perspective: Communities of the United States	3
University Elective	2 University Elective	3
	16	15
Year 3		
Fall	Credits Spring	Credits
STAT 445	3 STAT 446 ¹	3
CGER HA-PDU Humanities & Arts: Pasts that Define Us	3 MTH 371, 407, STAT 443, STAT 444, STAT 447, or STAT 449 ^{1,2}	3
CSH Core (300/400 not MTH) or Minor ³	3 CSH Core (300/400 not MTH) or Minor ³	3
University Elective	3 CSH Core (300/400 not MTH) or Minor ³	3
University Elective	3 University Elective	4
	Apply for "graduate special status" for fall semester	
	15	16
Year 4		
Fall	Credits Spring	Credits
STAT 541 (Group I)	3 STAT 542 (Group I)	3
STAT 796	1 STAT 796	1
Group II non thesis graduate course work (see catalog for course listing)	3 Group II non thesis graduate course work (see catalog for course listing)	3
University Elective	3 CSH Core (300/400 not MTH) or Minor ³	3
University Elective	3 University Elective	3
University Elective at 300/400 level	3 University Elective	3
	Apply for "full graduate status" for spring semester	
	16	16

Additional year

Fall	Credits Spring	Credits
Group II non thesis graduate course work (see catalog for course listing)	6 Group II non thesis graduate course work (see catalog for course listing)	6
STAT 796	2 STAT 796	2
	8	8

Total Credits: 141¹ Should be completed by the end of the junior year.² MTH 407, STAT 443, and STAT 449 are offered in the **fall** whereas MTH 371, STAT 444, and STAT 447 are offered in the **spring**. Plan your schedule accordingly.³ See CSH BS Core Requirements (<https://catalog.uwlax.edu/undergraduate/scienceandhealth/#bs-core>) for information on completing the individualized option. 300/400 requirements for graduation may be impacted.