

## Mathematics, Applied/Statistics Emphasis, B.S., Major

The following is a hypothetical schedule, based on the 2018-2019 catalog. It assumes no transferred credits, no requirements waived by placement tests, no courses taken in the summer, and readiness to take Calculus I during the first semester of the first year. UW-Eau Claire cannot guarantee all courses will be offered as shown, but will provide a range of courses that will enable prepared students to fulfill their requirements in a timely period. This is just a guide. Please consult your advisor, the catalog, and your degree audit for specific requirements.

### FIRST YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 114	Calculus I (S2)	4	MATH 215	Calculus II (prereq for MATH 324)	4
WRIT 114 or 116	Blugold Seminar (S1)	5	LE Core Elective	Communication (S1)	3
LE Core Elective	Global Learning (R2) with (K2), (K3), or (K4)	3	LE Core Elective	Equity, Diversity, Inclusivity (R1) with (K2) or (K3)	3
LE Core Elective***	Social Science (K2), Humanities (K3), or Fine Arts (K4)	3	LE Core Elective***	Social Science (K2), Humanities (K3), or Fine Arts (K4)	3
			LE Core Elective*	Integrative Learning (I1)	3
<b>TOTAL</b>		<b>15</b>	<b>TOTAL</b>		<b>16</b>

### SECOND YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 216	Calculus III (prereq for MATH 316)	4	MATH 324	Linear Algebra (prereq for MATH 316, 425)	4
LE Core Elective	Natural Science (K1)	4	MATH 312 or 346	Diff Eqs & Linear Algebra <sup>a</sup> or Probability <sup>a</sup>	4
LE Core Elective***	Social Science (K2), Humanities (K3), or Fine Arts (K4)	3	LE Core Elective	Natural Science (K1)	4
LE Core Elective	Civic, Social, Environmental (R3)	3	LE Core Elective	Equity, Diversity, Inclusivity (R1 + DD)	3
<b>TOTAL</b>		<b>14</b>	<b>TOTAL</b>		<b>15</b>

### THIRD YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH 316	Introduction to Real Analysis	3	MATH 425	Abstract Algebra I	3
MATH 347 or Applied Elective	Applied Elective <sup>c</sup> or Statistics Elective <sup>c</sup>	3-4	MATH Applied/Stats Elective	Applied Elective <sup>c</sup> or Statistics Elective <sup>c</sup>	2-4
CS 145/163/170/PHIL 250 <sup>e</sup>		3	LE Core Elective**	Creativity (S3)	3
LE Core Elective*	Integrative Learning (I1)	3	LE Core Elective*	Integrative Learning (I1)	3
LE Core Elective***	Social Science (K2), Humanities (K3), or Fine Arts (K4)	3	Minor/Electives		3
<b>TOTAL</b>		<b>15-16</b>	<b>TOTAL</b>		<b>14-16</b>

### FOURTH YEAR

FIRST SEMESTER			SECOND SEMESTER		
Subj/Area/Course	Title	Crs	Subj/Area/Course	Title	Crs
MATH Applied/Stats Elective	Applied Elective <sup>c</sup> or Statistics Elective <sup>c</sup>	2-4	MATH Elective <sup>d</sup>		2-4
Minor/Electives		3	Minor		3
Minor/Electives		3	Minor		3
Minor/Electives		3	Elective		3
Minor/Electives		3	Elective		3
<b>TOTAL</b>		<b>14-16</b>	<b>TOTAL</b>		<b>14-16</b>

## RECOMMENDATIONS FOR OPTIONAL HIGH IMPACT PRACTICES (HIPs)

The University of Wisconsin-Eau Claire encourages all students to participate in High Impact Practices. The following information identifies any specific recommendations that faculty in this major have concerning which HIPs might be most beneficial to students, and any recommendations about when those HIPs best fit into the degree plan. Students should also consult their faculty advisor for information on HIPs.

Students in the Applied/Stats emphasis are strongly encouraged to participate in student/faculty research. Watch for announcements of potential research projects and meet with potential research advisors in the spring preceding the year in which student/faculty research will begin (for example, spring of the first year for a research project during sophomore year).

## NOTES

### Liberal Education Core (LE Core)

The LE Core comprises 17 learning experiences across 11 learning outcomes. Students must complete a minimum of 36 credits in courses approved for the LE Core.

- K1 – Natural Sciences; two experiences (one lab science experience is required in K1 or K2).
- K2 – Social Sciences; two experiences (one lab science experience is required in K1 or K2).
- K3 – Humanities; two experiences.
- K4 – Fine Arts; one experience.
- S1 – Written and Oral Communication; two experiences (one experience must satisfy the University writing requirement).
- S2 – Mathematics; one experience (must satisfy the University math competency requirement).
- S3 – Creativity; one experience (can be fulfilled in a student's major).
- R1 – Equity, Diversity, and Inclusivity; two experiences (one experience must meet the UW System Design for Diversity (DD) requirement).
- R2 – Global Perspectives; one experience.
- R3 – Civic and Environmental Issues; one experience.
- I1 – Integration; two experiences (one experience can be fulfilled in a student's major).

### Additional LE Core Information

- Most LE Core learning experiences are course based, and many courses meet more than one learning outcome (e.g., K3 and R2 or K1 and R3).
- Some learning experiences can also be met outside of a traditional course (e.g., undergraduate research (S3), study abroad (I1)).
- S1 – An English placement score that fulfills the University writing requirement fulfills one S1 experience.
- S1 – A foreign Language placement score that qualifies the student to enter the 102 level satisfies one S1 experience.
- S1, R2 – A foreign language placement score that qualifies the student to enter the 202 level satisfies one experience in S1 and the R2 experience.
- S2 – A math placement score that qualifies the student to enter Math 111, 112, 113 or 114 fulfills the S2 experience.
- S3 – Completion of two credits from any approved music ensemble fulfills the S3 experience.
- I1 – Any semester long study abroad program can fulfill one I1 experience.

### Course Suggestions

\* One of the two experiences required for Integrative Learning (I3) may be fulfilled with a math course with the I3 designation such as MATH 307 or MATH 462.

\*\* The Creativity (S3) experience can be fulfilled with a math course with the S3 designation such as MATH 307 or MATH 380.

\*\*\* In this 4 year plan, the experiences for (K2), (K3), and (K4) are listed together. The appropriate number of experiences from each learning outcome will be required. See LE Core above.

<sup>a</sup> For students interested in focusing on applied math, MATH 312 is recommended. For students interested in focusing on statistics, MATH 346 is recommended.

<sup>b</sup> For students interested in focusing on statistics, MATH 347 is recommended. It is a prerequisite to the courses listed as statistics electives<sup>c</sup>.

<sup>c</sup> The Applied/Statistics emphasis allows students to choose courses that emphasize either applied math or statistics.

- Students interested in focusing on applied math are recommended to choose electives from the following list of applied electives: MATH 307, 313, 318, 345, 351, 352, 354, 440 (PHYS 440).
- Students interested in focusing on statistics are recommended to choose electives from the following list of statistics electives: MATH 441, 443, 445, 447.

<sup>d</sup> At least 10 credits are required from the following list: MATH 307, 312, 313, 318, 345, 346, 347, 351, 352, 354, 440 (PHYS 440), 441, 443, 445, 447. Students who have fulfilled this requirement may take an additional course from this list, or another MATH elective numbered above MATH 305, to achieve at least 36 credits of courses that count toward the major.

<sup>e</sup> Students must complete at least three credits to be selected from PHIL 250, CS 145, 163, 170, or another computer science course approved by the Math Department.