

College of Science, Technology, Engineering, and Mathematics

Natural Science Education-Middle Level Endorsement BAE

(68 credits)

Why study the BAE in Natural Science?

The BAE Program in Biology prepares the pre-service teacher to earn certification to teach biology in grades 5-12 in the state of Washington. Graduates are very competitive in the job market. The program provides students with a rigorous foundation in biological and chemistry concepts as well as supporting courses in education, including science teaching method courses. Completion of the program requires passing external certification exams and leads to a Secondary Teaching Certification in Washington State with an endorsement in Biology.

Other Degree Options

Minor in Natural Science Elementary

Career Opportunities

Science Teacher, Biology Teacher



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This is an example of a four year class schedule. Academic Advisors are there to help create individualized plans.

First Year	Q1	Q2	Q3
	BACR (4 cr.)	BIOL 171 (5 cr.)	BACR (4 cr.)
	BIOL 115 (5 cr.)	ENGL 201 (5 cr.)	CHEM 161 (5 cr.)
	CMST 200 (4 cr.)	MATH 208 (5 cr.)	MATH 142 (5 cr.)
	ENGL 101 (5 cr.)		MATH 209 (4 cr.)
Second Year	Q5	Q6	Q7
	BIOL 172 (5 cr.)	BACR (5 cr.)	GEOG 115 (GECR) or GEOL 1
	MATH 210 (4 cr.)	BACR (5 cr.)	PHYS 115 (5 cr.)
	PHYS 131 (4 cr.)	Global (5 cr.)	PHYS 121 (5 cr.)
	PHYS 161 (1 cr.)	MUSC 450 (3 cr.)	
Third Year	Q9	Q10	Q11
	BACR (5 cr.)	EDUC 417 (3 cr.)	EDUC 380 (4 cr.)
	GEOG 204 (GECR) or 314 (5 c	GEOL 121 (5 cr.)	EDUC 381 (4 cr.)
	ART 390 (3 cr.)	PSYC 304 (5 cr.)	SCED 390 (2 cr.)
	EDUC 303 (3 cr.)		SCED 391 (3 cr.)
	EDUC 308 (3 cr.)	SPED 363 (4 cr.)	
Fourth Year	Q13	Q14	Q15
	PHED 390 (3 cr.)	MTED 390 or EDUC 344 (5 cr	Diversity (5 cr.)
	EDUC 201 (3 cr.)	EDUC 310 (4 cr.)	EDUC 340 (4 cr.)
	EDUC 304 (3 cr.)	EDUC 386 (3 cr.)	EDUC 420 (1 cr.)
	EDUC 338 (4 cr.)	EDUC 427 (3 cr.)	SCED 490 (5 cr.)
	EDUC 342 (4 cr.)		
	EDUC 386 (3 cr.)		

Listed is a Sample Four Year Plan. Individual plans will vary based on placement test scores and class availability.

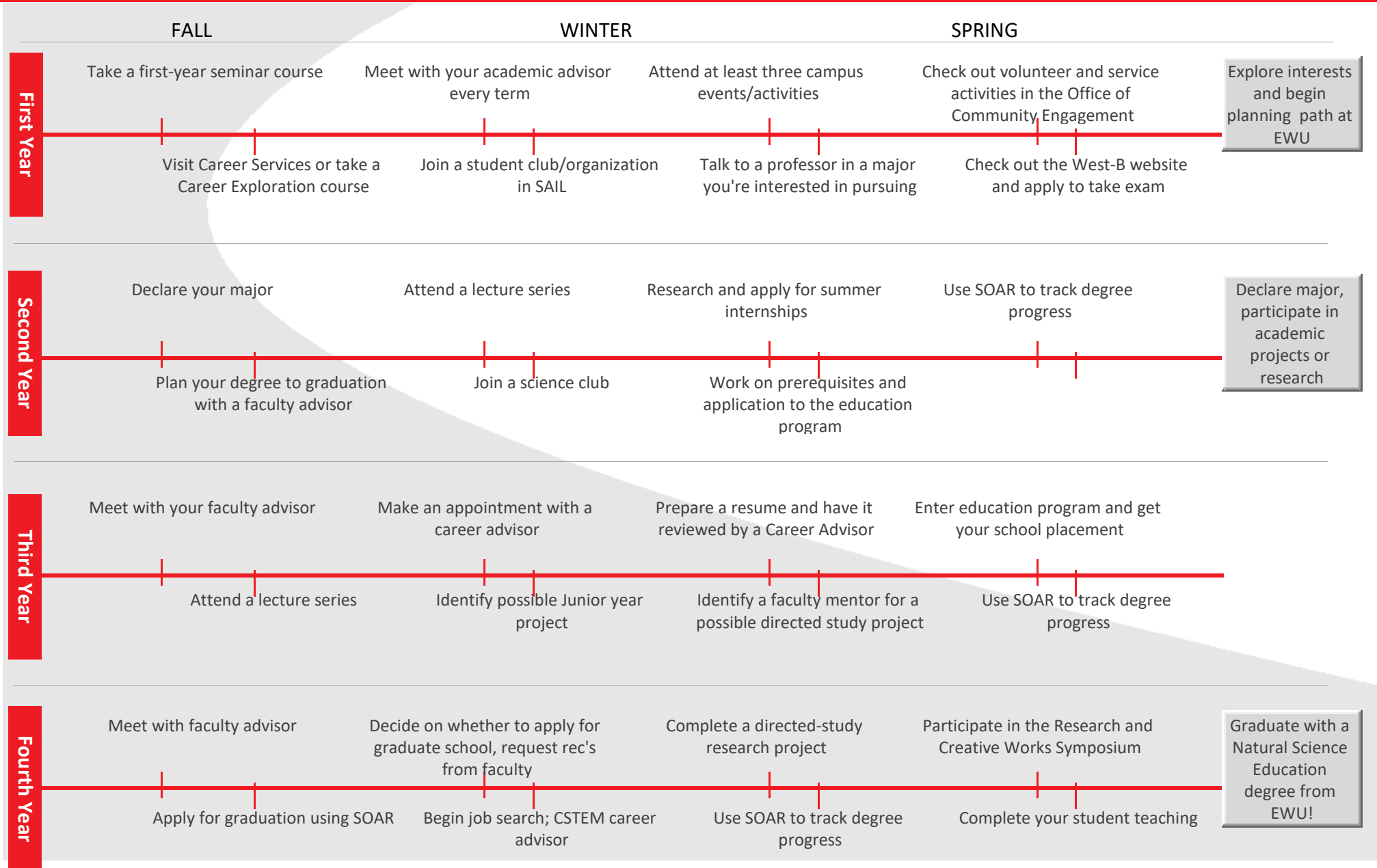


Flight Plan to Success

The following milestones will help you succeed and improve your experience at EWU.

Natural Science Education-Middle Level Endorsement, BAE

College of Science, Technology, Engineering, and Mathematics
Biology



All recommended activities can occur at any time during a student's time at EWU



Student's name: _____ EWU ID: _____

College of Science, Technology, Engineering, and Mathematics

SOAR Department: Natural Sc | SOAR Major: EDNS

Bachelor of Arts in Education in Natural Science Education-Middle Level Endorsement
Elementary Education Core
2018-2019 Catalog Year

Major Declaration Form: Natural Science Education - Elementary/Middle Level, BAE-NATSC, ELMI
Math proficiency needed: MATH 208, 209, 210

First year courses and prerequisites	Notes	Previously offered **
Q1 BACR (4 cr.)		
Q1 BIOL 115 INVESTIGATING BIOLOGY (5 cr.)	Satisfies: a BACR for natural science.	F17, W18
Q1 CMST 200 INTRO TO SPEECH COMMUNICATION (4 cr.)	Note: CMST 200 cannot be taken for credit towards the Communication Studies Majors.	F17, W18, Sp18, Su18
Q1 ENGL 101 COLL COMP: EXPOSITN & ARGUMNT (5 cr.) Prerequisite: Writing Placement Test or General Advising.	Satisfies: university competencies, writing.	F17, W18, Sp18, Su18
Q2 BIOL 171 BIOLOGY I (5 cr.) Prerequisites: concurrent enrollment in MATH 141 or completion of MATH 141 with $\geq C$; students must receive $\geq C$ - to enroll in BIOL 172 and $\geq C$ to enroll in BIOL 270.	Satisfies: a BACR for natural science. Note: course fee.	F17, W18, Sp18
Q2 ENGL 201 COLL COMP: ANALYSIS/RES/DOCMNT (5 cr.) Prerequisite: ENGL 101, Writing Placement Test or general advising.	Satisfies: university proficiencies, writing.	F17, W18, Sp18, Su18
Q2 MATH 208 MATH FOR ELEMENTARY TEACHERS I (5 cr.) Prerequisites: MTHD 106 with a grade $\geq C$, or a satisfactory score on the mathematics placement assessment (MPA); placement into or above ENGL 101.	Satisfies: completion of this course with a grade $\geq C$ satisfies the university proficiencies in mathematics.	
Q3 BACR (4 cr.)		
Q3 CHEM 161 GEN CHEM FOR HEALTH SCIENCES (5 cr.) Prerequisite: Concurrent enrollment in or completion of MTHD 104 or MATH 107 or MATH 141 or equivalent. A high school chemistry course or CHEM 100 is highly recommended.	Satisfies: a BACR for natural sciences. Note: Laboratory work is included. A placement exam is given during the first week of classes.	F17, W18, Sp18

I have discussed this academic plan with the student listed above. Advisor name: _____ Advisor signature: _____

* See the catalog for prerequisites and other details.

** Future course offerings may differ from the past. Check the course schedule for future courses.

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Q3

MATH 142 PRECALCULUS MATH II (5 cr.)

Prerequisite: MATH 141 or equivalent.

Satisfies: completion of this course with a grade \geq C satisfies the university proficiencies in mathematics.

F17, W18, Sp18, Su18

Q3

MATH 209 MATH ELEMENTARY TEACHERS II (4 cr.)

Prerequisite: MATH 208.

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Second year courses and prerequisites	Notes	Previously offered **
Q5 BIOL 172 BIOLOGY II (5 cr.) Prerequisite: ≥C- in BIOL 171 and ≥C in MATH 141.	Satisfies: 2nd Natural Sciences BACR if BIOL 171 and BIOL 270 are complete or BIOL 172 and BIOL 270 are completed. Note: course fee.	F17, W18, Sp18
Q5 MATH 210 MATH ELEMENTARY TEACHERS III (4 cr.) Prerequisite: MATH 208.	Note: this course addresses content from previous courses MATH 211 and 212 in more depth and adds topics required by Washington State Teacher Competences for K-8 elementary certification.	
Q5 PHYS 131 INTRODUCTORY PHYSICS I (4 cr.) Prerequisites: MATH 142, concurrent enrollment in PHYS 161 is recommended.	Satisfies: The completion of PHYS 131, PHYS 161 satisfies the BACR for natural sciences, counts as one course. The completion of PHYS 131, PHYS 132, PHYS 161, plus any one of the following: PHYS 162, PHYS 163, PHYS 263 satisfies the BACR for natural scien Note: PHYS 161, the associated laboratory course, is usually required by any program also requiring PHYS 131, but requires separate enrollment.	F17
Q5 PHYS 161 MECHANICS LABORATORY (1 cr.) Prerequisite: MATH 142.		F17, W18
Q6 BACR (5 cr.)		
Q6 BACR (5 cr.)		
Q6 Global (5 cr.)		
Q6 MUSC 450 INTEGRATING MUSIC IN CLASSROOM (3 cr.) Prerequisites: EDUC 303.		F17, W18, Sp18, Su18
Q7 GEOG 115 (GECR) or GEOL 115 (GECR) (5 cr.)		
Q7 PHYS 115 INVESTIGATING PHYSICAL SCIENCE (5 cr.) Prerequisite: MATH 208 or equivalent.	Satisfies: a BACR for natural sciences.	Sp18

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Q7

PHYS 121 DESCRIPTIVE ASTRONOMY (5 cr.)
Prerequisite: pre-university basic skills in mathematics.

Satisfies: a BACR for natural sciences.
Note: Laboratory work related to the covered topics is included. May include planetarium sessions.

F17, Sp18, Su18

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This list of courses is for information purposes only. All students are required to follow the catalog requirements for the year they declared a major.

Third year courses and prerequisites	Notes	Previously offered **
Q9 BACR (5 cr.)		
Q9 GEOG 204 (GECR) or 314 (5 cr.)		
Q9 ART 390 ART IN THE ELEMENTARY SCHOOL (3 cr.)		F17, W18, Sp18, Su18
Q9 EDUC 303 FOUNDATIONS OF ASSESSMENT (3 cr.) Prerequisites: ENGL 201; MATH 107 or MATH 208; CMST 200 or proof of equivalence; passing the Washington Education Skill Test-Basic (WEST-B).	Concurrent with EDUC 308	F17, W18, Sp18, Su18
Q9 EDUC 308 FOUNDATION ELEM CLASSROOM MGMT (3 cr.) Prerequisites: ENGL 201; MATH 208, CMST 200 or proof of equivalence; passing the Washington Education Skill Test-Basic (WEST-B).	Note: Application required. Department authorization required. Concurrent with EDUC 303	F17, W18, Sp18, Su18
Q10 EDUC 417 CULTURE OF MIDDLE SCHOOL (3 cr.) Prerequisites: EDUC 303; EDUC 308 or EDUC 309.		W18, Su18
Q10 GEOL 121 PHYS GEOL - SURFICIAL PROCESS (5 cr.) Prerequisites: MTHD 104 or equivalent.	Satisfies: the completion of GEOL 121 counts as one course for the BACR in natural science; the completion of GEOL 120 and GEOL 121 counts as two courses for the BACR for natural science. Note: weekly laboratories and one field trip are required.	W18, Sp18
Q10 PSYC 304 EDUCATIONAL PSYCHOLOGY (5 cr.) Prerequisites: PSYC 201 recommended.		F17, W18, Sp18, Su18
Q11 EDUC 380 INTEGRATED STEM METHODS 1 (4 cr.) Prerequisites: EDUC 310 and taken concurrently with EDUC 381.	Note: Washington State Patrol Clearance / FBI Fingerprint Clearance required. A lab course with required hours in the field is required. Please consult your advisor.	
Q11 EDUC 381 INTEGRATED STEM METHODS 2 (4 cr.) Prerequisites: EDUC 310 and concurrently with EDUC 380.	Note: Washington State Patrol Clearance / FBI Fingerprint Clearance required. A lab course with required hours in the field is required. Please consult your advisor.	
Q11 SCED 390 SCIENCE TEACHING METHODS (2 cr.) Prerequisite: EDUC 303 or by permission of the instructor plus upper level major courses. Students study types of science programs, organization of lesson materials, techniques, laboratory safety and evaluation.	Note: designed for BAE Biology, Chemistry, Earth Science, Physics majors and minors as well as those seeking middle level science endorsement.	F17

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Q11	SCED 391 MIDDLE LEVEL AND EARTH AND SPA (3 cr.) Prerequisite: SCED 390 or concurrent enrollment.	Note: This course is designed for students seeking an endorsement to teach middle school science and/or secondary earth and space science. Students must complete >= 70% of program to enroll in this course.	F17
Q11	SPED 363 INTRO TO SPECIAL EDUCATION (4 cr.)		F17, W18, Sp18, Su18
Q13	PHED 390 HEALTH & PE IN ELEM SCHOOL (3 cr.) Prerequisites: junior standing and a minimum GPA \geq C.		F17, W18, Sp18, Su18

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Fourth year courses and prerequisites	Notes	Previously offered **
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q13</div> EDUC 201 INTRO TO EDUCATION (3 cr.)		F17, W18, Sp18, Su18
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q13</div> EDUC 304 INTRO TO ELEMENTARY READING (3 cr.) Prerequisites: successful completion of EDUC 303 and EDUC 308 or may be taken concurrently.		F17, W18, Sp18, Su18
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q13</div> EDUC 338 LANG & SOCIAL METHODS 1 (4 cr.) Prerequisites: program admission required; concurrent enrollment in EDUC 340 and 3 credits of Field Experience and Practicum.	Note: Washington State Patrol Clearance/FBI fingerprinting clearance required. Concurrent with EDUC 339	F17, W18, Sp18
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q13</div> EDUC 342 ELEMENTARY SCHOOL SCI METHODS (4 cr.) Prerequisites: EDUC 310; concurrent enrollment in EDUC 338 and EDUC 340.	Note: Washington State Patrol Clearance/FBI fingerprinting clearance required. Placement in P-8 school with minimum nine hour per week field experience required. Concurrent with EDUC 338	F17, W18, Sp18
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q13</div> EDUC 386 FIELD EXPERIENCE AND PRACTICUM (3 cr.) Prerequisite: admission to the Education program.	Note: Washington State Patrol Clearance / FBI Fingerprint Clearance required. A weekly seminar is required. Your schedule must be arranged so time can be spent in a public school classroom during the day.	
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q14</div> MTED 390 or EDUC 344 (5 cr.)		
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q14</div> EDUC 310 LTCY METHOD MGMT ASSESS ELEM (4 cr.) Prerequisites: EDUC 304 or EDUC 479. Washington State Patrol Clearance/FBI fingerprinting clearance.		F17, W18, Sp18
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q14</div> EDUC 386 FIELD EXPERIENCE AND PRACTICUM (3 cr.) Prerequisite: admission to the Education program.	Note: Washington State Patrol Clearance / FBI Fingerprint Clearance required. A weekly seminar is required. Your schedule must be arranged so time can be spent in a public school classroom during the day.	
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q14</div> EDUC 427 GENERAL STUDENT TEACHING K-12 (3 cr.) Prerequisite: EDUC 420.	Note: graded Pass/Fail.	F17, W18, Sp18
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Q15</div> Diversity (5 cr.)		

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Q15	EDUC 340 LANG & SOCIAL METHODS 2 (4 cr.) Prerequisites: program admission required; concurrent enrollment in EDUC 338 and 3 credits of Field Experience and Practicum.	Note: Washington State Patrol Clearance/FBI fingerprinting clearance required. Concurrent with EDUC 338	F17, W18, Sp18
Q15	EDUC 420 ADM TO PROFESSIONAL CANDIDACY (1 cr.) Prerequisites: P-3: concurrent with EDUC 439 and EDUC 495, Elementary: EDUC 338. Secondary: EDUC 341. Washington State Patrol/FBI clearance required.	Note: graded Pass/Fail.	F17, W18, Sp18
Q15	SCED 490 MIDDLE LEVEL SCIENCE CAPSTONE (5 cr.) Prerequisites: EDUC 341 and SCED 390.	Satisfies: a university graduation requirement'senior capstone. Note: this is a professional development course for students planning to be middle level science teachers and just prior to student teaching and is a requirements for the BAE in Middle Level Science Major.	W18, Sp18

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Fifth year courses and prerequisites

Notes

Previously offered **

Q16 EDUC 423 ELEM STUDENT TEACHING K-8 (12 cr.)
Prerequisite: EDUC 420 and departmental clearance required prior to registration.

Note: Graded Pass/Fail. Washington State Patrol and FBI clearance must be current. All students must have a minimum overall GPA \geq B- in each of the following: major(s), minor(s) and Professional Education Program. All course grades in the student's major(s)

F17, W18, Sp18

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