

Program Change Request

Date Submitted: 02/08/21 11:44 am

Viewing: **SC-BS-BIOL : Biology, BS**

Last approved: 10/30/20 3:21 pm

Last edit: 02/08/21 11:44 am

Changes proposed by: jbazaz

**Catalog Pages
Using this Program**
[Biology, BS](#)

🔍
Rationale for

Are you completing this form on someone else's behalf?

Yes

Requestor:

In Workflow

1. **BIOL Program Chair**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. SC CAT Editor
5. Assoc Provost- Undergraduate
6. Registrar-Programs: Duration
7. Registrar-Programs

Approval Path

1. 02/08/21 11:45 am
Geraldine Grant
(ggrant1): Approved for BIOL Program Chair

History

1. Oct 23, 2017 by
clmig-jwehrheim
2. Dec 5, 2017 by
clmig-jwehrheim
3. Mar 1, 2018 by
Jennifer Bazaz
Gettys (jbazaz)
4. Mar 8, 2018 by
Rebekah Zacharias
(rzachari)
5. Mar 16, 2018 by
Rebekah Zacharias
(rzachari)
6. Dec 4, 2018 by
Jennifer Bazaz

- Gettys (jbazaz)
- 7. Feb 1, 2019 by Jennifer Bazaz Gettys (jbazaz)
- 8. Mar 4, 2019 by Tory Sarro (vsarro)
- 9. Jan 16, 2020 by Jennifer Bazaz Gettys (jbazaz)
- 10. Mar 24, 2020 by Jennifer Bazaz Gettys (jbazaz)
- 11. Apr 2, 2020 by Johanna Riemen (jriemen)
- 12. Oct 30, 2020 by Tory Sarro (vsarro)

Name	Extension	Email
Deborah Polayes	4543	dpolayes

Effective Catalog: 2021-2022

Program Level: Undergraduate

Program Type: Bachelor's

Degree Type: Bachelor of Science

Title: Biology, BS

Banner Title: Biology, BS

Is this a retitling of an existing

Existing Program

Registrar/OAPI Use Only – SCHEV Status Approved

Registrar’s Office Use Only – Program Start Term

Registrar/OAPI Use Only – SCHEV Letter

Registrar/OAPI Use Only – SACSCOC Status

Concentration(s):

	Associated Concentrations	Registrar's Office Use Only: Concentration Code
1	Bioinformatics	BNF
2	Biopsychology	BP
3	Biotechnology and Molecular Biology	BTMB
4	Environmental and Conservation Biology	ESCB
5	Microbiology	MIB

INTO Major(s):

Registrar/IRR Use Only – Concentration CIP Code

College/School: College of Science

Department / Academic Unit: Biology

Jointly Owned Program? No

Participating

Participating

Justification

GEOL 102 was reduced from 4 credits to 3 when the lecture and lab were decoupled. We are adding in GEOL 104 to all instances of GEOL 102 to add the 1 credit lab back into the program.

Catalog Published Information

Total Credits Required: Total credits: minimum 120

Registrar's Office Use Only - Program Code:

SC-BS-BIOL

Registrar/IRR Use Only – Program CIP Code 26.0101 - Biology/Biological Sciences, General.

Admission Requirements:

Admissions

University-wide admissions policies can be found in [Undergraduate Admissions Policies](#).

To apply for this program, please complete the [George Mason University Admissions Application](#).

Program-Specific Policies:

Policies

Students must fulfill all [Requirements for Bachelor's Degrees](#), including the [Mason Core](#).

Important information and departmental policies are listed in the [Department of Biology](#).

[BIOL 308](#) Foundations of Ecology and Evolution meets the writing intensive requirement for this major. Transfer students who have transferred in [BIOL 308](#) Foundations of Ecology and Evolution but did not meet the writing intensive requirement may take [MLAB 300](#) Science Writing to meet the writing intensive requirement.

For policies governing all undergraduate degrees, see [AP.5 Undergraduate Policies](#).

Important Program Requirements

- Students may apply no more than 8 credits of [BIOL 103](#) Introductory Biology II-Survey of Cell and Molecular Biology ([Mason Core](#)) or [BIOL 107](#) Intro Biology II Lecture ([Mason Core](#)) and [BIOL 106](#) Introductory Biology II Laboratory ([Mason Core](#)) toward elective credit (or equivalent transfer credit at the 100 to 200-level) if taken before successful completion of [BIOL 213](#) Cell Structure and Function ([Mason Core](#)).
- Biology majors must earn a minimum grade of 'C' in all biology core courses. A grade of 'C' or better must be earned in [BIOL 213](#) Cell Structure and Function ([Mason Core](#)) in order to advance to other core requirements.
- Students may repeat [BIOL 213](#) Cell Structure and Function ([Mason Core](#)) once, but a second time only with permission from the Department of Biology.
- Students may **not** count [BIOL 124](#) Human Anatomy and Physiology and/or [BIOL 125](#) Human Anatomy and Physiology toward any biology major requirement.
- Students who take [BIOL 300](#) BioDiversity may **not** count [BIOL 303](#) Animal Biology and/or [BIOL 304](#) Plant Biology toward any biology major requirement.
- 44 credits must be in biology coursework.
- [BIOL 493](#) Honors Research in Biology, [BIOL 495](#) Directed Studies in Biology, and [BIOL 497](#) Special Problems in Biology do not satisfy the requirements of the BS degree which state that students must complete at least two upper division courses that include a laboratory. The courses do, however, count as non-laboratory electives. The total limit for [BIOL 493](#) Honors Research in Biology, [BIOL 495](#) Directed Studies in Biology, and [BIOL 497](#) Special Problems in Biology combined is 6 credits toward the 44 credits required for the BS.

Several optional concentrations are available; details on each can be found in the Requirements tab.

Teacher Licensure

Students majoring in biology who wish to pursue a career teaching secondary school may consider applying for the [Secondary Education - Biology \(6-12\) Undergraduate Certificate](#) offered by the [College of Education and Human](#)

[Development](#) as an option in seeking an initial Virginia teaching license.

Other routes to licensure include the [Biology, BA or BS/Curriculum and Instruction, Accelerated MEd](#) (Secondary Education Biology Concentration) or select traditional Master's programs. Please contact the [College of Education and Human Development](#) for more information.

Degree Requirements:

Students should refer to the [Admissions & Policies](#) tab for specific policies related to this program.

Students must complete their biology coursework and the supporting requirements which follow with a minimum GPA of 2.00.

All students must complete the Core Courses listed below. Students then elect to complete the BS degree either with a concentration or without a concentration.

Core Courses

Biology

BIOL 213	Cell Structure and Function (Mason Core)	4
BIOL 214	Biostatistics for Biology Majors	4
BIOL 300	BioDiversity	4
BIOL 308	Foundations of Ecology and Evolution 1	5
BIOL 311	General Genetics	4

Chemistry

CHEM 211	General Chemistry I (Mason Core)	4
& CHEM 213	and General Chemistry Laboratory I (Mason Core)	
CHEM 212	General Chemistry II (Mason Core)	4
& CHEM 214	and General Chemistry Laboratory II (Mason Core)	
CHEM 313	Organic Chemistry I	5
& CHEM 315	and Organic Chemistry Lab I	

Physics

Select from one of the following Mason Core Natural Science sequences: 8

PHYS 160	University Physics I (Mason Core)
& PHYS 161	and University Physics I Laboratory (Mason Core)
& PHYS 260	and University Physics II (Mason Core)
& PHYS 261	and University Physics II Laboratory (Mason Core)
PHYS 243	College Physics I (Mason Core)
& PHYS 244	and College Physics I Lab (Mason Core)
& PHYS 245	and College Physics II (Mason Core)
& PHYS 246	and College Physics II Lab (Mason Core)

Mathematics

Select one from the following: 3-6

MATH 111	Linear Mathematical Modeling (Mason Core)
or MATH 113	Analytic Geometry and Calculus I (Mason Core)

MATH 123 Calculus with Algebra/Trigonometry, Part A
& **MATH 124** and Calculus with Algebra/Trigonometry, Part B (**Mason Core**)

Computer Science

Select one from the following:

3

CDS 130 Computing for Scientists 2

Any course(s) that fulfills the Mason Core: Information Technology requirement

Total Credits

48-51

1 Fulfills writing intensive requirement.

Transfer students who have transferred in **BIOL 308** Foundations of Ecology and Evolution but did not meet the writing intensive requirement may take **MLAB 300** Science Writing to meet the writing intensive requirement.

2 Recommended by the Department of Biology.

BS without Concentration

Students who do not select an optional concentration must complete the biology core and shared courses shown above in addition to the curriculum requirements listed below.

Biology Electives

Complete 23 credits of additional biology courses 1

23

Additional Science Courses

Students are encouraged to consult with a biology faculty advisor to determine which option (A, B, or C) best meets their career goals. Select one from the following options: 3-8

Option A:

CHEM 314 Organic Chemistry II
& **CHEM 318** and Organic Chemistry Lab II

Option B:

One 3 credit chemistry course at the 300 or 400-level (not CHEM 314)

Option C:

GEOL 101 Introductory Geology I (**Mason Core**)
& **GEOL 102** and Historical Geology (**Mason Core**)
& **GEOL 104** and Historical Geology Laboratory (**Mason Core**) (Natural Science courses)

Total Credits

26-

31

Note:

Students expecting to enter a professional school are strongly encouraged to complete **MATH 113** Analytic Geometry and Calculus I (**Mason Core**).

1 Of which, at least 15 credits must be upper division, and at least two of the upper division courses must include a laboratory.

Concentration in Bioinformatics (BNF)

The highly interdisciplinary field of bioinformatics has emerged as a powerful modern science. There is a great demand for undergraduate and graduate-level trained individuals with a background in bioinformatics in industry

as well as in academia.

Computer Science

3

Please note: [CDS 130](#) is recommended to fulfill the Computer Science requirement in the shared core above.

[CDS 230](#) Modeling and Simulation I

Bioinformatics

6

[BINF 401](#) Bioinformatics and Computational Biology I

[BINF 402](#) Bioinformatics and Computational Biology II

Biology

14-16

[BIOL 312](#) Biostatistics for Bioinformatics

[BIOL 401](#) Phage Discovery

[BIOL 412](#) Phage Genomics

Biology Lab Elective

Select one from the following:

[BIOL 305](#) Biology of Microorganisms
& [BIOL 306](#) and Biology of Microorganisms Laboratory

[BIOL 320](#) Comparative Chordate Anatomy

[BIOL 322](#) Developmental Biology
& [BIOL 323](#) and Lab for Developmental Biology

[BIOL 331](#) Invertebrate Zoology

[BIOL 332](#) Insect Biology

[BIOL 334](#) Vertebrate Paleontology

[BIOL 336](#) Invertebrate Paleontology

[BIOL 344](#) Plant Diversity and Evolution

[BIOL 345](#) Plant Ecology

[BIOL 350](#) Freshwater Ecosystems

[BIOL 355](#) Ecological Engineering and Ecosystem Restoration

[BIOL 379](#) RS: Ecological Sustainability ([Mason Core](#)).

[BIOL 385](#) Biotechnology and Genetic Engineering
& [BIOL 486](#) and Molecular Biology and Biotechnology Laboratory

[BIOL 405](#) Microbial Genetics

[BIOL 407](#) Microbial Diversity

[BIOL 430](#) Advanced Human Anatomy and Physiology I

[BIOL 431](#) Advanced Human Anatomy and Physiology II

[BIOL 437](#) Ornithology

[BIOL 438](#) Mammalogy

[BIOL 439](#) Herpetology

[BIOL 452](#) Immunology

& [BIOL 453](#) and Immunology Laboratory

[BIOL 454](#) Marine Mammal Biology and Conservation

& [BIOL 455](#) and Marine Mammal Biology and Conservation Field Course

[BIOL 465](#) Histology

BIOL 468	Vertebrate Natural History
BIOL 472	Introductory Animal Behavior
& BIOL 473	and Introductory Laboratory in Animal Behavior
BIOL 484	Cell Signaling and Disease
& BIOL 485	and Cell Signaling Laboratory
BIOL 509	DNA Analysis of Biological Evidence
& BIOL 510	and Forensic DNA Analysis Laboratory
BIOL 543	Tropical Ecosystems

Additional Science Courses

Select one from the following options: 1

3-8

Option A:

CHEM 314	Organic Chemistry II
CHEM 318	Organic Chemistry Lab II

Option B:

One 3 credit chemistry course at the 300 or 400-level 2

Option C:

GEOL 101	Introductory Geology I (Mason Core)
GEOL 102	Historical Geology (Mason Core)
& GEOL 104	and Historical Geology Laboratory (Mason Core)

Total Credits

26-33

1 Students are encouraged to consult with a biology advisor to determine which option (A, B, or C) best meets their career goals.

2 [CHEM 314](#) Organic Chemistry II does not fulfill this requirement.

Concentration in Biopsychology (BP)

The biopsychology concentration consists of a selection of courses designed to address the needs and interest of students who wish to study biology in more depth while simultaneously exploring psychology and neurobiology. This concentration will help prepare students for the MCAT section related to psychology and provide veterinary students with a background in animal learning/behavior.

Biopsychology Courses

BIOL 430	Advanced Human Anatomy and Physiology I	4
BIOL 431	Advanced Human Anatomy and Physiology II	4
PSYC 372	Biopsychology	3
PSYC 373	Biopsychology Laboratory	2

Additional Psychology/Neuroscience Course

Select 3-4 credits from the following:

3-4

PSYC 304	Principles of Learning
PSYC 376	Brain and Behavior
PSYC 406	Psychology of Communication (Mason Core)
NEUR 327	Cellular, Neurophysiological, and Pharmacological Neuroscience

NEUR 335 Molecular, Developmental, and Systems Neuroscience

Additional Biology Courses

Select 7-8 credits from the following:

7-8

BIOL 305	Biology of Microorganisms
BIOL 306	Biology of Microorganisms Laboratory
BIOL 314	Introduction to Research Design and Analysis
BIOL 322	Developmental Biology
BIOL 323	Lab for Developmental Biology
BIOL 437	Orinthology
BIOL 438	Mammalogy
BIOL 472	Introductory Animal Behavior
BIOL 473	Introductory Laboratory in Animal Behavior
BIOL 483	General Biochemistry

Additional Chemistry Courses

Select one from the following options: 1

3-5

Option A:

CHEM 314	Organic Chemistry II
& CHEM 318	and Organic Chemistry Lab II

Option B:

One chemistry course at the 300 or 400-level 2

Total Credits

26-30

1 Students are encouraged to consult with a biology faculty advisor to determine which option best meets their career goals.

2 **CHEM 314** Organic Chemistry II alone does not fulfill this requirement.

Concentration in Biotechnology and Molecular Biology (BTMB)

The biotechnology and molecular biology concentration consists of a selection of courses that provide essential skills to students who seek employment in the field or wish to include an applied component in their undergraduate training in biology.

Biotechnology Courses

BIOL 305	Biology of Microorganisms	3
BIOL 306	Biology of Microorganisms Laboratory	1
BIOL 385	Biotechnology and Genetic Engineering	3
BIOL 483	General Biochemistry	4

Additional Biology Courses

Select 12 credits from the following, at least one of the courses must include a laboratory:

12

Laboratory Courses:

BIOL 402	Applied and Industrial Microbiology
& BIOL 403	and Techniques in Applied and Industrial Microbiology
BIOL 405	Microbial Genetics

BIOL 452	Immunology
& BIOL 453	and Immunology Laboratory
BIOL 465	Histology
BIOL 486	Molecular Biology and Biotechnology Laboratory

Non-laboratory Courses:

BIOL 314	Introduction to Research Design and Analysis
BIOL 382	Introduction to Virology
BIOL 401	Phage Discovery
BIOL 411	Advanced General Genetics
BIOL 412	Phage Genomics
BIOL 417	Selected Topics in Molecular and Cellular Biology 1
BIOL 418	Current Topics in Microbiology 1
BIOL 420	Vaccines
BIOL 421	Genetics of Human Diseases
BIOL 422	Stem Cell Biology and Regenerative Medicine
BIOL 482	Introduction to Molecular Genetics
BIOL 484	Cell Signaling and Disease
BIOL 497	Special Problems in Biology 1

Additional Chemistry Courses

CHEM 314	Organic Chemistry II	3
CHEM 318	Organic Chemistry Lab II	2

Total Credits 28

1Registration for [BIOL 417](#) Selected Topics in Molecular and Cellular Biology, [BIOL 418](#) Current Topics in Microbiology, or [BIOL 497](#) Special Problems in Biology is subject to approval by the Director of Undergraduate Studies and the Chair of the Department of Biology.

Concentration in Environmental and Conservation Biology (ESCB)

This concentration is offered to students seeking a biology degree that focuses on ecology and organismal biology and prepares them for graduate work or employment in environmental and conservation fields, such as natural resources management, fisheries, forestry, water quality management, aquatic and wetland ecology, and conservation biology. The concentration is staffed and supported by the [Department of Environmental Science and Policy](#).

Environmental and Conservation Biology

BIOL 318	Conservation Biology	3
BIOL 377	Applied Ecology	3

Biology Electives

Select 17 credits from the following: 17

BIOL 309	Oceanography
BIOL 314	Introduction to Research Design and Analysis
BIOL 326	Animal Physiology

BIOL 331	Invertebrate Zoology
BIOL 332	Insect Biology
BIOL 344	Plant Diversity and Evolution
BIOL 345	Plant Ecology
BIOL 350	Freshwater Ecosystems
BIOL 355	Ecological Engineering and Ecosystem Restoration
BIOL 378	Applied Ecology Laboratory
BIOL 379	RS: Ecological Sustainability (Mason Core)
BIOL 437	Orinthology
BIOL 438	Mammalogy
BIOL 439	Herpetology
BIOL 440	Field Biology
BIOL 446	Ecological and Evolutionary Physiology
BIOL 449	Marine Ecology
BIOL 450	Marine Conservation
BIOL 454	Marine Mammal Biology and Conservation
BIOL 455	Marine Mammal Biology and Conservation Field Course
BIOL 457	Reproductive Strategies
BIOL 459	Fungi and Ecosystems
BIOL 468	Vertebrate Natural History
BIOL 472	Introductory Animal Behavior
& BIOL 473	and Introductory Laboratory in Animal Behavior
BIOL 480	The Diversity of Fishes
BIOL 497	Special Problems in Biology 4

Additional Science Courses

Select one from the following options: 2

3-8

Option A:

[CHEM 314](#) Organic Chemistry II
& [CHEM 318](#) and Organic Chemistry Lab II

Option B:

[One chemistry course at the 300 or 400-level](#) 3

Option C:

[GEOL 101](#) Introductory Geology I ([Mason Core](#))
& [GEOL 102](#) and Historical Geology ([Mason Core](#))
& [GEOL 104](#) and Historical Geology Laboratory ([Mason Core](#))

Total Credits

26-31

1Of which, two courses must be selected from the list above and must have either: 2 laboratory courses or 1 laboratory course and 1 field course (consult with an advisor for guidance).

2Students are encouraged to consult with a biology faculty advisor to determine which option best meets their career goals.

3[CHEM 314](#) Organic Chemistry II alone does not fulfill this requirement.

4 Registration in [BIOL 497](#) Special Problems in Biology is subject to approval by the Director of Undergraduate Studies and the Chairman of the Department of Biology.

Concentration in Microbiology (MIB)

This concentration offers lecture and laboratory courses in microbiology to prepare students for employment or advanced study in microbial genetics, physiology, diversity, and related fields.

Microbiology Courses

BIOL 305	Biology of Microorganisms	3
BIOL 306	Biology of Microorganisms Laboratory	1
BIOL 405	Microbial Genetics	4
BIOL 407	Microbial Diversity	4

Biology Electives

Select 11 credits from the following: 11

BIOL 314	Introduction to Research Design and Analysis
BIOL 382	Introduction to Virology
BIOL 385	Biotechnology and Genetic Engineering
BIOL 401	Phage Discovery
BIOL 402	Applied and Industrial Microbiology
BIOL 403	Techniques in Applied and Industrial Microbiology
BIOL 404	Medical Microbiology
BIOL 412	Phage Genomics
BIOL 418	Current Topics in Microbiology
BIOL 420	Vaccines
BIOL 452	Immunology
BIOL 453	Immunology Laboratory
BIOL 459	Fungi and Ecosystems
BIOL 483	General Biochemistry

Additional Chemistry Courses

CHEM 314	Organic Chemistry II	3
CHEM 318	Organic Chemistry Lab II	2

Total Credits 28

**Retroactive
Requirements
Updates:**

Plan of Study:

**Honors
Information:**

Honors in the Major

Admissions

Minimum requirements for invitation:

- GPA in biology courses must be 3.33 or better
- GPA in supporting requirements (math and other science) must be 3.00 or better
- Grade of 'B' or better in [BIOL 213](#) Cell Structure and Function ([Mason Core](#))

Students should apply for admission to the Honors Program during their first or second year at the university. Contact the [Department of Biology](#) for information on applying.

Retention Requirements

Students in honors biology must maintain a biology GPA of 3.33 or better and a supporting GPA of 3.00 or better from the time they have accumulated 30 hours and thereafter. Students who fall below this standard will be given a one semester probationary period in which to bring their GPA back up to the minimum standard.

Requirements to Graduate with Biology Honors

Students are required to take 6 to 8 credits in honors courses in BIOL including three semesters of [BIOL 494](#) Honors Seminar in Biology or two semesters of [BIOL 494](#) Honors Seminar in Biology and one semester of [BIOL 493](#) Honors Research in Biology. [BIOL 498](#) Research Seminar may count towards one of the semester requirements of [BIOL 494](#) Honors Seminar in Biology. The GPA requirements are as follows:

- Minimum 3.33 GPA in honors biology courses
- Minimum 3.33 GPA in biology requirements
- Minimum 3.00 GPA in supporting requirements
- Minimum 3.00 GPA overall

**Accelerated
Description/Dual
Degree
Description:**

**INTO-Mason
Requirements:**

**College
Requirements &
Policies:**

**Department /
Academic Unit
Requirements &
Policies:**

Program Outcomes

Additional Program Information

This information is required by the Office of Accreditation and Program Integrity.

**Courses offered via
distance (if
applicable):**

**Indicate whether
students are able**

What is the primary delivery format for the program?
Face-to-Face Only

Does any portion of this program occur off-campus?

No

Off-campus details:

Are you working with a vendor / other collaborators to offer your program?

No

Please explain:

**Related
Departments**

Could this program prepare students for any type of professional licensure, in Virginia or elsewhere?

No

Please explain:

Are you adding or removing a licensure component?

No

Please explain:

Additional SCHEV & SACSCOC Information

Are you changing the total number of credits required for this program?

No

Are you changing the delivery format in any way (e.g adding an online option)?

No

Are you adding/removing a licensure option which was approved by SCHEV?

No

Will any portion of this program be offered at an off-campus location?

No

What off-campus location(s)? List all

**What percentage of credits toward this program are offered at the off-campus location(s)?
Please list percentages by site (i.e. 15% at Site A, 35% at Site B etc.)**

Will this program change affect any specialized accreditation?

No

Is the content of the new program closely related to that of an existing approved program?

No

Which existing approved program(s)?

Is this new program considered to be "advancing the degree level of a currently approved program" (i.e. existing content is at lower degree level, new content is at the higher degree level)?

No

Which existing approved program(s)?

Is this new program considered to be "lowering the degree level of a currently approved program" (i.e. existing content is at higher degree level, new content is at the lower degree level)?

No

Which existing approved program(s)?

Does this change represent a repackaging of content in an existing approved degree/certificate program?

No

Which existing approved program(s)?

Percentage of total credits containing new course content, excluding gen ed courses for undergraduate program: ("New content" means content that is not currently included in an existing approved degree/certificate program.) Please choose a percentage (i.e. 0%-100%)

less than 25%

Are the total credits for the program increasing or decreasing by more than 3 credits?

No

Will any additional equipment/facilities be needed?

No

Description of institutional impact:

Will any additional faculty be required?

No

Description of institutional impact:

Will any additional financial resources be needed?

No

Description of institutional impact:

Will any additional library/learning resources needed?

No

Description of institutional impact:

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf program? No

Green Leaf Designation

Sustainability-focused academic programs require at least one green leaf course. Either that course is itself sustainability-focused or else the program requires a set of sustainability-related courses with aggregated

Relationship to Existing Courses

Relationship to Existing Programs

List sustainability-focused courses currently required in the degree

Sustainability-related academic programs either require at least one sustainability-related course or else offer one green leaf course as an option or elective *

List sustainability-related courses currently required in the degree

Does this program cover material which crosses into another department?

No

**Impacted
Departments**

**Additional
Attachments**

SCHEV Proposal

Executive Summary

**Reviewer
Comments**

**Additional
Comments**

Is this course required of all students in this degree program?

%wi_required.eshtml%

**Attached
Document**

Key: 17