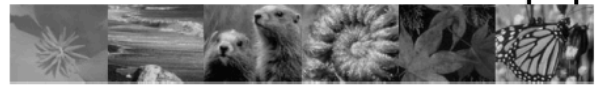




## The Department of Biology

- ▶ Dr. Geraldine Grant , Chairperson
- ▶ Dr. Charles Madden, Assistant Chairperson
- ▶ Dr. Deborah Polayes, Director of Undergraduate Studies
- ▶ Dr. Ann VerHoeven, Director of Medical Laboratory Sciences
- ▶ Dr. Malda Kocache, Biology Honors Coordinator
- ▶ **Advisers**
  - ▶ Dr. Valerie Olmo
  - ▶ Dr. Charles Madden
  - ▶ Dr. Lorelei Crerar
  - ▶ Dr. Arndt Laemmerzahl
  - ▶ Dr. Brenda Tondi
  - ▶ Dr. Alexandra Masterson



### ▶ Undergraduate degrees

- ▶ **BS in Biology**
- ▶ **BA in Biology**
- ▶ **BS in Medical Laboratory Sciences**
- ▶ **BS in Biology**
  - ▶ Biotechnology and Molecular Biology Concentration
  - ▶ Microbiology Concentration
  - ▶ Environmental and Conservation Biology Concentration
  - ▶ BioPsychology
  - ▶ Bioinformatics

## BA or BS?

▶ That is the question.



## MASON CORE REQUIREMENTS

### • BS AND BA REQUIREMENTS

- ENGH 101 (100) (3)
- COMM 100/101 (3)
- Literature(3)\*
- Fine Arts(3)\*
- Western Civilization (3) HIST 100 or HIST 125 (non-transfer students)
- Social & Behavioral Science (3)\*
- Global Understanding(3)\*
- ENGH 302 (C or better) (3)
- Synthesis (3)\*

### ▶ ADDITIONAL BA REQUIREMENTS

- ▶ Foreign Language, Elementary level Foreign Language, Intermediate level
- ▶ Philosophy or Religious Studies (3)
- ▶ Additional Social & Behavioral Science (3)
- ▶ Non-Western Culture (3)

**BIOLOGY REQUIREMENTS**  
Must be completed with a C or better in all core courses (Overall Biology GPA  $\geq 2.0$ )

BIOL 213 (4) <b>Cell Biology</b> (C or Better before you can take another biology class)	▶ BIOLOGY ELECTIVE CREDITS
BIOL 214 (4) <b>Introduction to Biostatistics</b> (Corequisite: BIOL 213)	▶ BA – 11 CREDITS
BIOL 311 (4) <b>Genetics</b> (Prerequisite: BIOL 213, BIOL214 is recommended)	▶ 4 credits may be 100-200 level
BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL213 and 214; Writing Intensive)	▶ 1 Upper Division Lab Course
BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213)	▶ BS – 23 CREDITS
• <b>Final Grade for Graduation is a C or Better in ALL the core classes.</b>	▶ 8 Credits may be at the 100-200 level
	▶ 2 Upper Division Lab Course

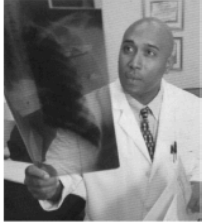
**SUPPORTING REQUIREMENTS**  
Must be completed with a minimum 2.0 GPA

- |  |   |
|--|---|
| ▶ <b>BS</b>  | ▶ <b>BA</b>   |
| ▶ CHEM 211, 213 and 212, 214 (8) General Chemistry   | ▶ CHEM 211, 213 and 212, 214 (8) General Chemistry  |
| ▶ CHEM 313, 315 (5) Organic Chemistry I              | ▶ MATH 111 or 113, (3-4) or MATH 123 and 124 (6)  |
| ▶ CHEM 314, 318 (5)                                  | ▶ CDS 130 (3)   |
| ▶ or GEOL 101, 102 (8) or CHEM 300-400 (not 314) (3) | ▶ 2 Courses chosen from the following: ASIR 103, 111, 113; GEOL 101, 102; PHYS 243, 245 (6-8) |
| ▶ PHYS 243, 244 and 245, 246 (8)                     |   |
| ▶ MATH 111 or 113, (3-4) or MATH 123 and 124 (6)     |   |
| ▶ CDS 130 (3)  |   |

**What type of career am I interested in?**



**Pre-Med, Pre-Dental, Pre-PT, Pre-PA**

- |  |   |
|--|---|
|  | ▶ 1 Year Biology (213/311)  |
|  | ▶ 1 Year Math   |
|  | ▶ 1 Year General Chemistry  |
|  | ▶ 1 Year Organic Chemistry  |
|  | ▶ 1 Year Physics  |
|  | ▶ PYSC100   |
|  | ▶ SOC1101   |
|  | ▶ Pre-Health Advisor :  |
|  | ▶ <a href="http://prehealth.amu.edu/">http://prehealth.amu.edu/</a> |



- ▶ Which biology course should you start with?
- ▶ BIOL 213 (Cell Biology) or BIOL 103 (General Biology) ?

## What classes should I take?



- ▶ 2 Science Classes
  - ▶ BIOL 213 or 103 (4)
  - ▶ CHEM 211/213 (4) or PHYS 243/244 (4)
- 1 Mason Core Class (3) + BIOL 214 (4) OR
- 2 Mason Core Classes


## Course Alternative Worksheet

- ▶ BIOL 213 or BIOL 103
- ▶ CHEM 211/213 or PHYS 243/244
- ▶ BIOL 214
- ▶ PICK 1 (or 2 if no BIOL214) OF THE FOLLOWING:
  - ▶ ENGH 101 or COMM 100 or HIST 100/125
  - ▶ Social & Behavioral Science (see list)
  - ▶ CDS 130 or Math (111 or 113, or MATH123)

## Other things to consider when choosing courses


- ▶ AP / IB Credit
  - ▶ <http://admissions.gmu.edu/exams/ExamAdvancedPlacement.asp>
  - ▶ <http://admissions.gmu.edu/exams/examBaccalaureateInternational.asp>

AP Exam	Score	Course	Credit
Art History	3	ARTH200	3
	4 or 5	ARTH200, ARTH201	4
Biology	3	BOL109	3
	4	BOL103	4
	5	BOL103, BOL107/106	5
Calculus AB	3	MATH 129	3
	4 or 5	MATH 113	4
Calculus BC	3	MATH 125	3
	4 or 5	MATH 113, MATH 114	5
Calculus AB subgrade	3	MATH 129	3
	4 or 5	MATH 113	4
Chemistry	3	CHM 103	4
	4 or 5	CHM201/203	4
Chinese Language and Culture	3	CHN 102	3
	4	CHN 102, CHN 201	4
	5	CHN 102, 201, 302	5
Computer Science A	3	CS elective	4
	4 or 5	CS 112	4
Computer Science Principles	3	CS elective	3
	4 or 5	CS 100	3
English Language & Composition	4	ENGL 101	3
	5	ENGL 101, ENGL 201	4
English Literature & Composition	4	ENGL 101	3

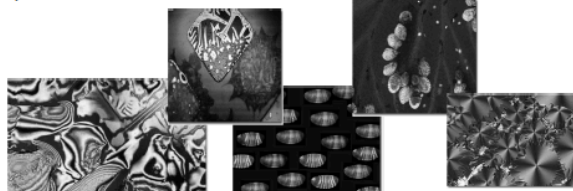


## And another thing.....

- ▶ See an Advisor at least once a year.
- ▶ Go to [www.biology.gmu.edu](http://www.biology.gmu.edu) to make an appointment
- ▶ Access your Degree Evaluation and know exactly where you stand!
- ▶ Don't skip class! Take responsibility for your learning!



- ▶ Biology Office: Exploratory Hall Suite 1200
- ▶ Quick Questions: email [biology@gmu.edu](mailto:biology@gmu.edu)
- ▶ It's going to be a great year!!!!
- ▶



# Other Options

## MEDICAL LABORATORY SCIENCES

## BS-Medical Laboratory Sciences

Dr. Ann VerHoeven Director

### Required Courses:

- ▶ BIOL 213
  - ▶ BIOL 214
  - ▶ BIOL 311
  - ▶ BIOL 305 + BIOL 306
  - ▶ BIOL 452 + BIOL 453
  - ▶ BIOL 430 + BIOL 431
  - ▶ Chemistry - 18 credits
  - ▶ MLAB 200, MLAB 300
  - ▶ Math (6-8)
    - ▶ MATH 111, 113
  - ▶ Mason Core requirements
- ▶ 3 + 1 program
    - ▶ Three years here, 90 credits
    - ▶ One year of hospital clinical training
    - ▶ 30 credits at one of five affiliated hospitals
  - ▶ 4 + 1 program
    - ▶ BS in Biology
    - ▶ One year clinical training

## Honors Program

### Minimum Requirements for consideration:

- ▶ GPA in Biology courses  $\geq 3.33$
- ▶ GPA in supporting requirements  $\geq 3.0$
- ▶ Grade of B or better in Biology 213

### Graduation Requirements:

- ▶ Biology Honors courses (6-7) including:
  - ▶ 3 semesters of BIOL 494 (1), one in senior year, or
  - ▶ 1 semester of Biology 493 (1-2) & 2 semesters of BIOL 494.



## Student Organizations

- ▶ Biology Club
- ▶ Alpha Epsilon Delta
  - ▶ National Pre- Medical Honor Society
- ▶ American Society for Microbiology Student Chapter
- ▶ Medical Technology Club
- ▶ Pre-Dental Society
- ▶ Pre-Optometry Club
- ▶ Geo Club

## BS BIOLOGY

For Students who have taken AP/IB biology regardless of AP/IB score

### Starting with BIOL213

Fall (Semester 1)	Credits	Spring (Semester 2)	Credits
<b>BIOL213</b>	<b>4</b>	<b>BIOL300</b>	<b>4</b>
Mason Core	3	MATH	3-4
CHEM211, CHEM213	4	CHEM212, CHEM214	4
Mason Core	3	Mason Core	3
<b>BIOL101</b> or Univ100	1		
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>14-15</b>

Can take Biol214 with Biol213 first semester.

Fall (Semester 3)	Credits	Spring (Semester 4)	Credits
<b>BIOL214</b>	<b>4</b>	<b>BIOL 311</b>	<b>4</b>
Mason Core or MATH*	3-4	Mason Core	3
Chem 313	3	CHEM 314**	3
Chem 315	2	CHEM 318**	2
Mason Core	3	Mason Core	3-4
<b>TOTAL</b>	<b>15-16</b>	<b>TOTAL</b>	<b>15-16</b>

\* 2<sup>nd</sup> math not required but many professional schools require 2 semesters calculus

\*\* Can take 2 semesters GEOL or an >300 chemistry course instead

Fall (Semester 5)	Credits	Spring (Semester 6)	Credits
<b>BIOL elective with lab</b>	<b>4</b>	<b>BIOL elective with lab</b>	<b>4</b>
Mason Core	3-4	<b>BIOL elective</b>	<b>3</b>
Physics lecture	3	Physics lecture	3
Physics Lab	1	Physics lab	1
elective	3	Mason Core	3
<b>TOTAL</b>	<b>15-16</b>	<b>TOTAL</b>	<b>14</b>

Fall (Semester 7)	Credits	Spring (Semester 8)	Credits
<b>BIOL308</b>	<b>5</b>	<b>BIOL elective</b>	<b>3</b>
<b>BIOL elective</b>	<b>3</b>	<b>BIOL elective</b>	<b>3</b>
ENGH302	3	<b>BIOL elective</b>	<b>3</b>
Elective	3-4	Synthesis	3
		Elective	3
<b>TOTAL</b>	<b>14-15</b>	<b>TOTAL</b>	<b>15</b>

Note: need 23 credits biology elective. 2 courses with labs at >300 level. Can take Senior seminar as a biology elective. Need 120 credits to graduate

BS BIOLOGY

**Starting with BIOL103**

Fall (Semester 1)	Credits	Spring (Semester 2)	Credits
<b>BIOL103</b>	<b>4</b>	<b>BIOL213</b>	<b>4</b>
Mason Core	3	MATH	3-4
CHEM211, CHEM213	4	CHEM212, CHEM214	4
Mason Core	3	Mason Core	3
<b>BIOL101</b> or Univ100	1		
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>14-15</b>

Fall (Semester 3)	Credits	Spring (Semester 4)	Credits
<b>BIOL214</b>	<b>4</b>	<b>BIOL300</b>	<b>4</b>
Mason Core or MATH*	3-4	Mason Core	3
Chem 313	3	CHEM 314**	3
Chem 315	2	CHEM 318**	2
Mason Core	3	Mason Core	3
<b>TOTAL</b>	<b>15-16</b>	<b>TOTAL</b>	<b>15</b>

- 2<sup>nd</sup> math not required but many professional schools require 2 semesters calculus
- \*\* can take 2 semesters GEOL or an >300 chemistry course instead

Fall (Semester 5)	Credits	Spring (Semester 6)	Credits
<b>BIOL elective with lab</b>	<b>4</b>	<b>BIOL elective with lab</b>	<b>4</b>
Mason Core	3-4	<b>BIOL311</b>	<b>4</b>
Physics lecture	3	Physics lecture	3
Physics Lab	1	Physics lab	1
elective	3	Mason Core	3
<b>TOTAL</b>	<b>14-15</b>	<b>TOTAL</b>	<b>15</b>

Fall (Semester 7)	Credits	Spring (Semester 8)	Credits
<b>BIOL308</b>	<b>5</b>	<b>BIOL elective</b>	<b>3</b>
<b>BIOL elective</b>	<b>3</b>	<b>BIOL elective</b>	<b>3-4</b>
<b>BIOL elective</b>	<b>3</b>	Synthesis	3
Mason Core	3	Elective	3
		Elective	3
<b>TOTAL</b>	<b>14</b>	<b>TOTAL</b>	<b>15-16</b>

Note: need 23 credits biology elective. 2 courses with labs at >300 level. Can take Senior seminar as a biology elective. Need 120 credits to graduate

**GEORGE MASON UNIVERSITY**  
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**B.A. DEGREE IN BIOLOGY (1200 Exploratory Hall, 703-993-1050)**  
**2020-2021 Catalog**

Completed	<b>MASON CORE REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (100 or 101) (3)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
	Social and Behavioral Science (3)		
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
	Synthesis (3)		

\*A listing of courses satisfying many of the general education requirements can be found on the reverse side of this sheet

**COLLEGE LEVEL REQUIREMENTS (9-21)**

	Foreign Language, Elementary level (0-6)		
	Foreign Language, Intermediate level (0-6)		
	Philosophy or Religious Studies (3) <sup>1, 2, 3*</sup>		
	Additional Social & Behavioral Science (3) <sup>4,5*</sup> (ADJ, ECON, GEOG [not 102, 209], GOVT, ANTH, PSYC, SOCI)		
	Non-Western Culture (3) <sup>3,5*</sup>		

<sup>1,2,3,4,5</sup> Requirements with matching numbers can use specific single course to fulfill both requirements

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (21)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisites BIOL 213 required, BIOL 214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213, 214 required, BIOL 311 is recommended) Writing Intensive		
	BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213, required)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (11)**

Courses chosen from BIOL: (List choices below) <b>[One Upper Division Lab Course Required]</b>		
A. BIOL	B. BIOL	C: BIOL

**MAJOR SUPPORTING REQUIREMENTS (20-23)**

	CHEM 211, 213 (4) and CHEM 212, 214 (4) <b>General Chemistry</b>		
	One of the following MATH 111, or 113, or (MATH123 and MATH124)		
	CDS130 (3) or any course that fulfills this requirement		
	2 Courses chosen from the following: ASTR 103, 111, 113; GEOL 101, 102; PHYS 243, 245 (6-8)		

**GENERAL ELECTIVES (12-32) (List courses)**

<b>MINIMUM HOURS TO GRADUATE: 120</b>
<b>UPPER DIVISION CREDITS (300+ level) (minimum 45)</b>
<b>Minimum GPA: (overall 2:00, Major 2.0 [Biology majors must earn a minimum grade of C in all biology core courses listed above], Supporting 2.0)</b>

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**GEORGE MASON UNIVERSITY**  
**COLLEGE OF SCIENCE**  
**B.S. DEGREE IN BIOLOGY (1200 Exploratory Hall, 703-993-1050)**  
**2020-2021 Catalog**

Completed	<b>MASON CORE REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (3) (100 or 101)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
	Social and Behavioral Science (3)		
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
	Synthesis (3)		

\*A listing of courses satisfying many of the general education requirements can be found on the reverse side of this sheet

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (21)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisite: BIO 213 required, BIOL214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213 and 214 required, BIOL311 is recommended) Writing Intensive		
	BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213 required)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (23)**

Courses chosen from BIOL: (List choices below) [Two upper division lab courses required]			
A. BIOL	B. BIOL	C. BIOL	D. BIOL
E. BIOL	F. BIOL	G. BIOL	H. BIOL

**MAJOR SUPPORTING REQUIREMENTS (30-35)**

	CHEM 211, 213 (4) and CHEM 212, 214 (4) <b>General Chemistry</b>		
	CHEM 313, 315 (5) <b>Organic Chemistry I</b>		
	CHEM 314, 318 (5) or GEOL 101, 102 (8) or CHEM 300-400 (not 314) (3)		
	PHYS 243, 244 and 245, 246 (8)		
	One of the following MATH 111, or 113, or (MATH123 and MATH124)		
	CDS130 (3) or IT104 (3)		

**GENERAL ELECTIVES (14-19) (List courses)**


**MINIMUM HOURS TO GRADUATE: 120**

**UPPER DIVISION CREDITS (300+ level) (minimum 45)**

**Minimum GPA: (overall 2:00, Major 2.0** [Biology majors must earn a minimum grade of C in all biology core courses listed above], **Supporting 2.0)**

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**GEORGE MASON UNIVERSITY - COLLEGE OF SCIENCE**  
**B.S. DEGREE IN BIOLOGY**  
**CONCENTRATION IN BIOINFORMATICS**  
**(1200 Exploratory Hall, 703-993-1050)**  
**2020-2021 Catalog**

Completed	<b>MASON CORE REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (3) (100 or 101)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
	Social and Behavioral Science (3)		
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
	Synthesis (3)		

\*A listing of courses satisfying many of the general education requirements can be found on the reverse side of this sheet

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (21)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisites: BIOL 213 required, BIOL 214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213, 214 required, BIOL 311 is recommended) Writing Intensive		
	BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213, required)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (23)**

	CDS 230 (3) <b>Modeling and Simulation I</b>		
	BINF 401 (3) <b>Bioinformatics and Computational Biology I</b>		
	BINF 402 (3) <b>Bioinformatics and Computational Biology II</b>		
	BIOL 312 (4) <b>Biostatistics for Bioinformatics</b>		
	BIOL 401 (3) <b>Phage Discovery</b>		
	BIOL 412 (3) <b>Phage Genomics</b>		
	Biology Elective lab: 305 & 306, 320, 322 & 323, 331, 332, 334, 336, 344, 345, 350, 355, 379, 385 & 486, 405, 407, 430, 431, 437, 438, 439, 452 & 453, 454 & 455, 465, 468, 472 & 473, 484 & 485, 509 & 510, 543, 538		
A. BIOL	B. BIOL	C. BIOL	D. BIOL

**MAJOR SUPPORTING REQUIREMENTS (32-33)**

	CHEM 211, 213 (4) and CHEM 212, 214 (4) <b>General Chemistry</b>		
	CHEM 313, 315 (5) <b>Organic Chemistry I</b>		
	CHEM 314, 318 (5) or GEOL 101 and 102 (8), or CHEM 300-400 (not 314) (3)		
	PHYS 243, 244 and 245, 246 (8)		
	One of the following MATH 111, or 113, or (MATH 123 and MATH 124)		
	CDS 130 (3) is recommended to fulfill the Computer Science requirement		

**GENERAL ELECTIVES (16-17) (List courses)**

<b>MINIMUM HOURS TO GRADUATE: 120</b>		
<b>UPPER DIVISION CREDITS (300+ level) (minimum 45)</b>		
<b>Minimum GPA: (overall 2.00, Major 2.0 [Biology majors must earn a minimum grade of C in all biology core courses listed above], Supporting 2.0)</b>		

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**GEORGE MASON UNIVERSITY**  
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**(1200 Exploratory Hall, 703-993-1050)**  
**2020-2021 Catalog**

Completed	<b>MASON CORE REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (3) (100 or 101)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
	Social and Behavioral Science (3)		
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
	Synthesis (3)		

\*A listing of courses satisfying many of the general education requirements can be found on the reverse side of this sheet

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (21)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisites: BIOL 213 required, BIOL214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213 and 214, required, BIOL311 is recommended) Writing Intensive		
	BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213, required)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (23)**

	BIOL 430 (4) <b>Advanced Human Anatomy and Physiology I</b>		
	BIOL 431 (4) <b>Advanced Human Anatomy and Physiology II</b>		
	PSYC 372 (3) <b>Physiological Psychology</b>		
	PSYC 373 (2) <b>Physiological Psychology Lab</b>		
	Chose (3-4 credits) from: (PSYC304, PSYC406, PSYC376, NEUR327, NEUR335)		
	Chose (6-7 credits) from: (BIOL305, BIOL306, BIOL314, BIOL322, BIOL323, BIOL437, BIOL438, BIOL472, BIOL473, BIOL483)		

**MAJOR SUPPORTING REQUIREMENTS (32-33)**

	CHEM 211, 213 (4) and CHEM212, 214 (4) <b>General Chemistry</b>		
	CHEM 313, 315 (5) <b>Organic Chemistry I</b>		
	CHEM 314, 318 (5) <b>Organic Chemistry II</b> or CHEM 300-400 (not 314) (3)		
	PHYS 243, 244 and 245, 246 (8)		
	One of the following MATH 111, 113, or (MATH123 and MATH124)		
	CDS130 (3)		

**GENERAL ELECTIVES (16-17) (List courses)**

<b>MINIMUM HOURS TO GRADUATE: 120</b>			
<b>UPPER DIVISION CREDITS (300+ level) (minimum 45)</b>			
<b>Minimum GPA: (overall 2:00, Major 2.0 [Biology majors must earn a minimum grade of C in all biology core courses listed above], Supporting 2.0)</b>			

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**GEORGE MASON UNIVERSITY - COLLEGE OF SCIENCE**  
**B.S. DEGREE IN BIOLOGY**  
**CONCENTRATION IN BIOTECHNOLOGY and MOLECULAR BIOLOGY**  
**(1200 Exploratory Hall, 703-993-1050)**  
**2020-2021 Catalog**

Completed	<b>MASON CORE REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (3) (100 or 101)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
	Social and Behavioral Science (3)		
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
	Synthesis (3)		

\*A listing of courses satisfying many of the general education requirements can be found on the reverse side of this sheet

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (21)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisites: BIOL 213 required. BIOL 214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213, 214 Required, BIOL 311 is recommended) Writing Intensive		
	BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213, required)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (23)**

	BIOL305 (3) with BIOL306 (1) <b>Biology of Microorganisms</b> (lecture/lab)		
	BIOL 385 (3) <b>Biotechnology and Genetic Engineering</b>		
	BIOL 483 (4) <b>General Biochemistry</b>		
	Courses chosen from: (List choices bellow) BIOL314, 382, 401, 402. 403, 405, 411, 412, 417, 418, 420, 421, 422, 452, 453, 465, 482, 484, 486, 497 (12 credits) (Laboratories associated with these courses are required. At least one of these electives must include a laboratory)		
A. BIOL	B. BIOL	C. BIOL	D. BIOL

**MAJOR SUPPORTING REQUIREMENTS (32-33)**

	CHEM 211, 213 (4) and CHEM 212, 214 (4) <b>General Chemistry</b>		
	CHEM 313, 315 (5) <b>Organic Chemistry I</b>		
	CHEM 314, 318 (5) <b>Organic Chemistry II</b>		
	PHYS 243, 244 and 245, 246 (8)		
	One of the following MATH 111, or 113, or (MATH123 and MATH124)		
	CDS130 (3)		

**GENERAL ELECTIVES (16-17) (List courses)**

<b>MINIMUM HOURS TO GRADUATE: 120</b>			
<b>UPPER DIVISION CREDITS (300+ level) (minimum 45)</b>			
<b>Minimum GPA: (overall 2.00, Major 2.0 [Biology majors must earn a minimum grade of C in all biology core courses listed above], Supporting 2.0)</b>			

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**GEORGE MASON UNIVERSITY - COLLEGE OF SCIENCE**  
**B.S. DEGREE IN BIOLOGY**  
**CONCENTRATION IN ENVIRONMENTAL AND CONSERVATION BIOLOGY**  
**(1200 Exploratory Hall, 703-993-1050)**  
**2020-2021 Catalog**

Completed	<b>MASON CORE REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (3) (100 or 101)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
	Social and Behavioral Science (3)		
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
	Synthesis (3)		

\*A listing of courses satisfying many of the general education requirements can be found on the reverse side of this sheet

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (21)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisites: BIOL 213 required, BIOL 214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213, 214, required, BIOL 311 is recommended) Writing Intensive		
	BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213, required)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (23)**

	BIOL318 (3) <b>Conservation Biology</b>		
	BIOL 377 (3) <b>Applied Ecology</b>		
	16 credits: (2 courses MUST be either laboratory or Laboratory + field work) BIOL309, 314, 326, 331, 332, 344, 345, 350, 355, 378, 379, 437, 438, 439, 440, 446, 449, 450, 454, 455, 457, 459, 468, 472 and 473, 480.		
A. BIOL	B. BIOL	C. BIOL	D. BIOL

**MAJOR SUPPORTING REQUIREMENTS (32-33)**

	CHEM 211,213 (4) and CHEM212, 214 (4) <b>General Chemistry</b>		
	CHEM 313, 315 (5) <b>Organic Chemistry I</b>		
	CHEM 314, 318 (5) or GEOL101 and 102 (8), or CHEM 300-400 (not 314) (3)		
	PHYS 243, 244 and 245, 246 (8)		
	One of the following MATH 111, or 113, or (MATH123 and MATH124)		
	CDS130 (3) or IT104 (3)		

**GENERAL ELECTIVES (16-17) (List courses)**

<b>MINIMUM HOURS TO GRADUATE: 120</b>			
<b>UPPER DIVISION CREDITS (300+ level) (minimum 45)</b>			
<b>Minimum GPA: (overall 2:00, Major 2.0 [Biology majors must earn a minimum grade of C in all biology core courses listed above], Supporting 2.0)</b>			

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**GEORGE MASON UNIVERSITY**  
**COLLEGE OF SCIENCE**  
**B.S. DEGREE IN BIOLOGY – CONCENTRATION IN MICROBIOLOGY**  
**(1200 Exploratory Hall, 703-993-1050)**  
**2020-2021 Catalog**

Completed	<b>MASON CORE REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (3) (100 or 101)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
	Social and Behavioral Science (3)		
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
	Synthesis (3)		

\*A listing of courses satisfying many of the Mason Core requirements can be found on the reverse side of this sheet

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (21)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisites: BIOL 213 required, BIOL 214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213, 214 required, BIOL 311 is recommended) Writing Intensive		
	BIOL 300 (4) <b>Biodiversity</b> (Prerequisite: BIOL 213, required)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (23)**

	BIOL305 (3) with BIOL306 (1)		
	BIOL 405 (4)		
	BIOL 407 (4)		
	Courses chosen from: (List choices bellow) BIOL314, 382, 385, 401, 402, 403, 404, 412, 418, 420, 452, 453, 459, 483 (10)		
A. BIOL	B. BIOL	C. BIOL	

**MAJOR SUPPORTING REQUIREMENTS (32-33)**

	CHEM 211, 213 (4) and CHEM212, 214 (4) <b>General Chemistry</b>		
	CHEM 313, 315 (5) <b>Organic Chemistry I</b>		
	CHEM 314, 318 (5) <b>Organic Chemistry II</b>		
	PHYS 243, 244 and 245, 246 (8)		
	One of the following MATH 111, or 113, or (MATH123 and MATH124)		
	CDS130 (3) or IT104 (3)		

**GENERAL ELECTIVES (16-17) (List courses)**

<b>MINIMUM HOURS TO GRADUATE: 120</b>			
<b>UPPER DIVISION CREDITS (300+ level) (minimum 45)</b>			
<b>Minimum GPA: (overall 2:00, Major 2.0 [Biology majors must earn a minimum grade of C in all biology core courses listed above], Supporting 2.0)</b>			

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## Literature

ARAB 325 - Major Arab Writers/Stories  
CHIN 310 - Survey of Chinese Literature  
CHIN 311 - Modern Chinese Literature  
CHIN 325 - Major Chinese Writers  
CHIN 328 - Asian American Women Writers  
CLAS 250 - Classical Mythology  
CLAS 260 - Legacy of Greece and Rome  
CLAS 340 - Greek and Roman Epic  
CLAS 350 - Greek and Roman Tragedy  
CLAS 360 - Greek and Roman Comedy  
CLAS 380 - Greek and Roman Novels  
ELED 258 - Children's Lit for Teaching in Diverse Settings  
ELED 358 - Children's Lit for Teaching in Diverse Settings  
ENGL 201 - Reading and Writing -Texts  
ENGL 202 - Texts and Contexts  
ENGL 203 - Western Literary Tradition  
ENGL 204 - Western Literary Traditions  
FREN 325 - Major French Writers  
FREN 329 - Prob of West Civ French Lit  
FRLN 330 - Topics in World Literature  
GERM 325 - Major Writers  
HIST 334 - American Scriptures  
INTS 101 - Narratives of Identity  
ITAL 320 - Topics Italian Film and Literature  
ITAL 325 - Major Italian Writers  
JAPA 340 - Topics Japanese Literature  
KORE 311 - Modern Korean Literature  
PHIL 253 - Philosophy and Literature  
RELI 235 - Religion and Literature  
RELI 333 - Spiritual Autobiography  
RUSS 325 - Major Russian Writers  
RUSS 326 - Survey of Russian Literature  
RUSS 327 - Survey of Russian Literature  
SPAN 325 - Major Hispanic Writers

## Fine Arts

ARTH 101 - Intro to the Visual Arts  
ARTH 102 - Symbols and Stories in Art  
ARTH 103 - Introduction to Architecture  
ARTH 104 - Design in the 20<sup>th</sup> Century  
ARTH 200 - Survey of Western Art  
ARTH 201 - Survey of Western Art  
ARTH 203 - Survey of Asian Art  
ARTH 204 - Survey of Latin American Art  
ARTH 206 - Survey of African Art  
ARTH 311 - Design of Cities  
ARTH 321 - Greek Art and Archaeology  
ARTH 322 - Roman Art and Archaeology  
ARTH 324 - The Hellenistic World  
ARTH 333 - Early Christian Byzantine Art  
ARTH 334 - Western Medieval Art  
ARTH 335 - Arts of Medieval England  
ARTH 340 - Early Renaissance Art in Italy  
ARTH 341 - Northern Renaissance Art  
ARTH 342 - High Renaissance Art Italy  
ARTH 343 - The Art of Venice  
ARTH 344 - Baroque Art Italy, France, and Spain,  
ARTH 345 - Northern Baroque Art,  
ARTH 350 - American Architecture & Material Culture  
ARTH 360 - 19th-Century European Art  
ARTH 362 - 20th-Century European Art  
ARTH 370 - Arts of the United States  
ARTH 372 - 18th -19th-Century US Art  
ARTH 373 - 20th-Century US Art  
ARTH 376 - 20th-C Latin American Art  
AVT 103 - Intro to the Artist's Studio  
AVT 104 - Studio Fundamentals I  
AVT 215 - Typography  
AVT 222 - Drawing I  
AVT 232 - Painting I  
AVT 243 - Printmaking I  
AVT 252 - Fundamentals of Photography  
AVT 253 - Intro to Digital Photography  
AVT 262 - Sculpture I  
AVT 272 - Interdisciplinary Arts  
AVT 385 - EcoArt  
DANC 101 - Dance Appreciation  
DANC 119 - Dance in Afro-Latino Culture:  
DANC 125 - Beginning Modern Dance  
DANC 131 - Beginning Jazz Technique  
DANC 145 - Beginning Ballet  
DANC 161 - Beginning Tap Dance  
DANC 225 - Beginning Interm Modern Dance  
DANC 231 - Interm Jazz Technique  
DANC 245 - Beginning Interm Ballet  
DANC 301 - What is Dance?  
DANC 325 - Modern/Contemporary Dance III  
DANC 331 - Advanced Jazz Dance  
DANC 345 - Ballet III  
DANC 390 - Dance History I  
DANC 391 - Dance History II  
DANC 425 - Modern/Contemporary Dance IV  
ENGL 315 - Folklore and Folklife  
ENGL 370 - Introduction to Documentary  
ENGL 372 - Introduction to Film  
ENGL 396 - Intro to Creative Writing  
FAVS 225 - The History of World Cinema  
GAME 101 - Intro to Game Design  
INTS 103 - Human Creativity: Science & Art  
INTS 245 - Visual Culture and Society  
INTS 346 - Art as Social Action  
MUSI 100 - Fundamentals of Music  
MUSI 101 - Intro to Classical Music  
MUSI 102 - Popular Music in America  
MUSI 106 - Fundamentals of Rock, Blues, & Jazz  
MUSI 107 - The Development of Jazz  
MUSI 280 - Athletic and Ceremonial Ensemble  
MUSI 301 - Music in Motion Pictures  
MUSI 302 - American Musical Theater  
MUSI 380 - Wind Ensemble (1 cr)  
MUSI 381 - University Chorale (1 cr)  
MUSI 382 - Piano Ensemble (1cr)

MUSI 383 - Symphonic Band (1cr)  
MUSI 385 - Chamber Singers (1cr)  
MUSI 387 - Symphony Orchestra (1cr)  
MUSI 389 - Jazz Ensemble (1cr)  
MUSI 485 - Chamber Ensembles (1cr)  
PHIL 156 - What Is Art?  
THR 101 - Theatrical Medium  
THR 150 - Greek to Restoration  
THR 151 - Romanticism to Present  
THR 210 - Acting I  
THR 230 - Intro to Technical Theater  
THR 395 - Theater -the Life of the Mind  
THR 411 - Directing on Screen  
THR 412 - Performance on Screen

## Social and behavioral science

AFAM 200 - Intro to African American Studies  
ANTH 114 - Intro to Cultural Anthro  
ANTH 120 - Unearthing the Past:  
ANTH 363 - Humans, Disease and Death  
ANTH 372 - Culture of Disaster, Risk & Hope  
ANTH 396 - Issues in Anthropology: Social Sciences  
BUS 100 - Business and Society  
CONF 101 - Conflict and Our World  
CONS 410 - Human Dimensions in Conservation  
CRIM 100 - Intro to Criminal Justice  
ECON 100 - Economics for the Citizen  
ECON 103 - Microeconomic  
ECON 104 - Macroeconomic  
ECON 105 - Environ Econ for the Citizen  
ECON 110 - Intro to Economic Science  
ECON 111 - Lab Methods in Economics (iw/ ECON 110)  
ECON 367 - Money, Markets & Economic Policy  
EDEP 350 - Perspectives on Achievement Motivation  
EDSE 203 - Disability in American Culture  
EDUC 372 - Human Dev, Learning, and Teaching  
GGS 103 - Human Geography  
GOVT 101 - Democratic Theory/ Practice  
GOVT 103 - Intro to American Gov  
HEAL 230 - Intro to Health Behavior  
HIST 121 - Form of the American Rep  
HIST 122 - Development of Modern America  
LING 306 - General Linguistics  
PSYC 100 - Basic Concepts in Psychology  
PSYC 211 - Developmental Psychology  
PSYC 231 - Social Psychology  
SOCI 101 - Introductory Sociology  
SOCI 352 - Social Problems & Solutions  
SOCI 355 - Social Inequalities  
SOM 100 - Business in American Society  
TOUR 311 - Women and Tourism  
WMST 200 - Intro to Women and Gender Studies

## Global Understanding

ANTH 302 - Peoples & Cultures of Latin America  
ANTH 307 - Ancient Mesoamerica  
ANTH 308 - Peoples & Cultures of the Middle East  
ANTH 309 - Peoples Cultures of India  
ANTH 312 - Politial Anthropology  
ANTH 313 - Myth, Magic, and Mind  
ANTH 331 - Refugees  
ANTH 332 - Cross-cultural perspectives on globalization  
ARTH 319 - Art & Archaeology of the Ancient Near East  
ARTH 320 - Art of the Islamic World  
ARTH 382 - Urban Anthropology  
ARTH 383 - Arts of Southeast Asia  
ARTH 384 - Arts of China  
ARTH 385 - Arts of Japan  
ARTH 386 - The Silk Road  
BUS 200 - Global Environment of Business  
CEIE 100 - Environ Engineering  
CEIE 497 - Applied Engineering Abroad  
COMM 305 - Foundation of Intercultural Comm  
COMM 456 - Comparative Mass Media  
CONF 340 - Global Conflict Analysis and Resolution  
CRIM 405 - Law and Justice  
DANC 118 - World Dance  
DANC 318 - Global Perspect: World Dance  
DANC 418 - Global Dance Intensive: Study Abroad Cuba  
ECON 360 - Econ of Developing Areas  
ECON 361 - Econ Dev of Latin America  
ECON 362 - African Econ Development  
ECON 380 - Economies in Transition  
ENGL 362 - Global Voices  
ENGL 366 - idea of a World Literature  
ENGR 398 - Applied Engineering Abroad  
FAVS 300 - Global Horror Film  
GCH 205 - International Health  
GGS 101 - Major World Regions  
GLOA 101 - Intro to Global Affairs  
GOVT 132 - Intro to International Politics  
GOVT 133 - Intro to Comparative Politics  
HIST 251 - Survey of East Asian History  
HIST 252 - Survey of East Asian History  
HIST 261 - Survey of African History  
HIST 262 - Survey of African History  
HIST 271 - Latin American History  
HIST 272 - Latin American History  
HIST 281 - Middle Eastern Civilization  
HIST 282 - Survey of Middle Eastern Civilization  
HIST 328 - Rise of Russia  
HIST 329 - Modern Russia and Soviet Union  
HIST 354 - Modern China  
HIST 356 - Modern Japan  
HIST 357 - Post war Japan  
HIST 358 - Post-1949 China  
HIST 360 - History of South Africa  
HIST 364 - Revolution/Radical Politics in Latin America  
HIST 365 - Conquest/Colonization in Latin America  
HIST 387 - Topics in Global History  
HIST 460 - Modern Iran  
HIST 462 - Women in Islamic Society

INTS 102 - Global Network and Communities  
INTS 315 - Spirituality and Conflict Transformation  
INTS 406 - Global Leadership  
INTS 460 - Refugee and Internal Displacement  
INYO 105 - American Culture  
JAPA 310 - Japanese Culture  
MBUS 305 - Managing a Global Economy  
MUSI 103 - Music of the World  
MUSI 431 - Music History in Society  
PHIL 243 - Global Environmental Ethics  
PROV 150 - International Experience: Global Understanding  
PSYC 379 - Applied Cross-Cultural Psych  
RELI 100 - Human Religious Experience  
RELI 211 - Religions of the West  
RELI 313 - Hinduism  
RELI 315 - Buddhism  
RELI 320 - Religion & Revolution in Latin America  
RELI 322 - Religions of Africa  
RELI 341 - Global Persp on Spirituality and Healing  
RELI 374 - Islamic Thought  
RELI 384 - Global History of Christianity  
RUSS 354 - Post-Soviet Life  
SOCI 120 - Globalization and Society  
SOCI 320 - Social Structure and Globalization  
SOCI 332 - Sociology of Urban Communities  
SPAN 322 - Intro to Latin American Culture  
SPAN 466 -Latin American Civilization/Culture  
SYST 202 - Engineering Sys in a Complex World  
SYST 497 - Applied Engineering Abroad  
THR 359 - World Stages  
TOUR 210 - Global Understanding through Travel/Tourism  
WMST 100 - Rep of Women

## Synthesis Requirement

**Take a synthesis course after completing at least 60 credits**

ANTH 400 - Engaging the World:  
ARTH 394 - The Museum  
AVT 385 - EcoArt  
AVT 497 - Senior Project  
AVT 498 - Senior Design Project  
BENG 492 - Senior Advanced Design Project  
BINF 354 - Foundations in Mathematical Biology  
BIOL 301 - Biology and Society (Not for BIOL major credit)  
BIS 490 - RS: Senior Project  
CEIE 490 - Senior Design Project  
COMM 326 - Rhetoric of Social Movements and Political Controversy  
COMM 362 - Argument and Public Policy  
COMM 454 - Free Speech and Ethics  
CONF 490 - Integration  
CONS 490 - Integrated Conservation Strategies  
CONS 491 - RS: Comprehensive Conservation Planning  
CRIM 495 - Capstone in Criminology, Law and Society  
CS 306 - Synthesis of Ethics/ Law for Computing Pro.  
DANC 490 - Senior Dance Seminar  
ECE 492 - Senior Adv Design Project I  
ECE 493 - Senior Adv Design Project II  
ECON 309 - Economic Problems and Public Policies  
EVPV 480 - Sustainability in Action  
FAVS 352 - Ethics of Film and Video  
FRLN 385 - Multilingualism, Identity, and Power  
GAME 490 - Senior Game Design Capstone  
GEOL 420 - Earth Science and Policy  
GGS 303 - Conservation of Resources Environment  
GGS 304 - Populations Dimensions of Global Change  
GOVT 490 - Synthesis Seminar  
GOVT 491 - Honors Seminar  
HAP 465 - Integration of Professional Skills and Issues  
HDFS 400 - Advanced Family Processes  
HIST 300 - Introduction to Historical Method  
HIST 499 - Senior Seminar in History  
IT 492 - Senior Design Project I  
LAS 499 - Research Seminar in Latin American Studies  
MATH 400 - History of Math  
NURS 465 - Examination of Integration of Professional and Health care Issues  
PHIL 309 - Bioethics  
PHIL 343 - Issues in Environmental Ethics  
PHIL 377 - Darwin: Biology and Beyond  
PHIL 378 - Reason, Science, Faith in the Modern Age  
PHIL 379 - Perspectives on Time  
PHYS 346 - Quarks to Strings  
PROV 342 - George Mason Debates  
PSYC 405 - Mystery, Madness, and Murder  
PSYC 406 - Psychology of Communication  
PSYC 427 - Community Engagement for Social Change  
RELI 490 - Comparative Study of Religions  
RUSS 353 - Russian Civilization  
SOCI 377 - Art and Society  
SOCI 483 - The Sociology of Higher Education  
SPAN 388 - Introduction to Latina/o Studies  
THR 440 - Advanced Studies in Directing/Dramaturgy  
THR 496 - Text in Production

## Non-Western Culture (ONLY FOR BA--IF BS NOT REQUIRED)

ANTH 114, 300, 302, 307, 308, 309, 313, 314,330, 332, 381, 383, 396  
ARAB 360, 420, 440  
ARTH 203, 204, 206, 318, 319, 320, 382,383,384,385,386, 482  
CHIN 318, 320, 325, 470  
DANC 118  
ECON 361, 362  
FREN 451, 454  
GGS 101, 316, 325, 330, 399  
GOVT 328, 332, 333, 338, 340, 341, 345, 432, 433  
HIST 251, 252, 261, 262, 271, 272, 281, 282,326, 327, 328, 329, 353, 354, 356, 357, 358, 360, 364, 365, 366, 367, 387, 426, 460, 461, 462, 465  
JAPA 310, 340  
KORE 320  
MUSI 103  
RELI 211, 212, 240, 272, 313, 314, 315, 337, 365, 374, 375, 379, 387, 490  
Russ 353, 354

AP Exam	Score	Course	Credit
Art History	3	ARTH200	3
	4 or 5	ARTH200, ARTH201	6
Biology	3	BIOL107	3
	4	BIOL103	4
	5	BIOL103, BIOL107/106	8
Calculus AB	3	MATH 123	3
	4 or 5	MATH 113	4
Calculus BC	3	MATH 123	3
	4 or 5	MATH 113, MATH114	8
Calculus AB subgrade	3	MATH 123	3
	4 or 5	MATH 113	4
Chemistry	3	CHEM 103	4
	4 or 5	CHEM 211/213	4
Chinese Language and Culture	3	CHIN 102	3
	4	CHIN 102, CHIN 201	6
	5	CHIN 102, 201, 202	9
Computer Science A	3	CS elective	4
	4 or 5	CS 112	4
Computer Science Principles	3	CS elective	3
	4 or 5	CS 100	3
English Language & Composition	4	ENGH 101	3
	5	ENGH 101, ENGH 201	6
English Literature & Composition	4	ENGH 101	3
	5	ENGH 101, ENGH 201	6
Environmental Science	3	EVPP 110	4
	4 or 5	EVPP 110, 111	8
European History	3	HIST 101	3
	4 or 5	HIST 101, HIST 102	6
French Language and Culture	3	FREN 102	3
	4	FREN 102, FREN 201	6
	5	FREN 102, 201, 202	9
German Language and Culture	3	GERM 102	3
	4	GERM 102, GERM 201	6
	5	GERM 102, 201,202	9
Government & Politics: Comparative	3, 4 or 5	GOVT 133	3
Government & Politics: United States	3, 4 or 5	GOVT 103	3
Human Geography	3	GGG 103	3
	4 or 5	GGG 101, GGS 103	6
Italian Language & Culture	3	ITAL 102	3
	4	ITAL 102, ITAL 201	6
	5	ITAL 102, 201, 202	9
Japanese Language & Culture	3	JAPA 102	3
	4	JAPA 102, JAPA 201	6
	5	JAPA 102, 201, 202	9
Latin	3	LATN 101	3
	4	LATN 102, LATN 201	6
	5	LATN 102, 201, 202	9
Macroeconomics	3, 4 or 5	ECON 104	3
Microeconomics	3, 4 or 5	ECON 103	3
Music Theory	3	MUSI 115	3
	4 or 5	MUSI 115, MUSI 116	6
Physics 1	3	PHYS 103	4
	4 or 5	PHYS 243, 244, PHYS 245,246	8
Physics 2	3	PHYS 104	4
	4 or 5	PHYS 243, 244, PHYS 245,246	8
Physics 1 and Physics 2	4 or 5	PHYS 243, 244, PHYS 245,246	8
Physics C: Electricity & Magnetism	3	PHYS 245, 246	4
	4 or 5	PHYS 260, PHYS 261	4
Physics C: Mechanics	3	PHYS 243, 244	4
	4 or 5	PHYS 160, PHYS 161	4
Psychology	3, 4 or 5	PSYC 100	3
Spanish Language	3	SPAN 102	3
	4	SPAN 102, SPAN 201	6
	5	SPAN 102, 201, 202	9
Spanish Literature	3, 4 or 5	SPAN L488	3
Statistics	3	STAT elective	3
	4	STAT 250	3
	5	STAT2 50 for non-majors;	3



		STAT 260 for majors	
Studio Art: 2-D Design	4 or 5	AVT 104	4
Studio Art: 3-D Design	4 or 5	AVT 105	4
Studio Art: Drawing	4 or 5	AVT 222	4
United States History	3	HIST 121	3
	4 or 5	HIST 121, HIST 122	6
World History	3	HIST 125	3
	4 or 5	HIST 125, HIST L387	6
Capstone Synthesis	3, 4, or 5	General Elective	3
Capstone Research	3, 4, or 5	General Elective	3

IB Exam	Score	Course	Credit
Arabic Language B HL	4	ARAB 201	3
	5, 6 or 7	ARAB 201, ARAB 202	6
Biology HL	4	BIOL 107	3
	5	BIOL 103	4
	6 or 7	BIOL 103, BIOL 107/106	8
Chemistry HL	4	CHEM 103	4
	5, 6 or 7	CHEM 211, 213	4
Chinese Cantonese Language B HL	4	CHIN 201	3
	5, 6 or 7	CHIN 201, 202	6
Chinese Mandarin Language B HL	4	CHIN 201	3
	5, 6 or 7	CHIN 201, 202	6
Computing Science HL	4	CS 112	4
	5, 6 or 7	CS 112, CS 211	7
Economics HL	4, 5, 6 or 7	ECON 100	3
English A: Language & Literature HL	5	ENGH 101	3
	6 or 7	ENGH 101, ENGH 201	6
English Literature A HL	5	ENGH 101	3
	6 or 7	ENGH 101, ENGH 201	6
English Language B HL	5, 6 or 7	ENGH 101	3
French Language B HL	4	FREN 201	3
	5, 6 or 7	FREN 201, FREN 202	6
Geography HL	4	GGG 101	3
	5, 6 or 7	GGG 101, GGG 102	6
German Language B HL	4	GERM 201	3
	5, 6 or 7	GERM 201, 202	5
History: Americas HL	4	HIST 121	3
	5, 6 or 7	HIST 121, HIST 125	6
History: Africa HL	4	HIST 125	3
	5, 6 or 7	HIST 125, HIST 262	6
History: East & Southeast Asia & Oceania HL	4	HIST 125	3
	4	HIST 125, HIST 252	6
History Europe HL	5	HIST 101	3
	5, 6 or 7	HIST 101, HIST 125	6
History: Islamic History HL	4	HIST 281	3
	5, 6 or 7	HIST101, HIST 282	6
Italian Language B HL	4	ITAL 201	3
	5, 6 or 7	ITAL 201, ITAL 202	6
Japanese Language B HL	4	JAPA 201	3
	5, 6 or 7	JAPA 201, JAPA 202	6
Korean Language B HL	4	KORE 201	3
	5, 6, or 7	KORE 201, KORE 202	6
Latin Language B HL	4	LATN 201	3
	5, 6 or 7	LATN 201, LATN 202	6
Mathematics HL	4	MATH 110, MATH 123	6
	5, 6 or 7	MATH 110 and 113	7
Music HL	4	MUSI 115	3
	5, 6, or 7	MUSI 115, MUSI 116	6
Philosophy HL	4, 5, 6, or 7	PHIL 100	3
Physics HL	4	PHY S103	4
	5, 6, or 7	PHYS 243 244, PHYS 245, 246	8
Psychology HL	4, 5, 6, or 7	PSYC 100	3
Russian Language HL	4	RUSS 201	3
	5, 6 or 7	RUSS 201, RUSS 202	6
Social & Cultural Anthropology HL	4, 5, 6, or 7	ANTH 114	3
Spanish Language B HL	4	SPAN 201	3
	5, 6 or 7	SPAN 201, SPAN 202	6
Visual Arts HL	4 or 5	AVT 104	4
	6 or 7	AVT 104, AVT 105	8