

Biochemistry and Molecular Biology
 Division of Environmental and Biomolecular Systems
 Department of Science & Engineering
 Program Requirement Checklists

<i>Degree:</i>	Biochemistry and Molecular Biology – Master of Science – Nonthesis	2
<i>Track:</i>	<i>Biochemistry and Molecular Biology</i>	2
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<i>Degree:</i>	Biochemistry and Molecular Biology – Doctor of Philosophy.....	4
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<i>Degree:</i>	Biochemistry and Molecular Biology – Master of Science – Nonthesis	5
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<i>Degree:</i>	Biochemistry and Molecular Biology – Doctor of Philosophy.....	7
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Degree: **Biochemistry and Molecular Biology – Master of Science – Nonthesis**
Track: **Biochemistry and Molecular Biology**
Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Written report on the research performed, accepted and approved by advisor
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 512 – Proteins and Enzymes	_____	_____	_____
EBS 513 – Introduction to Molecular Biology	_____	_____	_____
EBS 514 – Metabolism and Bioenergetics	_____	_____	_____

Advanced Elective Courses (16 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (6 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research and/or Internship (10 credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Biochemistry and Molecular Biology – Master of Science – Thesis**

Track: **Biochemistry and Molecular Biology**

Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter
- A written thesis and oral defense composed of original research

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 512 – Proteins and Enzymes _____ _____ _____

EBS 513 – Introduction to Molecular Biology _____ _____ _____

EBS 514 – Metabolism and Bioenergetics _____ _____ _____

Advanced Elective Courses (8 credits, including special topics and independent studies):

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

Reading Groups (6 credits, includes student seminars):

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

Research (18 credits)

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

Degree: **Biochemistry and Molecular Biology – Doctor of Philosophy**

Track: **Biochemistry and Molecular Biology**

Matriculation Term:

General Degree Requirements:

- 135 credits minimum
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 607A) each Fall, Winter, and Spring quarter
- Qualifying exam, Date qualifying exam completed: _____
- A written dissertation and oral defense composed of original research of publishable quality

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 612 –Proteins and Enzymes	_____	_____	_____
EBS 613 –Introduction to Molecular Biology	_____	_____	_____
EBS 614 –Metabolism and Bioenergetics	_____	_____	_____

Advanced Elective Courses (12 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (12 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research (24+ credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Biochemistry and Molecular Biology – Master of Science – Nonthesis**
Track: **Environmental and Biomolecular Systems**
Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Written report on the research performed, accepted and approved by advisor
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 515 – Environmental & Biomolecular History of the Earth	_____	_____	_____
EBS 516 – Environmental Bioinorganic Chemistry	_____	_____	_____
EBS 517 – Environmental Systems and Human Health	_____	_____	_____

Advanced Elective Courses (16 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (6 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research and/or Internship (10 credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Biochemistry and Molecular Biology – Master of Science – Thesis**

Track: **Environmental and Biomolecular Systems**

Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter
- A written thesis and oral defense composed of original research

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 515 – Environmental & Biomolecular History of the Earth _____

EBS 516 – Environmental Bioinorganic Chemistry _____

EBS 517 – Environmental Systems and Human Health _____

Advanced Elective Courses (8 credits, including special topics and independent studies):

Reading Groups (6 credits, includes student seminars):

Research (18 credits)

Degree: **Biochemistry and Molecular Biology – Doctor of Philosophy**

Track: **Environmental and Biomolecular Systems**

Matriculation Term:

General Degree Requirements:

- 135 credits minimum
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 607A) each Fall, Winter, and Spring quarter
- Qualifying exam, Date qualifying exam completed: _____
- A written dissertation and oral defense composed of original research of publishable quality

Curriculum: **Credits Grade Term**

Core Courses (12 Credits required):

EBS 615 – Environmental & Biomolecular History of the Earth	_____	_____	_____
EBS 616 – Environmental Bioinorganic Chemistry	_____	_____	_____
EBS 617 – Environmental Systems and Human Health	_____	_____	_____

Advanced Elective Courses (12 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (12 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research (24+ credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Environmental Science and Engineering
 Division of Environmental and Biomolecular Systems
 Department of Science & Engineering
 Program Requirement Checklists

<i>Degree:</i>	Environmental Science and Engineering – Master of Science – Nonthesis	2
<i>Track:</i>	<i>Environmental Science and Engineering</i>	2
<i>Degree:</i>	Environmental Science and Engineering – Master of Science – Thesis	3
<i>Track:</i>	<i>Environmental Science and Engineering</i>	3
<i>Degree:</i>	Environmental Science and Engineering – Doctor of Philosophy	4
<i>Track:</i>	<i>Environmental Science and Engineering</i>	4
<i>Degree:</i>	Environmental Science and Engineering – Master of Science – Nonthesis	5
<i>Track:</i>	<i>Environmental and Biomolecular Systems</i>	5
<i>Degree:</i>	Environmental Science and Engineering – Master of Science – Thesis	6
<i>Track:</i>	<i>Environmental and Biomolecular Systems</i>	6
<i>Degree:</i>	Environmental Science and Engineering – Doctor of Philosophy	7
<i>Track:</i>	<i>Environmental and Biomolecular Systems</i>	7
<i>Degree:</i>	Environmental Science and Engineering – Master of Science – Nonthesis	8
<i>Track:</i>	<i>Estuaries and Oceans Systems</i>	8
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<i>Degree:</i>	Environmental Science and Engineering – Doctor of Philosophy	10
<i>Track:</i>	<i>Estuaries and Oceans Systems</i>	10

Degree: **Environmental Science and Engineering – Master of Science – Nonthesis**
 Track: **Environmental Science and Engineering**
 Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 510 – Aquatic Chemistry	_____	_____	_____
EBS 535 – Environmental Organic Chemistry	_____	_____	_____
EBS 575 – Transport Processes	_____	_____	_____

Advanced Elective Courses (16 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (6 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research and/or Internship (10 credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Environmental Science and Engineering – Doctor of Philosophy**
Track: **Environmental Science and Engineering**
Matriculation Term:

General Degree Requirements:

- 135 credits minimum
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 607A) each Fall, Winter, and Spring quarter
- Qualifying exam, Date qualifying exam completed: _____
- A written dissertation and oral defense composed of original research of publishable quality

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 610 – Aquatic Chemistry	_____	_____	_____
EBS 635 – Environmental Organic Chemistry	_____	_____	_____
EBS 675 – Transport Processes	_____	_____	_____

Advanced Elective Courses (12 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (12 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research (24+ credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Environmental Science and Engineering – Master of Science – Nonthesis**
 Track: **Environmental and Biomolecular Systems**
 Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 515 – Environmental & Biomolecular History of the Earth	_____	_____	_____
EBS 516 – Environmental Bioinorganic Chemistry	_____	_____	_____
EBS 517 – Environmental Systems and Human Health	_____	_____	_____

Advanced Elective Courses (16 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (6 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research and/or Internship (10 credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Environmental Science and Engineering – Doctor of Philosophy**

Track: **Environmental and Biomolecular Systems**

Matriculation Term:

General Degree Requirements:

- 135 credits minimum
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 607A) each Fall, Winter, and Spring quarter
- Qualifying exam, Date qualifying exam completed: _____
- A written dissertation and oral defense composed of original research of publishable quality

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 615 – Environmental & Biomolecular History of the Earth	_____	_____	_____
EBS 616 – Environmental Bioinorganic Chemistry	_____	_____	_____
EBS 617 – Environmental Systems and Human Health	_____	_____	_____

Advanced Elective Courses (12 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (12 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research (24+ credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Environmental Science and Engineering – Master of Science – Nonthesis**
 Track: **Estuaries and Oceans Systems**
 Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 565 – Estuary and Ocean Systems I	_____	_____	_____
EBS 566 – Estuary and Ocean Systems II	_____	_____	_____
EBS 517 – Environmental Systems and Human Health	_____	_____	_____

Advanced Elective Courses (16 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (6 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research and/or Internship (10 credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Environmental Science and Engineering – Master of Science – Thesis**
 Track: **Estuaries and Oceans Systems**
 Matriculation Term:

General Degree Requirements:

- 45 credits total
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 507A) each Fall, Winter, and Spring quarter
- A written thesis and oral defense composed of original research

Curriculum: **Credits** **Grade** **Term**

Core Courses (12 Credits required):

EBS 565 – Estuary and Ocean Systems I	_____	_____	_____
EBS 566 – Estuary and Ocean Systems II	_____	_____	_____
EBS 517 – Environmental Systems and Human Health	_____	_____	_____

Advanced Elective Courses (8 credits, including special topics and independent studies):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Reading Groups (6 credits, includes student seminars):

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Research (18 credits)

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Degree: **Environmental Science and Engineering – Doctor of Philosophy**
 Track: **Estuaries and Oceans Systems**
 Matriculation Term:

General Degree Requirements:

- 135 credits minimum
- Cumulative GPA at or above 3.0
- Ethics course (CONJ 650 or approved equivalent)
- Department Seminar (EBS 607A) each Fall, Winter, and Spring quarter
- Qualifying exam, Date qualifying exam completed: _____
- A written dissertation and oral defense composed of original research of publishable quality

Curriculum: **Credits Grade Term**

<input type="checkbox"/> <i>Core Courses (12 Credits required):</i>			
EBS 665 – Estuary and Ocean Systems I	_____	_____	_____
EBS 666 – Estuary and Ocean Systems II	_____	_____	_____
EBS 617 – Environmental Systems and Human Health	_____	_____	_____
<input type="checkbox"/> <i>Advanced Elective Courses (12 credits, including special topics and independent studies):</i>			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<input type="checkbox"/> <i>Reading Groups (12 credits, includes student seminars):</i>			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<input type="checkbox"/> <i>Research (24+ credits)</i>			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____