## Climate Change (Collaborative Program)

This section presents the requirements for programs in:

- M.A. Anthropology with Collaborative Specialization in Climate Change
- M.A. Communication with Collaborative Specialization in Climate Change
- M.A. English with Collaborative Specialization in Climate Change
- M.A. Sociology with Collaborative Specialization in Climate Change
- M.A.Sc. Aerospace Engineering with Collaborative Specialization in Climate Change
- M.A.Sc. Electrical and Computer Engineering with Collaborative Specialization in Climate Change
- M.A.Sc. Environmental Engineering with Collaborative Specialization in Climate Change
- M.A.Sc. Materials Engineering with Collaborative Specialization in Climate Change
- M.A.Sc. Mechanical Engineering with Collaborative Specialization in Climate Change
- M.B.A. with Collaborative Specialization in Climate Change
- M.Eng Electrical and Computer Engineering with Collaborative Specialization in Climate Change
- M.Eng. Environmental Engineering with Collaborative Specialization in Climate Change
- M.Eng. Sustainable Energy with Collaborative Specialization in Climate Change
- M.Sc. Management with Collaborative Specialization in Climate Change

### Program Requirements

#### M.A. Anthropology with Collaborative Specialization in Climate Change (5.0 credits)

**Requirements - Thesis pathway:**

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
   
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
   
3. **1.0 credit in:**
   - ANTH 5401 [0.5] Theories and Methods I
   - ANTH 5402 [0.5] Theories and Methods II

4. **2.0 credit in** approved electives, chosen in consultation with the student's advisor
5. **1.0 credit in:**
   - ANTH 5908 [1.0] M.A. Research Essay (in the specialization)

**Total Credits**

5.0

#### M.A. Communication with Collaborative Specialization in Climate Change (5.0 credits)

**Requirements - Research essay pathway:**

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
   
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series

3. **1.5 credits in:**
   - COMS 5101 [1.0] Foundations of Communication Studies
   - COMS 5605 [0.5] Approaches to Communication Research

4. **1.0 credit in:**
   - COMS 5908 [1.0] Research Essay (in the specialization)

5. **1.5 credits from the list of optional courses**

**Total Credits**

5.0

**Requirements - Thesis pathway:**

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
   
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series

3. **1.5 credits in:**
   - COMS 5101 [1.0] Foundations of Communication Studies
   - COMS 5605 [0.5] Approaches to Communication Research

4. **2.0 credits in:**
   - COMS 5908 [2.0] M.A. Thesis (in the specialization)

5. **0.5 credit from** the list of optional courses

**Total Credits**

5.0

#### M.A. English with Collaborative Specialization in Climate Change (4.5 credits)

**Requirements - Coursework pathway:**

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration

2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series

3. **2.5 credits in** ENGL at the 5000-level (excluding ENGL 5908 and ENGL 5909)

4. **0.5 credit in** a graduate seminar with sufficient Climate Change content in ENGL or another department, as approved by the Coordinator of the Climate Change Specialization.
<table>
<thead>
<tr>
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<th>Credits</th>
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<tr>
<td>0.5 credit in:</td>
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<tr>
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**Requirements - Research essay pathway:**

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<tr>
<td>CLIM 5000 [0.0] Climate Collaboration</td>
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<tr>
<td>2. 0.0 credit in:</td>
<td>0.0</td>
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<td>CLIM 5800 [0.0] Climate Seminar Series</td>
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<td>3. 0.5 credit in:</td>
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**Requirements - Thesis pathway:**

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<td>1. 1.0 credit in:</td>
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<tr>
<td>CLIM 5000 [0.0] Climate Collaboration</td>
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<td>2. 0.0 credit in:</td>
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<td>CLIM 5800 [0.0] Climate Seminar Series</td>
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<td>ENGL 5005 [0.5] M.A. Seminar</td>
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<td>5. 2.0 credits in:</td>
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**M.A. Sociology with Collaborative Specialization in Climate Change (5.0 credits)**

**Requirements - Thesis pathway:**

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<tr>
<td>CLIM 5000 [0.0] Climate Collaboration</td>
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<td>2. 0.0 credit in:</td>
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<tr>
<td>CLIM 5800 [0.0] Climate Seminar Series</td>
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<tr>
<td>3. 1.5 credits in courses offered by the OCIMAE.</td>
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<tr>
<td>4. Participation in the Mechanical and Aerospace Engineering seminar series</td>
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<tr>
<td>5. 2.5 credits in:</td>
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<td>Total Credits</td>
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**M.A. Electrical and Computer Engineering with Collaborative Specialization in Climate Change (5.0 credits)**

**Requirements:**

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<th>Requirement</th>
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<tr>
<td>CLIM 5000 [0.0] Climate Collaboration</td>
<td></td>
</tr>
<tr>
<td>2. 0.0 credit in:</td>
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</tr>
<tr>
<td>CLIM 5800 [0.0] Climate Seminar Series</td>
<td></td>
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<td>3. 1.5 credits in courses</td>
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<td>4. 2.5 credits in:</td>
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**M.A. Environmental Engineering with Collaborative Specialization in Climate Change (5.0 credits)**

**Requirements:**

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<th>Requirement</th>
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<td>1. 1.0 credit in:</td>
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</tr>
<tr>
<td>CLIM 5000 [0.0] Climate Collaboration</td>
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<tr>
<td>2. 0.0 credit in:</td>
<td>0.0</td>
</tr>
<tr>
<td>CLIM 5800 [0.0] Climate Seminar Series</td>
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</tr>
<tr>
<td>3. 1.5 credits in courses with at least 0.5 credit from two different areas of study listed below outside the area of EIA, Sustainability and Climate Change</td>
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<tr>
<td>4. 0.0 credit in:</td>
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</tr>
<tr>
<td>ENVE 5800 [0.0] Master's Seminar (participation in the graduate student seminar series)</td>
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<tr>
<td>5. 2.5 credits in:</td>
<td>2.5</td>
</tr>
<tr>
<td>ENVE 5909 [2.5] Master's Thesis (in the specialization)</td>
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</tr>
<tr>
<td>Total Credits</td>
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</tbody>
</table>
M.A.Sc. Materials Engineering with Collaborative Specialization in Climate Change (5.0 credits)

Requirements:

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
3. **1.5 credits in courses offered by the OCIMAE.**
4. Participation in the Mechanical and Aerospace Engineering seminar series
5. **2.5 credits in:**

Total Credits 5.0

M.A.Sc. Mechanical Engineering with Collaborative Specialization in Climate Change (5.0 credits)

Requirements:

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
3. **1.5 credits in courses offered by the OCIMAE.**
4. Participation in the Mechanical and Aerospace Engineering seminar series
5. **2.5 credits in:**

Total Credits 5.0

M.B.A. with Collaborative Specialization in Climate Change (8.5 credits)

Requirements:

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
3. **0.25 credit in:**
   - BUSI 5108 [0.25] Sustainable Business Development
4. **1.0 credit in:**
   - elective specialization courses designated as having sufficient climate change content, within the School of Business or elsewhere, with permission of the School of Business.
5. **4.25 credits in compulsory core courses**
6. **1.0 credit in elective courses**
7. **1.0 credit in:**
   - BUSI 5999 [1.0] Internship
8. **0.0 credit in:**
   - BUSI 5998 [0.0] MBA Skills Workshop

Total Credits 8.5

1 Students with less than two (2) years of professional work experience must successfully complete BUSI 5999 [1.0] Internship in order to graduate. Students with two or more years work experience may apply for an exemption.
2 Non-credit required skills workshop.

M.Eng Electrical and Computer Engineering with Collaborative Specialization in Climate Change (4.5 credits)

Requirements - by Project (4.5 credits)

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
3. **0.5 credit in:**
   - ELEC 5302 [0.5] Renewable and Distributed Energy Resource Technologies
   - SERG 5001 [0.5] Sustainable Energy Policy for Engineers
   - SERG 5003 [0.5] Energy Evaluation and Assessment Tools
   - SYSC 5005 [0.5] Optimization Theory and Methods
   - SYSC 5104 [0.5] Methodologies For Discrete-Event Modeling And Simulation
   - or approved Advanced Topic in the area of climate change
4. **2.5 credits in courses**
5. **0.5 credit in:**
   - SYSC 5900 [0.5] Systems Engineering Project (in the area of climate change)

Total Credits 4.5

Requirements - by Coursework (4.5 credits)

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
3. **0.5 credit in:**
   - ELEC 5302 [0.5] Renewable and Distributed Energy Resource Technologies
   - SERG 5001 [0.5] Sustainable Energy Policy for Engineers
   - SERG 5003 [0.5] Energy Evaluation and Assessment Tools
   - SYSC 5005 [0.5] Optimization Theory and Methods
   - SYSC 5104 [0.5] Methodologies For Discrete-Event Modeling And Simulation
   - or approved Advanced Topic in the area of climate change
4. **3.0 credits in courses**

Total Credits 4.5

M.Eng. Environmental Engineering with Collaborative Specialization in Climate Change (5.0 credits)

Requirements - Project pathway

1. **1.0 credit in:**
   - CLIM 5000 [0.0] Climate Collaboration
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
3. **0.5 credit from:**
   - ENVE 5105 [0.5] Atmospheric Aerosols

Total Credits 5.0
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ENVE 5200</td>
<td>Climate Change and Engineering</td>
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<tr>
<td>ENVE 5201</td>
<td>Geo-Environmental Engineering</td>
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<tr>
<td>ENVE 5205</td>
<td>Sludge Treatment and Disposal</td>
<td>0.5</td>
</tr>
<tr>
<td>ENVJ 5908</td>
<td>Anaerobic Digestion</td>
<td>0.5</td>
</tr>
<tr>
<td>ENVJ 5212</td>
<td>Climate Change Impacts on Water Resources</td>
<td>0.0</td>
</tr>
</tbody>
</table>

or approved Special Topics in the area of climate change

4. 2.5 credits in courses, with at least 0.5 credit from two different areas of study listed below outside the area of EIA, Sustainability and Climate Change

5. 0.0 credit in:
   - ENVE 5800 [0.0] Master's Seminar

6. 1.0 credit in:
   - ENVE 5900 [1.0] Environmental Engineering Project (in the specialization)

Total Credits: 5.0

Requirements - Coursework pathway

1. 1.0 credit in:
   - CLIM 5000 [0.0] Climate Collaboration

2. 0.0 credit in:
   - CLIM 5800 [0.0] Climate Seminar Series

3. 1.5 credits from:
   - ENVE 5105 [0.5] Atmospheric Aerosols
   - ENVE 5200 [0.5] Climate Change and Engineering
   - ENVE 5201 [0.5] Geo-Environmental Engineering
   - ENVE 5205 [0.5] Sludge Treatment and Disposal
   - ENVJ 5908 [0.5] Anaerobic Digestion
   - ENVJ 5212 [0.0] Climate Change Impacts on Water Resources
   or approved Special Topics in the area of climate change

4. 2.5 credits in courses, with at least 0.5 credit from two different areas of study listed below outside the area of EIA, Sustainability and Climate Change

Total Credits: 5.0

M.Eng. Sustainable Energy with Collaborative Specialization in Climate Change (5.0 Credits)

Requirements:

1. 1.0 credit in:
   - CLIM 5000 [0.0] Climate Collaboration

2. 0.0 credit in:
   - CLIM 5800 [0.0] Climate Seminar Series

3. 2.0 credits in:
   - SERG 5001 [0.5] Sustainable Energy Policy for Engineers
   - SERG 5003 [0.5] Energy Evaluation and Assessment Tools
   - SERG 5004 [1.0] Applied Interdisciplinary Project

4. 0.0 credit in:
   - SERG 5800 [0.0] Sustainable Energy Seminar

5. 2.0 credits in:
   - Graduate level ELEC, SYSC or EACJ courses

Total Credits: 5.0

M.Sc. Management with Collaborative Specialization in Climate Change (5.0 credits)

Requirements (5.0 credits):

1. 1.0 credit from:
   - CLIM 5000 [0.0] Climate Collaboration

2. 0.0 credit in:
   - CLIM 5800 [0.0] Climate Seminar Series

3. 1.5 credits in:
   - BUSI 5980 [0.5] Foundations of Management Theory and Research
   - BUSI 5981 [0.5] Statistics for Business Research
   - BUSI 5982 [0.5] Research Methodology in Business

4. 0.5 credit from:
   - BUSI 5983 [0.5] Qualitative Research Design
   - BUSI 5984 [0.5] Quantitative Research Design

5. Completion of the Research Tutorial

6. 2.0 credits in:

Total Credits: 5.0

Climate Change (CLIM) Courses

CLIM 5000 [1.0 credit]

Climate Collaboration
A seminar on the climate crisis from an interdisciplinary perspective. Drawing on a range of disciplinary approaches from the humanities, social sciences, public policy, engineering and natural science, students will engage with the many factors bearing on the climate crisis and how to address it.

CLIM 5800 [0.0 credit]

Climate Seminar Series
A series of seminars presented by researchers and practitioners in the area of climate change. To complete this course, a student must attend six seminars.