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 [1.0] Climate Collaboration
2. 0.0 credit in:
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

Requirements - Research essay pathway:
1. 1.0 credit in:
   - CLIM 5000 [1.0] Climate Collaboration
2. 0.0 credit in:
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

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

Requirements - Research essay pathway:
1. 1.0 credit in:
   - CLIM 5000 [1.0] Climate Collaboration
2. 0.0 credit in:
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 [1.0] Climate Collaboration
2. 0.0 credit in:
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 option (4.5 credits)
1. 1.0 credit in:
   - CLIM 5000 [1.0] Climate Collaboration
2. 0.0 credit in:
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)
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.
Climate Change (Collaborative Program)

<table>
<thead>
<tr>
<th>Requirements - Research Essay option (4.5 credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1.0 credit in: CLIM 5000 [1.0] Climate Collaboration</td>
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<tr>
<td>2. 0.0 credit in: CLIM 5800 [0.0] Climate Seminar Series</td>
</tr>
<tr>
<td>3. 0.5 credit in: ENGL 5005 [0.5] M.A. Seminar</td>
</tr>
<tr>
<td>4. 2.0 credits in ENGL at the 5000 level (excluding ENGL 5908)</td>
</tr>
<tr>
<td>5. 1.0 credit in: ENGL 5908 [1.0] Research Essay (in the specialization)</td>
</tr>
</tbody>
</table>

Total Credits: 4.5

Requirements - Thesis option (4.5 credits)

| 1. 1.0 credit in: CLIM 5000 [1.0] Climate Collaboration |
| 2. 0.0 credit in: CLIM 5800 [0.0] Climate Seminar Series |
| 3. 1.0 credit in ENGL at the 5000-level (excluding ENGL 5909) |
| 4. 0.5 credit in: ENGL 5005 [0.5] M.A. Seminar |
| 5. 2.0 credits in: ENGL 5909 [2.0] M.A. Thesis (in the specialization) |

Total Credits: 4.5

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

Requirements - Thesis pathway:

| 1. 1.0 credit in: CLIM 5000 [1.0] Climate Collaboration |
| 2. 0.0 credit in: CLIM 5800 [0.0] Climate Seminar Series |
| 3. 1.0 credit: SOCI 5005 [0.5] Recurring Debates in Social Thought |
| SOCI 5809 [0.5] The Logic of the Research Process |
| 4. 1.0 credit in approved electives, chosen in consultation with the student's advisor |
| 5. 2.0 credits in: SOCI 5909 [2.0] M.A. Thesis (in the specialization) |

Total Credits: 5.0

Requirements - Research essay pathway:

| 1. 1.0 credit in: CLIM 5000 [1.0] Climate Collaboration |
| 2. 0.0 credit in: CLIM 5800 [0.0] Climate Seminar Series |
| 3. 1.0 credit: SOCI 5005 [0.5] Recurring Debates in Social Thought |
| SOCI 5809 [0.5] The Logic of the Research Process |

Total Credits: 5.0

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

Requirements:

| 1. 1.0 credit in: CLIM 5000 [1.0] 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: MECH 5909 [2.5] M.A.Sc. Thesis (in the specialization) |

Total Credits: 5.0

M.A.Sc. Electrical and Computer Engineering with Collaborative Specialization in Climate Change (5.0 credits)

Requirements:

| 1. 1.0 credit in: CLIM 5000 [1.0] Climate Collaboration |
| 2. 0.0 credit in: CLIM 5800 [0.0] Climate Seminar Series |
| 3. 1.5 credits in courses |
| 4. 2.5 credits in: SYSC 5909 [2.5] M.A.Sc. Thesis (in the area of climate change) |

Total Credits: 5.0

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

Requirements:

| 1. 1.0 credit in: CLIM 5000 [1.0] Climate Collaboration |
| 2. 0.0 credit in: CLIM 5800 [0.0] Climate Seminar Series |
| 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 |
| 4. 0.0 credit in: ENVE 5800 [0.0] Master's Seminar (participation in the graduate student seminar series) |
| 5. 2.5 credits in: ENVE 5909 [2.5] Master's Thesis (in the specialization) |

Total Credits: 5.0
## M.A.Sc. Materials Engineering with Collaborative Specialization in Climate Change (5.0 credits)

### Requirements:
1. **1.0 credit in:**
   - CLIM 5000 [1.0] 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

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

### Requirements:
1. **1.0 credit in:**
   - CLIM 5000 [1.0] 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

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

### Requirements:
1. **1.0 credit in:**
   - CLIM 5000 [1.0] 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

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1 Students with less than two (2) years of professional employment experience may apply for an exemption.
2 Non-credit required skills workshop.

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## M.B.A. M.A.Sc. Materials Engineering with Collaborative Specialization in Climate Change (5.0 credits)

### Requirements:
1. **1.0 credit in:**
   - CLIM 5000 [1.0] 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 [1.0] 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

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## 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 [1.0] 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
   - 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 [1.0] 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 [1.0] 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: 5.0

### Requirements - Coursework (5.0 credits)
1. **2.5 credits in** courses
2. **2.5 credits in** courses
3. **0.5 credit from:**
   - ENVE 5105 [0.5] Atmospheric Aerosols
   - ENVE 5003 [0.5] Sustainable Energy Policy for Engineers
   - ENVE 5003 [0.5] Energy Evaluation and Assessment Tools
   - ENVE 5105 [0.5] Optimization Theory and Methods
   - ENVE 5114 [0.5] Methodologies For Discrete-Event Modeling And Simulation
   - or approved Advanced Topic in the area of climate change

Total Credits: 5.0

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1 Students with less than two (2) years of professional employment 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</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>
<td>0.5</td>
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<tr>
<td>ENVE 5205</td>
<td>Sludge Treatment and Disposal</td>
<td>0.5</td>
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<tr>
<td>ENVJ 5908</td>
<td>Anaerobic Digestion</td>
<td>0.5</td>
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<td>0.5</td>
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</tbody>
</table>

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

Requirements:
1. **1.0 credit in:**
   - CLIM 5000 [1.0] 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 [0.5] Climate Change Impacts on Water Resources
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. **5.0 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

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

Requirements (5.0 credits):
1. **1.0 credit from:**
   - CLIM 5000 [1.0] Climate Collaboration
2. **0.0 credit in:**
   - CLIM 5800 [0.0] Climate Seminar Series
3. **1.5 credits from:**
   - 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

Regulations
See the General Regulations section of this Calendar and the regulations of the participating unit.

Admission
Admission to the collaborative master’s program in Climate Change is available to master’s students who are admitted in one of the participating master’s programs. To apply to one of the participating master’s programs, please visit the Faculty of Graduate and Postdoctoral Affairs Admissions page.

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.