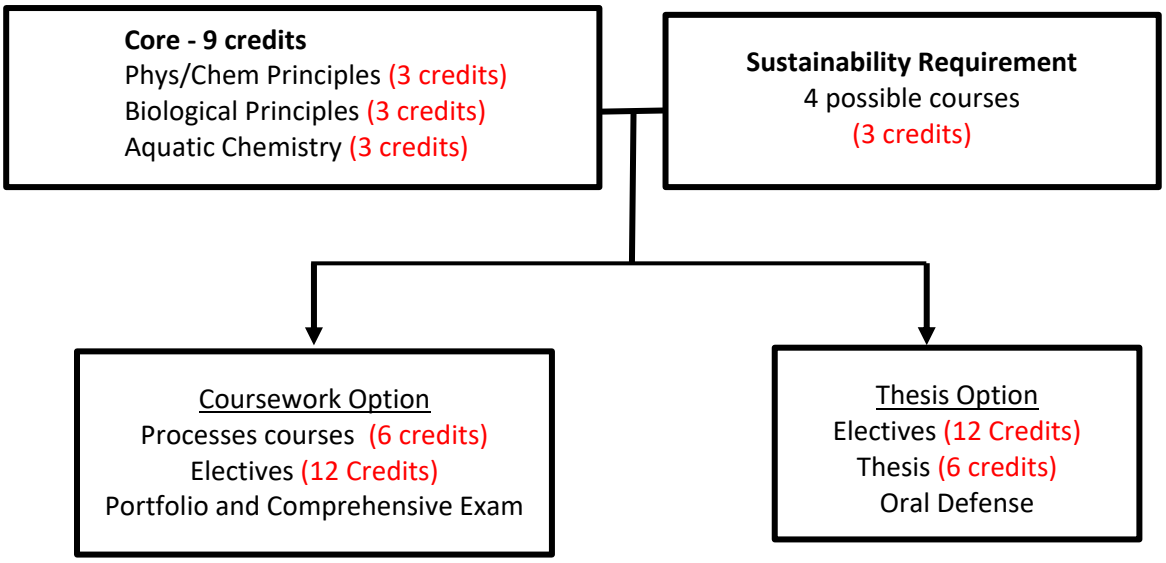
**MSEV Course Registration Guide and Program of Study Forms**

In the CEE department at USF, graduate students are expected to know their program requirements and register themselves for classes using Oasis. The staff class search feature will help you to search for open classes (https://usfweb.usf.edu/DSS/StaffScheduleSearch). When using this tool, be sure to enter the correct Term, Department, Level (e.g., graduate/undergraduate), and Status (open). The following graphic shows the structure of the MSEV program for Thesis and Non-Thesis (coursework only) students:




**Core Courses (9 credits)** - These courses are required for all MSEV students:

- ENV 6002 Physical & Chemical Principles in Environmental Engineering (3 credits)
- EES 6107 Biological Principles in Environmental Engineering (3 credits)
- ENV 6666 Aquatic Chemistry (3 credits)

**Sustainability course (3 credits) -** choose one from the following**:**

- ENV 6617 Green Engineering for Sustainability (3 credits)
- ENV 6070 Resilient and Sustainable Infrastructure (3 credits)
- ENV 6510 Sustainable Development Engineering (3 credits)
- CGN 6933 ENVISION Sustainable Communities (3 credits)

**Processes Course Requirements (6 credits)** – MSEV students who select the non-thesis option must select two of the following courses:

- ENV 6105 Air Pollution Fundamentals (3 credits)
- ENV 6438 Physical & Chemical Processes for Drinking Water (3 credits)
- ENV 6519 Physical & Chemical Processes for Groundwater (3 credits)
- ENV 6564 Environmental Engineering Design (3 credits)
- ENV 6667 Environmental Biotechnology (3 credits)
- CWR 6625 Ecological Engineering (3 credits)

**Electives (12 credits)** - Electives are grad level classes that you are free to select based on your interests and career goals. You may select additional courses in your concentration area, CEE courses outside your concentration area or classes in another department (e.g., GIS, Engineering Management, Geosciences, Public Health).

**Independent Study (up to 6 credits)** - Up to 6 credits of Independent Study (IS) may be taken to meet elective requirements. IS credits may be used for the following: 1) students sit in on an undergraduate course and receive graduate credit by doing additional work, 2) a student or group of students can study a topic under the direction of a faculty member, 3) students may work on a project with a faculty member and write a report (this is similar to a thesis but normally not as extensive). Students must write a proposal and submit a registration form to sign up for IS credits.

**Thesis (6 credits Thesis Option Students only)** - A MS thesis allows students to make a contribution to the field of study by carrying out research, presenting and defending their work in a public forum and publishing a thesis. The research is guided by a 3-member committee that is led by a major professor or two co-major professors. It is the student's responsibility to find their major professor(s) within the first semester of the graduate program. Although the thesis is only 6 credits, typically the level of effort required is much greater than the work required for 6 credits of coursework. A thesis typically take 1.5 to 2 years to complete and there are very strict format requirements for the final publication. Note that students must submit a proposal and registration form to sign up for thesis credits. Students may take thesis credits at any time but 2 credits of thesis must be taken during the semester of graduation.

**Comprehensive Exam** - All non-thesis MSEV students must submit a portfolio to at least two Graduate Committee members in the student's area of study for review. The portfolio consists of the following components: 1) A writing sample, 2) A report showing the solution of a complex engineering problem, 3) an oral presentation on the complex problem submitted in item #2, 4) an oral comprehensive exam where you will be asked to answer questions about the problem addressed, methodology used and to defend your findings and conclusions. More details on the comprehensive exam can be found here.

***Engineering for International Development***

Students who select the Engineering for international development concentration engage in full-time global training and service as part of their program of study. For example, students can serve in the U.S. Peace Corps, or work with a non-governmental organization. This work must be incorporated into the student's thesis. Note that this concentration is available to thesis option students only.

- ENV 6510 Sustainable Development Engineering Credit Hours: 3 (note this class meets the sustainability requirement for the MSEV program)

The following classes can be used as MSEV electives:

One course from the following applied anthropology courses: (3 Credit Hours)

- ANG 6766 Research Methods in Applied Anthropology
- ANG 6730 Socio Cultural Aspects of HIV/AIDS
- ANG 6469 Selected Topics in Medical Anthropology: Health, Illness and Culture

One course from the following global public health courses: (3 Credit Hours)

- PHC 6764 Global Health Principles and Contemporary Issues
- PHC 6761 Global Health Assessment Strategies

6 additional graduate level credit hours of coursework in international development engineering or closely related areas.

**Recommended Electives Outside of CEE Department**

Below is a list of recommended **elective courses** outside of the CEE Department that may be of interest. Course descriptions are available on the USF Graduate Catalog or USF Course Inventory.

- EIN 5182 Principles of Engineering Management (3 credits)
- GIS 5049 GIS for Non-Majors (3 credits)
- GIS 6100 Geographic Info Systems (3 credits)
- GIS 6355 Water Resources GIS (3 credits)
- IDS 6233 Concepts of Sustainability (3 credits)
- IDS 6234 Systems Thinking (3 credits)
- IDS 6245 Sust. Water Res. Management (3 credits)
- IDS 6246 Water Sensitive Urban Design (3 credits)
- IDS 6247 Water Resources Planning (3 credits)
- IDS 6276 Food/Energy/Water (FEW) Nexus (3 credits)
- PHC 6050 Biostatistics I (3 credits)
- PHC 6761 Global Health Assessment Strategies (3 credits)
- STA 6205 Design of Experiments (3 credits)
- ANG 6020 Environmental Justice (3 credits)
- PHC 6377 Hazardous Materials and Comm (3 credits)
- ANG 6766 Research Methods in Applied Anthropology (3 credits)
- ANG 6730 Socio Cultural Aspects of HIV/AIDS (3 credits)
- ANG 6469 Selected Topics in Medical Anthropology: Health, Illness and Culture (3 credits)
- PHC 6764 Global Health Principles and Contemporary Issues (3 credits)

**MSEV Program of Study Form - Non-thesis option**

| | | | | | |
|---|---|---|---|---|---|
| **Name:** | | | | | |
| **UID:** | | | | | |
| **MSEV Admission Term:** | | | | | |
| **Email:** | | | | | |
| **Address:** | | | | | |
| **Phone:** | | | | | |
| **Course Title** | **Course Number** | **Credits** | **Semester Taken** | **Outside CEE?** | **Grade** |
| **Core Coursework 9 credits** | | | | | |
| Biological Principles in EVE | EES 6107 | 3 | | | |
| Physical & Chemical Principles in EVE | ENV 6002 | 3 | | | |
| Aquatic Chemistry | ENV 6666 | 3 | | | |
| **Sustainability requirement (3 credits) - one course from the following:** | | | | | |
| Green Engineering for Sustainability | ENV 6617 | 3 | | | |
| Resilient and Sustainable Infrastructure | ENV 6070 | 3 | | | |
| Sustainable Development Engineering | ENV 6510 | 3 | | | |
| ENVISION Sustainable Communities | CGN 6933 | 3 | | | |
| **Processes Courses 6 credits – At least two of the following:** | | | | | |
| Air Pollution Fundamentals | ENV 6105 | 3 | | | |
| Physical & Chemical Processes for Drinking Water | ENV 6438 | 3 | | | |
| Physical & Chemical Processes for Groundwater | ENV 6519 | 3 | | | |
| Environmental Engineering Design | ENV 6564 | 3 | | | |
| Environmental Biotechnology | ENV 6667 | 3 | | | |
| Ecological Engineering | CWR 6625 | 3 | | | |
| **Electives 12 credits (grad level classes you may select based on your interests and career goals):** | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **Total credits of Independent study (≤6)** | | | | | |
| **Total credits (≥30)** | | | | | |

Notes for the GPD:

Graduate Program Director signature Date

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*Updated September, 2024*

**MSEV Program of Study Form - Thesis Option**

| | | | | | |
|---|---|---|---|---|---|
| **Name:** | | | | | |
| **UID:** | | | | | |
| **MSEV Admission Term:** | | | | | |
| **Email:** | | | | | |
| **Address:** | | | | | |
| **Phone:** | | | | | |
| **Major Professor(s):** | | | | | |
| **Course Title** | **Course Number** | **Credits** | **Semester Taken** | **Outside CEE?** | **Grade** |
| **Core Coursework 9 credits:** | | | | | |
| Biological Principles in EVE | EES 6107 | 3 | | | |
| Physical & Chemical Principles in EVE | ENV 6002 | 3 | | | |
| Aquatic Chemistry | ENV 6666 | 3 | | | |
| **Sustainability requirement (3 credits) - one course from the following:** | | | | | |
| Green Engineering for Sustainability | ENV 6617 | 3 | | | |
| Resilient and Sustainable Infrastructure | ENV 6070 | 3 | | | |
| Sustainable Development Engineering | ENV 6510 | 3 | | | |
| ENVISION Sustainable Communities | CGN 6933 | 3 | | | |
| **Electives 12 credits (grad level classes you may select based on your interests and career goals):** | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **Thesis (a minimum of 6 credits are required, with 2 credits taken in the semester of graduation):** | | | | | |
| MS Thesis | CGN 6971 | | | NA | NA |
| | | | | | |
| | | | | | |
| **Total credits of Independent study (≤6)** | | | | | |
| **Total credits (≥30)** | | | | | |

Notes for the GPD:

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Major Professor signature Date Grad Program Director signt. Date

*Updated September, 2024*

**MSEV Program of Study Form - Thesis Option Engineering for International Development**

| | | | | | |
|---|---|---|---|---|---|
| **Name:** | | | | | |
| **UID:** | | | | | |
| **MSEV Admission Term:** | | | | | |
| **Email:** | | | | | |
| **Address:** | | | | | |
| **Phone:** | | | | | |
| **Major Professor(s)** | | | | | |
| **Course Title** | **Course Number** | **Credits** | **Semester Taken** | **Outside CEE?** | **Grade** |
| **Core Coursework and Sustainability Requirement 12 credits:** | | | | | |
| Biological Principles in EVE | EES 6107 | 3 | | | |
| Physical & Chemical Principles in EVE | ENV 6002 | 3 | | | |
| Aquatic Chemistry | ENV 6666 | 3 | | | |
| Sustainable Development Engineering | ENV 6510 | 3 | | | |
| **A minimum of 1 course from the following applied anthropology courses (3 Credit Hours):** | | | | | |
| Research Methods in Applied Anthropology | ANG 6766 | 3 | | | |
| Socio-cultural Aspects of HIV/AIDS | ANG 6730 | 3 | | | |
| Health, Illness, and Culture | ANG 6469 | 3 | | | |
| **A minimum of one course from the following global public health courses (3 Credit Hours):** | | | | | |
| Global Health Principles & Contemp. | PHC 6764 | 3 | | | |
| Global Health Assessment Strategies | PHC 6761 | 3 | | | |
| **6 additional credits of coursework related to international development engineering:** | | | | | |
| | | | | | |
| | | | | | |
| **Thesis (a minimum of 6 credits are required, with 2 credits taken in the semester of graduation):** | | | | | |
| MS Thesis | CGN 6971 | | | NA | NA |
| | | | | | |
| | | | | | |
| | | | | **Total credits outside CEE (≤12)** | |
| | | | | **Total credits of Independent study (≤6)** | |
| | | | | **Total credits (≥30)** | |

Notes for the GPD:

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Major Professor signature Date Grad Program Director signt. Date

*Updated September, 2024*