

Master of Science in Engineering - Civil and Environmental Engineering

2 Graduate Program Change 2022-23

I. General Information

The faculty member originating this proposal is to complete sections I and II.

Before starting this form, please review graduate curriculum website on policies and processes: <https://www.unlv.edu/graduatecollege/curriculum>

Click **"validate and launch proposal"** button below. Once the pop-up window comes up and displays an error message, click on the "show me" button (on the pop-up). This will highlight in red the required fields of this form. Fill in ONLY the red (required) fields.

With all red fields completed, click on the **"validate and launch proposal"** button again to launch the proposal. The pop-up this time should not display an error, and will display instead a **"launch proposal"** button. Click on the **"launch proposal"** button to launch.

After launch, please fill in all remaining fields in the form to reflect your intended changes, including edits to the schema section of this form (further explained below).

Department (s) (if Dual or Interdisciplinary please add all departments):*

Civil and Environmental Engineering and Construction

Degree or Certificate Name:* Master of Science in Engineering - Civil and Environmental Engineering

Degree Type:*

Master of Science

Program Type:*

Master's

II. Program Changes

Proposed New CIP Code (if applicable):

Are you changing Yes No

admission requirements?*

Are you changing program learning objectives?* Yes No

If yes, describe changes to learning objectives:

The following student learning outcomes should replace the existing ones.

1. Demonstrate knowledge in the chosen area of their expertise (construction, geotechnical, structural, transportation, and water resources/environmental).
2. Acquire and apply appropriate research methodology to solve contemporary engineering problems related to the area of their expertise.*
3. Demonstrate an ability to generate, collect, compile, and interpret research data.*

4. Demonstrate technical communication skills.

* These SLOs apply to the Thesis option only.

Are you changing course requirements?* Yes No

Are you changing degree completion requirements?* Yes No

Are you changing the culminating experience?* Yes (complete the culminating experience section below) No

Other Changes (e.g. subplan titles,...):* Yes No

If not a Dual itself, is this program also available as part of a Dual-Degree offering?* Yes No

Summary of Changes

Provide a brief summary of proposed changes:

1. The language under "Career Possibilities" must be changed.
2. The Student Learning Outcomes must be changed.
3. The project track MSE will be replaced by the non-thesis track MSE.
4. Under non-thesis track MSE, the Seminar Course will be required to be taken by the students.

Provide a rationale for each proposed change:

All these changes were initiated because the external reviewers of our MSE program recommended changing them.

Office of Online Education

Programs that are 100% online must contact the Office of Online Education (<https://www.unlv.edu/provost/online-education>).

Email: elizabeth.barrie@unlv.edu

What is the current delivery/mode of instruction for this program? *

- 100% face-to-face courses
- Hybrid (some online courses; some face-to-face courses)
- 100% online courses

Are you changing the delivery/mode of instruction? (select new mode):*

- 100% face-to-face courses
- Hybrid (some online courses; some face-to-face courses)
- 100% online courses (contact office of online education)
- No Changes

Required Additional Documents:

Please attach required documents by navigating to the “attach a file” icon at the right of this form.

Information and forms available at the [Office of the Vice Provost for Academic Programs](#) website.

If changing to 100% online delivery, please attach the following:

Assessment Plan - A new assessment plan will be required when adding an exclusively online mode of delivery to a degree and it must be approved by the [Office of Academic Assessment](#), assessment@unlv.edu,

Dean's memo of support

Teach Out Plan (available at the [Office of the Vice Provost for Academic Programs](#) website).

If 100% Online, attach the required documents and mark the checkboxes:

- Assessment Plan
- Dean's memo of support
- Teach Out Plan

Office of Educational Compliance

Programs that lead to professional licensure or certification must contact the Office of Educational Compliance (<https://www.unlv.edu/provost/ed-compliance>).

Email: leeann.fields@unlv.edu

With this change, does this program

- Yes (contact office of educational compliance)
- No

lead to professional
licensure or
certification?*



NO

SCHEMA SECTION

Please edit the schema section after launching the proposal. To launch, please complete all other fields of this form and click "validate and launch" at the bottom. If an error message pops up, please click "show me" and fill in all red (missing) fields in the form and click "validate and launch" again until successfully launched.

In this section, please use the instructions below to change the graduate catalog display of program requirements: descriptions, admissions, courses, degree completion, graduation, etc.

Please note that the new graduate catalog will display the exact information that you edit in this section.

INSTRUCTIONS:

1. Click on the "View Curriculum Schema" icon at the bottom of the "Schema Section."
2. If you are only adjusting existing content, click on the respective Core you would like to edit, then make your edits and click on "Save" as you go. If you are deleting a subplan or courses, simply delete the respective Cores or courses and adjust the descriptive content accordingly.

If you are adding new subplans and/or adding or substituting courses, please see the steps below:

Prior to following the steps below, please open in parallel a structurally similar program from the graduate catalog as a reference ([UNLV Graduate Catalog](#)). You will use this reference to review the sections of a program plan, and have direction on expected content.

3. Click "Add Core" to create blank "Cores." Create as many Cores as you will need. If unsure, refer to other subplans already in this program or to a reference in the graduate catalog to understand how many Cores you need and their expected content.
4. Click on each Core and rename them following your needs or a catalog reference, clicking on "Save" as you go.
5. Add content to all of the cores by clicking within the field to be edited and clicking "Save" as you go. Please note that course sections require instructions of how the credits must be taken (e.g. "Complete x credits by completing all of the following courses," or "Complete x credits of advisor-approved courses," or "Complete 3 credits of course-x and 6 credits of course-z," etc.).
6. To add courses, click on the "View Curriculum Courses" tab at the top of the schema window below, then click on the "Import Course" button at the bottom of the "View Curriculum Courses" window. Click on the available import catalog (only one will be available), and on the import window, select "filter by prefix." (1) Search for your desired course prefix; (2) then click "search available curriculum; (3) then click on all courses that will be imported. Add courses to proposal by clicking, at the very bottom, on the "Add Courses to Proposal" button. Repeat this process as often as you need until all courses are added to the proposal.
7. For courses that do not exist yet at the time of this proposal: Add the courses into the description box of the respective course section in the following way: "PREFIX - NUMBER - Course name, (credits)."
8. Add the courses into their respective course section by clicking "add course" within each course section.

QUESTIONS? Step-by-step guides are available at the [Graduate Curriculum Website](#), and at any time please contact gradcurriculum@unlv.edu

Plan Description

The Department of Civil and Environmental Engineering and Construction (CEEC) at UNLV offers a number of program degree options leading to the Master of Science in Engineering (M.S.E.) - Civil and Environmental Engineering. Specific areas of engineering that are currently available include Construction, Geotechnical, Structural, Transportation, and Water Resources/Environmental. Two subplans (thesis and non-thesis) are available in M.S.E. degree program along with an Integrated BS-MSE Thesis subplan for currently enrolled CEEC undergraduate students.

For more information about your program, including your graduate program handbook and learning outcomes please visit the [Degree Directory](#).

Plan Admission Requirements

[Application deadlines](#)

Applications available on the [UNLV Graduate College website](#).

Admission to the program leading to the M.S.E. degree in thesis and non-thesis subplans are open to those students completing the following requirements:

Applications must include all documentation as required by the Graduate College. Applications should be submitted through the [Grad Rebel Gateway](#).

Applicant must have a bachelor's degree in engineering or a closely-related discipline with an overall GPA of 2.75 (4.00=A) and a GPA of 3.0 (4.00=A) for the last 60 credits(semester basis) of undergraduate program.

Applicants desiring to specialize in environmental engineering who have baccalaureate degrees in the natural sciences may require at least an additional semester of full time study to complete engineering prerequisite undergraduate course work; this may include fluid mechanics, calculus through differential equations, engineering physics, chemistry and engineering economics. Successful environmental engineering applicants are expected to complete a set of graduate courses in engineering hydrology, hydraulics, statistics, water and wastewater treatment, and wastewater treatment plant design during their graduate study.

The CEEC Graduate Program Committee (GPC) and Graduate Coordinator make all the final decisions after review of each applicant's records and admissions information.

The applicant must submit a Statement of Intent (SOI) with no more than two pages, indicating their interests in the area of specialization (construction, geotechnical, structural, transportation, and water resources/environmental) and objectives in working toward a M.S.E. degree.

In addition, two letters of recommendation (LOR) must be submitted from individuals familiar with the applicant's knowledge, skills and abilities. It is highly recommended that LOR documents are created using official letterheads (e.g. academic advisor, academic faculty, professional supervisor). Also, applicants must enter professional email addresses of those sending an LOR.

A short resume (no more than 2 pages) must be submitted.

International applicants must meet English proficiency requirements established in the [UNLV english proficiency page: here](#).

All domestic and international applicants must review and follow the [Graduate College Admission and Registration Requirements](#).

Additional Requirements for the Integrated BS-MSE Thesis Subplan:

This program is designed to provide high-achieving undergraduate students in CEEC department with the opportunity to be exposed to graduate courses and encourage them to continue with a graduate degree by reducing the time needed for degree completion. Up to six credits of approved graduate-level coursework with grades of B or better can be taken as technical electives during the senior year. Those credits will be also counted towards the graduate degree coursework. The students who are not enrolled in CEEC undergraduate Civil Engineering degree cannot apply for this degree plan. The following additional requirements must be satisfied:

A minimum of two semesters of full time enrollment in B.S. of Civil and Environmental Engineering program at UNLV is required.

A minimum of 90 credits of course work applicable to the B.S. of Civil and Environmental Engineering degree must be completed before beginning the joint degree program.

An overall cumulative GPA of 3.20 or higher is needed to begin the Integrated BS-MSE Thesis subplan degree program.

Once a student has been admitted into the Integrated BS-MSE Thesis subplan program, they must then submit an application for an M.S.E. program in Civil Engineering. The student has to follow the normal application procedures found on the UNLV Graduate College website. Additionally,

Student must meet all departmental and Graduate College application deadlines.

Student should indicate in their application materials that they are participating in the Integrated BS-MSE Thesis subplan program.

Student should request a letter of nomination from a CEEC faculty member. Submit this letter along with a short resume (no more than 2 pages). The materials will be evaluated by three faculty members in the student's technical area of interest or nearby areas.

Student must choose the Integrated BS-M.S.E. Thesis subplan

Students are accepted into a degree program as described in the Graduate Catalog. The faculty, specific areas, and degree subplans within the described programs are subject to change at any time.

Plan Requirements

See Subplan Requirements below.

[Subplan 1: Thesis](#)

[Subplan 2: Non-Thesis](#)

[Subplan 3: The Integrated BS-MSE Thesis](#)

Subplan 1 Requirements: Thesis

Total Credits Required: 30

Course Requirements

Required Course – Credits: 3

CEE 700 Research Methods in Civil and Environmental Engineering

3

Elective Courses – Credits: 18

Complete 18 credits of advisor approved electives, including 9 credits in one of the following concentrations:

Construction

CEE 609 Engineering Project Management	3
CEE 672 Construction Estimating for Infrastructure Projects	4
CEE 673 Construction Scheduling for Infrastructure Projects	3
CEE 710 Modular Construction	3
CEE 720 Information and Sensing Technology in Construction	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 785 Construction Engineering Management	3

Geotechnical

CEE 710 Modular Construction	3
CEE 720 Information and Sensing Technology in Construction	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 731 Pavement Materials and Design	3
CEE 732 Advanced Foundation Engineering	3
CEE 734 Advanced Soil Mechanics	3
CEE 736 Earth Slopes and Retaining Structures	3
CEE 737 Soil Dynamics and Earthquake Engineering	3
CEE 741 Design of Highway Bridge Structures	3
CEE 785 Construction Engineering Management	3

Transportation

Students must successfully complete a minimum of 2 courses at the 700 level from the following list:

CEE 661 Introduction to Railroad Transportation	3
CEE 662 Railroad Engineering	3
CEE 663 Traffic Engineering	3
CEE 664 Airport Design	3
CEE 666 Geometric Design of Highways	3
CEE 667 Computer Applications in Transportation Engineering	3

CEE 671 Public Transportation Systems	3
CEE 725 Freight Transportation	3
CEE 726 Railroad Operations	3
CEE 727 Transportation Safety	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 761 Transportation Demand Analysis	3
CEE 762 Operations Research Applications in Civil Engineering	3
CEE 763 Advanced Traffic Engineering	3
CEE 760 Transportation Planning	3
CEE 764 Air Transportation	3

Structure

CEE 741 Design of Highway Bridge Structures	3
CEE 744 Design of Prestressed/Post-Tensioned Concrete Structures	3
CEE 748 Advanced Design of Timber Structures	3
CEE 775 Seismic Response of Structures	3
CEE 780 Advanced Reinforced Concrete Structures	3

Water Resources/ Environmental

CEE 704 Environmental & Water Systems	3
CEE 709 Numerical Methods in Mechanics	3
CEE 750 Urban Runoff Quality and Control	3
CEE 751 Water Reuse Principles and Design	3
CEE 754 Biochemical Wastewater Treatment Fundamentals	3
CEE 755 Advanced Physicochemical Methods for Water Treatment	3
CEE 756 Advanced Waste Treatment Design	3
CEE 757 Engineering Modeling of Natural Systems	3
CEE 758 Air Quality Modeling	3
CEE 759 Mass Transfer in Environmental Systems	3
CEE 768 Applied Geographic Information Systems	4

(Optional) Graduate Internship and Seminar Courses - Credits: 1 - 3

Students that opt to engage in Curricular Practical Training (CPT) must take 1 credit of CEE 792. This course can be taken only once during their studies. However, the

credit will not be counted towards the degree.

CEE 798 can be taken a maximum of three credits. However, credits will not be counted towards the degree.

CEE 792 Graduate Internship for Master in Civil Engineering and Transportation	1
[After] CEE - 798: Engineering & Construction Seminar	1 - 3

Thesis – Credits: 9

CEE 797 Thesis in Civil Engineering	3 – 9
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Degree Requirements

1. A Thesis Advisory Committee composed of at least four members of the UNLV graduate faculty is to be formed for the student. At least two of the committee members must be from tenured or tenure-track faculty of the CEEC Department and the third member from a related field. The fourth faculty member, the Graduate College Representative, is recommended by advisor/advisee and appointed by the Graduate College. It is recommended that the Thesis Advisory Committee collective expertise reflects the thesis topic. The committee chair must be a tenured or tenure-track CEEC faculty from the area of expertise chosen for thesis topic.

2. In addition to CEE 700, all students must successfully complete a minimum of 18 credits of approved graduate courses, out of which a minimum of 3 courses from one of the five categories in the discipline-based list provided above.

3. In addition to the coursework requirements, 9 credits of research work associated with the master's level thesis (CEE 797) with the outcome being a manuscript written for a specific indexed conference or journal.

4. At least 50% of the courses (600 and 700 level) within the total coursework must be from the College of Engineering.

5. At least 50% of the courses within the total coursework must be 700 level.

6. Students must maintain a minimum grade point average of 3.00. A course in which a grade of less than C was earned will not be considered for use toward the degree.

7. All requirements for the M.S.E. are met upon the satisfactory completion of the proposed research, the submission of a satisfactory thesis, and the successful oral defense of the thesis before the Thesis Advisory Committee.

Graduation Requirements

1. The student must submit all required forms to the Graduate College as well as apply for graduation up to two semesters prior to completing their degree requirements.
2. The student must submit and successfully defend their thesis by the posted deadline. The defense must be advertised and is open to the public.
3. After the thesis defense, the student must electronically submit a properly formatted pdf copy of their thesis to the Graduate College for format check. Once the thesis format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for thesis defenses, format check submissions, and the final ProQuest submission can be [found here](#).

Subplan 2 Requirements: Non-Thesis

Total Credits Required: 30

Course Requirements

Elective Courses - Credits: 27

Complete 27 credits of advisor approved electives, including 9 credits in one of the following concentrations:

Construction

CEE 609 Engineering Project Management	3
CEE 672 Construction Estimating for Infrastructure Projects	4
CEE 673 Construction Scheduling for Infrastructure Projects	3
CEE 710 Modular Construction	3
CEE 720 Information and Sensing Technology in Construction	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 785 Construction Engineering Management	3

Geotechnical

CEE 710 Modular Construction	3
CEE 720 Information and Sensing Technology in Construction	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 731 Pavement Materials and Design	3
CEE 732 Advanced Foundation Engineering	3
CEE 734 Advanced Soil Mechanics	3
CEE 736 Earth Slopes and Retaining Structures	3
CEE 737 Soil Dynamics and Earthquake Engineering	3
CEE 741 Design of Highway Bridge Structures	3
CEE 785 Construction Engineering Management	3

Transportation

Students must successfully complete a minimum of 2 courses at the 700 level from the following list:

CEE 661 Introduction to Railroad Transportation	3
CEE 662 Railroad Engineering	3
CEE 663 Traffic Engineering	3
CEE 664 Airport Design	3
CEE 666 Geometric Design of Highways	3
CEE 667 Computer Applications in Transportation Engineering	3
CEE 671 Public Transportation Systems	3
CEE 725 Freight Transportation	3
CEE 726 Railroad Operations	3
CEE 727 Transportation Safety	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 760 Transportation Planning	3
CEE 761 Transportation Demand Analysis	3

CEE 762 Operations Research Applications in Civil Engineering	3
CEE 763 Advanced Traffic Engineering	3
CEE 764 Air Transportation	3

Structure

CEE 741 Design of Highway Bridge Structures	3
CEE 744 Design of Prestressed/Post-Tensioned Concrete Structures	3
CEE 748 Advanced Design of Timber Structures	3
CEE 775 Seismic Response of Structures	3
CEE 780 Advanced Reinforced Concrete Structures	3

Water Resources/ Environmental

CEE 704 Environmental & Water Systems	3
CEE 709 Numerical Methods in Mechanics	3
CEE 750 Urban Runoff Quality and Control	3
CEE 751 Water Reuse Principles and Design	3
CEE 754 Biochemical Wastewater Treatment Fundamentals	3
CEE 755 Advanced Physicochemical Methods for Water Treatment	3
CEE 756 Advanced Waste Treatment Design	3
CEE 757 Engineering Modeling of Natural Systems	3
CEE 758 Air Quality Modeling	3
CEE 759 Mass Transfer in Environmental Systems	3
CEE 768 Applied Geographic Information Systems	4

(Optional) Graduate Internship Course - Credits: 1

Students that opt to engage in Curricular Practical Training (CPT) must take 1 credit of CEE 792. This course can be taken only once during their studies. However, the credit will not be counted towards the degree.

CEE 792 Graduate Internship for Master in Civil Engineering and Transportation	1
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Culminating Experience Course - Credits: 3

Degree Requirements

1. The student's Advisor should be tenured or a tenure-track faculty member of the CEEC Department. An advisory committee is not required.
2. Students must complete a minimum of 27 credits of approved graduate-level courses, out of which a minimum of 3 courses from one of the five categories in the discipline-based list provided above, and 3 credits of CEE - 798: Engineering & Construction Seminar with the outcome being a professional presentation.
3. At least 50% of the courses (600 and 700 level) within the total coursework must be from the College of Engineering.
4. At least 50% of the courses within the total coursework must be 700 level.

5. Students must maintain a minimum grade point average of 3.00. A course in which a grade of less than C was earned will not be considered for use toward the degree.

6. All requirements for the M.S.E. are met upon the satisfactory completion of the CEE 798 Seminar course.

Graduation Requirements

1. The student must submit all required forms to the Graduate College as well as apply for graduation up to two semesters prior to completing their degree requirements.
2. The student must successfully present their seminar on an appropriate topic collectively decided by the student and their advisor in CEE 798 Seminar course.

Subplan 3 Requirements: Integrated BS-MSE Thesis

Total Credits Required: 30

Course Requirements

Required Courses - Credits: 3

CEE 700 Research Methods in Civil and Environmental Engineering	3
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Elective Courses - Credits: 18

Complete the remaining 18 credits of advisor approved electives, including 9 credits in one of the following concentrations. Elective credits up to 6 credits completed during a student's undergraduate degree can be added.

Construction

CEE 609 Engineering Project Management	3
CEE 672 Construction Estimating for Infrastructure Projects	4
CEE 673 Construction Scheduling for Infrastructure Projects	3
CEE 710 Modular Construction	3
CEE 720 Information and Sensing Technology in Construction	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 785 Construction Engineering Management	3

Geotechnical

CEE 710 Modular Construction	3
CEE 720 Information and Sensing Technology in Construction	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 731 Pavement Materials and Design	3
CEE 732 Advanced Foundation Engineering	3
CEE 734 Advanced Soil Mechanics	3
CEE 736 Earth Slopes and Retaining Structures	3
CEE 737 Soil Dynamics and Earthquake Engineering	3
CEE 741 Design of Highway Bridge Structures	3
CEE 785 Construction Engineering Management	3

Transportation

Students must successfully complete a minimum of 2 courses at the 700 level from the following list:

CEE 661 Introduction to Railroad Transportation	3
CEE 662 Railroad Engineering	3
CEE 663 Traffic Engineering	3
CEE 664 Airport Design	3
CEE 666 Geometric Design of Highways	3
CEE 667 Computer Applications in Transportation Engineering	3
CEE 671 Public Transportation Systems	3
CEE 725 Freight Transportation	3
CEE 726 Railroad Operations	3
CEE 727 Transportation Safety	3
CEE 730 Foundations of Big Data Analytics for Infrastructure Applications	3
CEE 760 Transportation Planning	3
CEE 761 Transportation Demand Analysis	3
CEE 762 Operations Research Applications in Civil Engineering	3
CEE 763 Advanced Traffic Engineering	3
CEE 764 Air Transportation	3

Structure

CEE 741 Design of Highway Bridge Structures	3
CEE 744 Design of Prestressed/Post-Tensioned Concrete Structures	3
CEE 748 Advanced Design of Timber Structures	3
CEE 775 Seismic Response of Structures	3
CEE 780 Advanced Reinforced Concrete Structures	3

Water Resources/ Environmental

CEE 704 Environmental & Water Systems	3
CEE 709 Numerical Methods in Mechanics	3
CEE 750 Urban Runoff Quality and Control	3
CEE 751 Water Reuse Principles and Design	3
CEE 754 Biochemical Wastewater Treatment Fundamentals	3
CEE 755 Advanced Physicochemical Methods for Water Treatment	3
CEE 756 Advanced Waste Treatment Design	3
CEE 757 Engineering Modeling of Natural	3

Systems	
CEE 758 Air Quality Modeling	3
CEE 759 Mass Transfer in Environmental Systems	3
CEE 768 Applied Geographic Information Systems	4

(Optional) Graduate Internship and Seminar Courses - Credits: 1 - 3

Students that opt to engage in Curricular Practical Training (CPT) must take 1 credit of CEE 792. This course can be taken only once during their studies. However, the credit will not be counted towards the degree.

CEE 798 can be taken a maximum of three credits. However, credits will not be counted towards the degree.

CEE 792 Graduate Internship for Master in Civil Engineering and Transportation	1
[After] CEE - 798: Engineering & Construction Seminar	1 - 3

Thesis – Credits: 9

CEE 797 Thesis in Civil Engineering	3 – 9
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Degree Requirements

1. A Thesis Advisory Committee composed of at least four members of the UNLV graduate faculty is to be formed for the student. At least two of the committee members must be from tenured or tenure-track faculty of the CEEC Department and the third member from a related field. The fourth faculty member, the Graduate College Representative, is recommended by advisor/advisee and appointed by the Graduate College. It is recommended that the Thesis Advisory Committee collective expertise reflects the thesis topic. The committee chair must be a tenured or tenure-track CEEC faculty from the area of expertise chosen for thesis topic.

2. Including CEE 700, all students must successfully complete a minimum of 18 credits of approved graduate courses, out of which a minimum of 3 courses from one of the five categories in the discipline-based list provided above.

3. In addition to the coursework requirements, 9 credits of research work associated with the master's level thesis (CEE 797) with the outcome being a manuscript written for a specific indexed conference or journal.

4. At least 50% of the courses (600 and 700 level) within the total coursework must be from the College of Engineering.

5. At least 50% of the courses within the total coursework must be 700 level.

6. Students must maintain a minimum grade point average of 3.00. A course in which a grade of less than C was earned will not be considered for use toward the degree.

7. All requirements for the M.S.E. are met upon the satisfactory completion of the proposed research, the submission of a satisfactory thesis, and the successful oral defense of the thesis before the Thesis Advisory Committee.

In addition to this, the following are required.

Additional Requirements for the Integrated BS-MSE:

Students enrolled through Integrated BS-MSE Thesis subplan option must meet requirements for both B.S. and M.S.E. degree as follows:

B.S. Degree Requirements:

1. Students must successfully complete all of the existing B.S. degree requirements for Civil Engineering at UNLV.

2. Students may take up to 6 credits of approved graduate level courses in place of undergraduate courses. These classes would typically substitute for the undergraduate technical electives.

3. Undergraduates taking graduate courses must pay the graduate tuition and fees for these courses.

4. Students will graduate with the B.S. degree as soon as all B.S. degree requirements are completed.

M.S.E. Degree Requirements:

1. Students must meet all of the other degree requirements for the M.S.E. Thesis subplan degree.

2. The 6 graduate-level class credits taken as part of the undergraduate program may count for the M.S.E. degree as long as the course grades are B (3.00) or better and their average GPA for these classes is a 3.00 or above.

3. Students must pursue Thesis subplan to receive the course release. Students who later elect to pursue a M.S.E. non-thesis subplan degree must apply to the M.S.E. degree and complete all the requirements listed for that degree.

Graduation Requirements

1. The student must submit all required forms to the Graduate College as well as apply for graduation up to two semesters prior to completing their degree requirements.

2. The student must submit and successfully defend their thesis by the posted deadline. The defense must be advertised and is open to the public.

3. After the thesis defense, the student must electronically submit a properly formatted pdf copy of their thesis to the Graduate College for format check. Once the thesis format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for thesis defenses, format check submissions, and the final ProQuest submission can be [found here](#).

Plan Graduation Requirements

Refer to your subplan for Graduation Requirements.

[Subplan 1: Thesis](#)

[Subplan 2: Non-Thesis](#)

[Subplan 3: The Integrated BS-MSE Thesis](#)

Advising and Culminating Experience

With these changes, will students in this program need a Grad Advisory Committee (GAC) formed?

- Yes
 No

If yes, please list the applicable subplans that will need a GAC:

Thesis Subplan

With these changes, will students be assigned a faculty advisory prior to GAC formation?

- Yes
 No

If yes, please list the applicable subplans that will need an advisor:

Course Subplan

Comments: The course subplan will require the advisor to be appointed after the student get admitted in this subplan.

For Master's program only: With these changes, does this program require a prospectus form?

- Yes
 No

If yes, please list applicable subplans:

With these changes, will the culminating experience be a course?

- Yes
 No

If yes, please provide course prefix, number and name:

CEE 798

With these changes, describe the culminating experience (requirements, if applicable-which subplans will need GACs, forms, etc.):

CEE 798 course will be culminating experience course for Course Subplan. This subplan requires the advisor to be appointed.

However, for the Thesis subplan, the culminating experience course will be CEE 797 Thesis in Civil Engineering and this plan requires GAC.

The [Degrees Directory](#) provides current and consistent degree information. Submission of this form indicates acknowledgment and understanding that every department is responsible creating and maintaining accurate and updated program information on the UNLV Degrees Directory.

If new courses are added as placeholders within this proposal, new courses must be created using a Course Create form simultaneously to the process of this proposal.

Degrees Directory Program Entry: Check this box to acknowledge the above statement.

Changes will be applicable to:

- Current Students
- New Students
- Both Current and New Students

If applicable to current students, changes are:

- Mandatory
- Optional

If mandatory:

- If mandatory, I confirm that all students will be notified in writing of these changes as approved by the graduate college
- Not Mandatory

Effective Date:

READY TO SUBMIT?

After making all your intended changes, please follow these steps:

1. Finish the launch of your proposal by clicking the decisions icon  located to the right of the form. This will display a new decision/approval field on the top right.
2. Click on "approve", add an optional comment if necessary, and then click on the "Make My Decision" button at the bottom to move the proposal forward to the next step. You will see a notification indicating that the proposal has moved forward. You will not be able to edit after moving the proposal forward.
3. Please note that it is your responsibility as the proposer to see that the proposal is reviewed and receives all necessary approvals. Please be encouraged to reach out to reviewers on each step, if necessary.
4. You can check the status of the proposal by clicking on the workflow status icon  to verify that the proposal has gone to the next step.

The workflow status icon  will also show you the current step of the proposal at any given time, and who are the reviewers at that step.

QUESTIONS? contact gradcurriculum@unlv.edu

III. Department Vote Information

Note: This section is to be filled out by the Department Chair on behalf of the department committee.

(The role has been assigned to the corresponding person on this step. If incorrect, please notify gradcurriculum@unlv.edu).

1. Review the proposal. Discuss and make appropriate revisions.
2. Fill in vote information in the fields below, along with the approval. If Dual or Interdisciplinary: add votes from all departments/colleges involved
3. Then approve/reject by clicking the decisions icon  located to the right of the form. This will display a new decision/approval field on the top right. Click on "approve", add an optional comment if necessary, and then click on the "Make My Decision" button at the bottom to move the proposal forward to the next step. You will see a notification indicating that the proposal has moved forward. You will not be able to edit after moving the proposal forward.

The workflow status icon  will also show you the current step of the proposal at any given time, and who are the reviewers at that step.

If there were any modifications to the proposal, please enter them in the comments box below:

Comments: The existing language under "Career Possibilities" must be replaced by the following.

"MSE degree allows the students to specialize in an area of interest such as construction, geotechnical, structural, transportation or water resource/environmental engineering. A Master's degree leads to better opportunities for securing technical or management positions at public institutions, and engineering consulting, design, manufacturing, or construction firms. In addition, the students with MSE degree have a strong technical background to start their own engineering and construction business."

Date faculty voted on proposal: 12/7/2021

Result of vote: 10/6/2

Manner of vote: Via Webex meeting

IV. College Vote Information

Note: This section is to be filled out by the Academic Associate Dean on behalf of the college/school committee.

(The role has been assigned to the corresponding person on this step. If incorrect, please notify gradcurriculum@unlv.edu).

1. Review the proposal. Discuss and make appropriate revisions.
2. Fill in vote information in the fields below, along with the approval. If Dual or Interdisciplinary: add votes from all departments/colleges involved

3. Then approve/reject by clicking the decisions icon  located to the right of the form. This will display a new decision/approval field on the top right. Click on "approve", add an optional comment if necessary, and then click on the "Make My Decision" button at the bottom to move the proposal forward to the next step. You will see a notification indicating that the proposal has moved forward. You will not be able to edit after moving the proposal forward.

The workflow status icon  will also show you the current step of the proposal at any given time, and who are the reviewers at that step.

Date faculty voted on proposal: 2/9/2022

Result of vote: 4/0/0

Manner of vote: online

V. Graduate College Use Only - Code Request Items

Note: This section is for graduate college use only.

**Academic
Organization:**

**Academic Program
Code:**

Academic Plan Code:

**Plan Description (30
chars):**

**Transcript
Description:**

Subplan Code:

Subplan Description:

Subplan Type: Track
 Concentration
 Option/Dual
 Embedded/Track

**Subplan on
Transcript?** YES NO

**Effective Date and
First Term Valid:**

**Length / Avg. Time to
Degree:**

CIP code and title:

Other Codes Needed:

**Description /
implementation field
(do not edit)**

Comments for Master of Science in Engineering - Civil and Environmental Engineering

Curriculog	3/2/2022 4:21 pm Reply
Emily Lin has approved this proposal on Graduate College Dean.	
Gregory Moody	3/2/2022 1:34 pm Reply
10-0 in support. WebEx meeting held March 1, 2022	
Curriculog	3/2/2022 1:34 pm Reply
Gregory Moody has approved this proposal on Graduate Programs Committee.	
Curriculog	3/2/2022 1:14 pm Reply
Graduate Curriculum has approved this proposal on Graduate Programs Committee.	
Curriculog	2/14/2022 9:04 am Reply
Mohamed Trabia has approved this proposal on School/College Associate Dean/ Dean.	
Melissa Morris	2/9/2022 10:20 am Reply
College committee voted to unanimously approve this proposal.	
Curriculog	2/9/2022 10:20 am Reply
Melissa Morris has approved this proposal on School/College Committee.	
Curriculog	2/3/2022 2:33 pm Reply
CEEC Chair has approved this proposal on Department Chair.	
Curriculog	1/28/2022 9:00 am Reply
CEEC Graduate Coordinator has approved this proposal on Graduate Coordinator.	
Curriculog	1/20/2022 8:08 am Reply
Graduate Curriculum has approved this proposal on Technical Review.	
Curriculog	1/5/2022 0:13 am Reply
This proposal has been approved by the Department Chair and the Graduate Coordinator.	

This proposal has passed its deadline and has been approved.

EVP Academic Assessment

1/4/2022 8:17 am [Reply](#)

The learning outcomes for the two Masters programs cannot be identical. You'll need to add at least one unique learning outcome for each program that relates directly to the individual program's goals. Feel free to email me at lindsay.couzens@unlv.edu for assistance.

Curriculog

1/4/2022 8:17 am [Reply](#)

EVP Academic Assessment has rejected this proposal on Learning Objectives Notification.

Curriculog

1/4/2022 8:12 am [Reply](#)

EVP Academic Assessment has approved this proposal on Learning Objectives Notification.

CEEC Graduate Coordinator

1/4/2022 8:03 am [Reply](#)

The following changes must also be made
1. Student Learning Outcomes
2. Career Possibilities

Curriculog

1/4/2022 8:03 am [Reply](#)

CEEC Graduate Coordinator has approved this proposal on Originator.

Curriculog

1/3/2022 8:31 am [Reply](#)

CEEC Graduate Coordinator has launched this proposal.

Curriculog

1/3/2022 8:11 am [Reply](#)

CEEC Graduate Coordinator imported from the map 2022-2023 - Working Graduate Catalog into the following proposal fields: I. General Information: Department (s) (if Dual or Interdisciplinary please add all departments);, I. General Information: Degree or Certificate Name:;, I. General Information: Degree Type:;, I. General Information: Program Type:;, II. Program Changes: Proposed Curriculum:;, V. Graduate College Use Only - Code Request Items: Description / implementation field (do not edit).