

Dual Degree: Master of Business Administration & Master of Science in Engineering - Civil & Environmental Engineering

2 Graduate Program Create 2021-22

I. General Information

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

TURN ON help text before starting this proposal by clicking  in the top right corner of the heading.

You will need to turn on help text again after any actions that refresh the page including after saving proposals, importing information, or running impact reports.

FILL IN ONLY fields required marked with an *. You will not be able to launch the proposal without completing the required fields.

Type of Program* Interdisciplinary Discipline Specific Dual Degree

Department(s) (if dual or interdisciplinary - add all departments)*

Civil and Environmental Engineering and Construction

Business Administration Programs

Program Type*

Dual Master's

Degree Type*

Master of Business Administration

Program Level* Post-Bachelor's Post-Master's Other (see below)

If program level is other, please specify

Degree Name* Dual Degree: Master of Business Administration & Master of Science in Engineering - Civil & Environmental Engineering

II. Program Administration Information

Graduate Anjala Krishen and Pramen Shrestha

Coordinator(s) for Proposed Program*

Department(s) contact information: email, phone number* anjala.krishen@unlv.edu at 540.588.3961 and pramen.shrestha@unlv.edu at 702.895.3841

Total Required Credits* MS CEEC is 30 credits; Master of Business Administration is 30 credits

Date of First Enrollment* Fall 2021

Instructional Mode*

In person only

Web-based only (all courses offered online)

Hybrid (50% or more courses offered online)

Program Delivery Description* Hybrid course format for the MBA portion of the degree. The MBA program is hybrid format and is a part-time evening program that is set up to accommodate working professionals as well as full-time students. The MSE in Civil & Environmental Engineering portion of the dual degree will be mainly based on in-person courses but may include online ones as recommended and offered.

Rationale regarding the credit analysis has been attached.

Typical Time to Degree* 4 years

Will this program have differential tuition?* Yes No

If yes, have the differential tuition being approved by the school/college and provost?* Yes No

Provide the proposed CIP code MSE Civil & Environmental Engineering - 14.0801

Admission Term Deadlines:

Deadlines for each semester must be on or before: Fall - August 1st, Spring - December 1st, Summer - May 1st

Admission Term(s)* Fall
 Spring
 Summer

Application Deadline(s)* July 15 for Fall, November 15 for Spring

Kira is a holistic admissions tool where applicants can submit timed, recorded, video interviews on competencies that are important to your program. Rate your applicant interviews from the convenience of your desk on topics like professionalism, determination, critical thinking, and more. Adminstrated by the Graduate College, this tool can help you admit a diverse applicant pool with the right fit for your program. Learn more at kiratalent.com!

Will this program admissions process include Kira online interviews?*

Yes No

Graduate Assistant stipend is commonly set per-discipline, and may follow the averages set by the graduate assistanship survey. Please contact gradcurriculum@unlv.edu for assistance in accessing the survey.

Graduate Assistant Stipend* 0

III. Program Information

Please attach required documents by navigating to the Proposal Toolbox and clicking  in the top right corner.

Documents Required for Program Proposal to be Complete for NSHE approval*

- This form
- Dean's Memo – Identifies strengths and weaknesses and showing the priority of this program within your College's strategic plan.
- Letters of Support
- NSHE Proposal Form – Available from the Vice Provost for Academic Programs
- New Program Budget Projection - Available from the Vice Provost for Academic Affairs
- Sample Degree Program
- Program Assessment Plan – Available from UNLV Office of Academic Assessment
- Five Representative Course Syllabi
- Approved UNLV New Program Pre-Proposal Form - Available from the UNLV Vice Provost for Academic Programs
- Graduate Assistant Plan
- Recruitment, Retention, Progression, and Completion (R2PC) Plan

Program Overview*

This program will combine two existing programs MBA and MSE in Civil & Environmental Engineering. Students will complete both degrees and do all of the courses and the project for the MSE in Civil & Enrionmental Engineering degree while being able to have a few less credits for the MBA program.

Aspirational Peer Examples of Similar Degrees (Provide Institutions and

To our knowledge this will be the first of its kind in the state of Nevada but many other states offer it, e.g., UofDelaware at <https://lerner.udel.edu/programs/dual-degrees/master-civil-engineering-mba/>, UofHawaii at

weblinks)*

<http://www.cee.hawaii.edu/graduate-study-2-3-3/> and UTennKnoxville at <https://cee.utk.edu/graduate-programs/degrees/dual-ms-mba-program/>

Learning Outcomes)*

MBA Portion

- Recognize and evaluate ethical, legal, and regulatory dimensions of business decisions.
- Communicate effectively business ideas and analyses in writing.
- Communicate effectively business ideas and analyses in the oral presentation.
- Work effectively in a team-oriented environment.
- Apply business concepts to managerial decision-making within a global or domestic setting.

MSE in Civil & Environmental Engineering Project Track Portion

1. Solve complex engineering and construction related problems by developing, evaluating, and assessing new techniques, skills, and tools.
2. Apply engineering and construction knowledge in the area of their expertise (construction, geotechnical, structural, transportation, and water resources/environmental).
3. Effectively communicate technical information.

Program Assessment Overview)*

This dual MBA/MSE in Civil & Environmental Engineering program is under the MBA programs. We apply a generic assessment plan for MBA programs, including all dual programs. (please see attached)

Accreditation Information)*

MBA is accredited by AACSB; MSE-CEE is accredited by Northwest Commission on Colleges and Universities . More information can be found at: unlv.edu/provost/vpaa/accreditation

Program Highlights*

- A holistic approach to business and engineering management starts with the role of the firm, its goals and markets, its strategic planning and positioning, supply chain management, design, estimating, scheduling of the infrastructure and building projects .
- The explicit emphasis on a framework for the analysis of ethical issues and critical thinking.
- An in-depth knowledge on project planning, design, construction, operation and maintenance of the infrastructure and building projects
- A greater emphasis on international studies through a specific course in international business and cross-cultural perspective and a greater internationalization of other courses.
- An evening MBA and MSE Project Track Program accommodating the needs of both full-time and part-time students by allowing students to complete their degree at a pace that fits their personal schedule.
- Students can take 2, 3 or 4 courses per semester enabling them to finish in the time frame of their choice. The cohort experience enables students to bond and network with each other among business and engineering programs students.
- Up to nine hours of electives in business program and 27 credits in engineering program provide greater flexibility in tailoring programs of study to each student's needs and interests.

Career Opportunities*


This dual MBA/MSE in Civil & Environmental Engineering program is designed for those who seek to develop a solid understanding of business administration with a focus on being civil engineers. The program will provide students with the needed skills, knowledge, and tools to become visionary and creative civil engineers with strong competency in business management.

Please list the number, names and rank of faculty who will be supporting the instruction for this proposed program*


The teaching faculty are from two different colleges. To see MBA faculty, please see: <https://www.unlv.edu/business/directory>; For CEEC faculty: see <https://www.unlv.edu/ceec/faculty-directory>.

The [Graduate Catalog](#) will need to be updated as a result of this proposal. Please use a comparable degree program in the current graduate catalog as a template. Follow the steps below to generate the program (catalog entry) text.

Follow these steps to build the new program curriculum:

1. Click on  "View Curriculum Schema." Click 'Add Core' and name your core (core names must match the existing format, do not use core names that do not currently exist in the catalog). Add any descriptive text (do not add courses until Step 2). Descriptive text is generally used in the following cores: Plan Description, Plan Admission Requirements, Plan Requirements, Plan Graduation Requirements. Click 'Save All Changes' (recommend doing this after each core). At this point you may preview your prospective curriculum. Repeat Step 1 until all cores have been added.

2. There are two options for adding courses: "Add Course" and "Import Course." For existing courses, click on "Import Course" and find the desired courses. For new classes going through a Curriculog Approval Process click on "Add Course" (this is for new courses only)-- a box will open asking you for the Prefix, Course Number and Course Title.

3. Click on  "View Curriculum Schema." Click on the area/header of the program where you would like to add courses. When you click on "Add Courses" it will bring up the list of courses available from Step 2.

Select the courses you wish to add. For removing courses click on the  and proceed.

Plan Description

This is a dual degree offered by the Lee Business School in conjunction with the Howard R. Hughes College of Engineering. The Lee Business School MBA Programs at UNLV is designed for those who seek global career and leadership opportunities. The world is changing quickly and today's business leaders are faced with new challenges in a complex business environment supported by new communication technologies and organizational structures. Success in the new global marketplace requires teams of executives working across functions and across borders. The MBA programs at UNLV prepare students to succeed in today's business environment by providing them with the needed skills, knowledge, and tools to become visionary and creative leaders. The program focuses on ethics and critical thinking, business communications, the role of the firm and its goals and markets, firms' strategic planning and positioning, supply chain management, international business culture, information technology, leadership, and teamwork. Our faculty and administration are committed to fulfilling the recently revised college mission: to advance the knowledge and practice of the disciplines that constitute business and administration and to foster the intellectual and economic vitality of Nevada and the Intermountain Region through teaching, research, and outreach. Our faculty are committed to continuous quality improvement of the curriculum. To achieve the best outcome, the faculty embrace no single teaching method, but rather employ a combination of methods best suited to the particular objectives of the course. Lectures, group discussions, seminars, case studies, computer simulations, and individual and group research projects are frequently used within courses and across the curriculum. 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.

Plan Admission Requirements

Application deadlines Applications available on the UNLV Graduate College website. The admission requirements for the dual degree are the same as those stated under the original programs linked below: - MBA - MSE CEE See the Application Process section under the MBA and MSE CEE programs linked above. Applications will be reviewed by representatives of both Lee Business School and CEEC department, in an independent process within each college. Applicants must be admitted to both Lee Business School and CEEC department to qualify for the dual degree program for that term. If denied by one program, the applicant will have the option of proceeding with a single degree program with departmental approval. All domestic and international applicants must review and follow the Graduate College Admission and Registration Requirements. Students are accepted into a degree program as

described in the Graduate Catalog.

Plan Requirements

Total Credits Required: 60

Course Requirements

**Total Credits Required for the Business Administration
M.B.A.: 30**

MBA Core Required Courses – Credits: 18

MBA 761 Accounting for Managers	3
MBA 763 Leadership, Teams, and Individuals	3
MBA 765 Financial Decision Making	3
MBA 767 Market Opportunity Analysis	3
MBA 769 Applied Economic Analysis	3
MBA 775 Data Modeling and Analysis	3

Electives – Credits: 9

Complete 9 credits of electives from any 700-level course offered by the Lee Business School.

Capstone Course – Credits: 3

MBA 787 Strategic Management	3
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**Total Credits Required for the Master of Science in
Engineering - Civil & Environmental Engineering: 30**

Elective Courses - Credits: 27

Students must successfully complete a minimum of 3 courses from one of the five categories in the following discipline-based list, and complete the remaining credits with a choice of advisor-approved courses

Construction

CEE 609 Engineering Project Management	3
CEE 710 Modular Construction	3
CEE 720 Information and Sensing Technology in Construction	3
CEM 651 Construction Estimating	4
CEE 785 Construction Engineering Management	3
CEM 653 Construction Scheduling and Resource Optimization	3
CEM 751 Construction Cost Analysis and Estimating	3

Geotechnical

CEE 710 Modular Construction	3
CEE 731 Pavement Materials and Design	3
CEE 732 Advanced Foundation Engineering	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
CEE 734 Advanced Soil Mechanics	3

Transportation

CEE 725 Freight Transportation	3
CEE 726 Railroad Operations	3
CEE 735 Earth Dams and Embankments	3
CEE 761 Transportation Demand Analysis	3
CEE 762 Operations Research Applications in Civil Engineering	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 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
CEE 755 Advanced Physicochemical Methods for Water Treatment	3

(Optional) Graduate Internship Course - Credit: Maximum up to 1

Students engaged in Curricular Practical Training (CPT) must take CEE 792. The course can be taken maximum one time during their study. 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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Project - Credits: 3

Degree Requirements

The MBA degree requires a minimum of 30 credits of approved course work. For the MBA, all requirements listed above must be completed successfully as defined by the Lee Business School and the Graduate College. All required courses are sequenced so students may acquire the tools and skill they need for success in the program. - For the MSE in Civil & Environmental Engineering, the student's Advisor should be tenured or a tenure-track faculty member of the CEEC Department. An advisory committee is not required. - For the MSE in Civil & Environmental Engineering, 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 project work associated with the master's level project (CEE 796) with the outcome being a paper written for a specific indexed conference or journal. - Out of 30 credits MSE related course work, at least 50% of the courses (600 and 700 level) within the total coursework must be from the College of Engineering. - Out of 30 credits MSE related course work, at least 50% of the courses within the total coursework must be 700 level. - 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. - All requirements for the M.S.E. are met upon the satisfactory completion of the project, and the submission of a satisfactory project report to the Advisor.

Graduation Requirements

The student must successfully complete the MBA capstone course. Students cannot graduate from one portion of the dual degree until the requirements for both are met. Students must apply to graduate from both programs for the same semester. The student must submit all required forms to the Graduate College as well as apply for graduation from both degrees up to two semesters prior to completing their degree requirements.

Please describe the culminating experience for this program, including course prefix, number, name and any further information.*

CEE 796 Design Project in Civil Engineering is the culminating capstone course for the MSE in Civil & Environmental Engineering Project Track portion of this dual degree, whereas MBA 787 is the culminating course for the MBA portion. These courses should be taken during the last year of the student's enrollment in these programs, respectively.

The [Degrees Directory](#) provides current and consistent degree information. Submission of this form indicates acknowledgment and understanding that every department is responsible for creating and maintaining accurate and updated program information on the UNLV Degrees Directory. Departments must also provide and maintain program handbooks which are housed on the Degrees

Directory: www.unlv.edu/academics/degrees

Handbooks should be submitted to the Graduate College for approval and to be posted to the Degrees Directory entry within 30 days of the issuance of the Provost Alert. Failure to do so may result in the closure of the program's application.


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

Student Authentication – Federal guidelines require that distance education and correspondence programs utilize mechanisms that verify student identity. UNLV strives to insure that this is done with all programs, not just those delivered via distance education. Describe how this program will verify student identity. (for more information on student authentication see the UNLV [Office of Online Education](#), [WICHE](#), and [SARA](#))

Describe how this program will verify student identity (online portion)* NSHE ID number.

3. LAUNCH proposal by clicking  in the top left corner.

4. Finish the launch of your proposal by clicking the icon  located in the Proposal Toolbox on left side at top. Make your decision, comment is optional, and click on "Make decision".

You can check the status of the proposal by clicking  in Proposal Toolbox to verify that the proposal has gone to the next step.


IV. Department Vote Information

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

3. Then go to the proposal toolbox at the top right side. Click on  and select the corresponding decision for the committee. This will enable the proposal to go to the next person on the workflow.

You can check the status of the proposal by clicking  in Proposal Toolbox to verify that the proposal has gone to the next step.

If Dual or Interdisciplinary: add votes from all departments/colleges involved

(e.g. "Dpt A: / Dpt. B)

Date faculty voted on proposal September 23, 2020

Result of vote Approved

Manner of vote Yes: 45; No: 4; Abstain: 0


V. Unit Vote Information

Note: This section is to be filled out by the College Committee Chair on behalf of the 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.

3. Then go to the proposal toolbox at the top right side. Click on  and select the corresponding decision for the committee. This will enable the proposal to go to the next person on the workflow.

You can check the status of the proposal by clicking  in Proposal Toolbox to verify that the proposal has gone to the next step.

If Dual or Interdisciplinary: add votes from all departments/colleges involved

(e.g. "College A: / College B)

Date faculty voted on proposal 2/9/2021

Result of vote 4/0/0

Manner of vote email

VI. Processing Notes (Graduate College/Registrar Use Only)

Program Alerts (E.g. **View Program Disclaimer)**

PS Processing Notes

PS Processing Date

Initials

**Aalog Processing
Notes**

**Aalog Processing
Date**

Initials

Comments for Dual Degree: Master of Business Administration & Master of Science in Engineering - Civil & Environmental Engineering

Curriculog	3/15/2021 2:56 pm Reply
Emily Lin has approved this proposal on Graduate College Dean.	
Curriculog	3/2/2021 1:52 pm Reply
Graduate Curriculum has approved this proposal on Graduate Programs Committee.	
Gregory Moody	3/2/2021 1:14 pm Reply
14-0 in favor. WebEx March 2, 2021	
Pending approval of learning objectives by Provost's office	
Curriculog	3/2/2021 1:14 pm Reply
Gregory Moody has approved this proposal on Graduate Programs Committee.	
Curriculog	2/12/2021 11:03 am Reply
Mohamed Trabia has approved this proposal on School/College Associate Dean/ Dean.	
Curriculog	2/9/2021 10:38 pm Reply
Business Associate Dean has approved this proposal on School/College Associate Dean/ Dean.	
Curriculog	2/9/2021 10:36 pm Reply
Business Associate Dean has approved this proposal on School/College Associate Dean/ Dean.	
Curriculog	2/9/2021 10:36 pm Reply
Business Associate Dean has approved this proposal on School/College Associate Dean/ Dean.	
Curriculog	2/9/2021 10:35 pm Reply
Business Associate Dean has approved this proposal on School/College Committee.	
Curriculog	2/9/2021 12:11 pm Reply
Melissa Morris has approved this proposal on School/College Committee.	

Curriculog

2/9/2021 11:47 am [Reply](#)

MBA Director has approved this proposal on School/College Committee.

Melissa Morris

2/9/2021 11:30 am [Reply](#)

The college committee has approved this proposal.

Curriculog

2/9/2021 11:30 am [Reply](#)

Melissa Morris has approved this proposal on School/College Committee.

Curriculog

2/7/2021 8:45 pm [Reply](#)

Ian McDonough has approved this proposal on School/College Committee.

Curriculog

2/5/2021 3:58 pm [Reply](#)

Han-Fen Hu has approved this proposal on School/College Committee.

Curriculog

2/5/2021 3:07 pm [Reply](#)

Han-Fen Hu was added to the Lee Business School Graduate College/School Curriculum Committee role.

Curriculog

2/5/2021 3:06 pm [Reply](#)

Ian McDonough was added to the Lee Business School Graduate College/School Curriculum Committee role.

Curriculog

2/5/2021 3:05 pm [Reply](#)

System Administrator Graduate Curriculum has restarted the School/College Committee step as a result of participants being added to or removed from the step.

Curriculog

2/5/2021 9:35 am [Reply](#)

Jianxin Chi has approved this proposal on School/College Committee.

Curriculog

2/5/2021 7:29 am [Reply](#)

Kimberly Charron has approved this proposal on School/College Committee.

Curriculog

2/4/2021 10:11 pm [Reply](#)

Gregory Moody has approved this proposal on School/College Committee.

Curriculog

2/4/2021 11:52 am [Reply](#)

CEEC Chair has approved this proposal on Department Chair.

Curriculog

2/4/2021 9:17 am [Reply](#)

MBA Director has approved this proposal on Department Chair.

Curriculog

1/28/2021 4:25 pm [Reply](#)

CEEC Graduate Coordinator has approved this proposal on Graduate Coordinator.

Curriculog

1/28/2021 7:21 am [Reply](#)

MBA Director has approved this proposal on Graduate Coordinator.

Curriculog

1/27/2021 4:07 pm [Reply](#)

Graduate Curriculum has approved this proposal on Technical Review.

Graduate Curriculum

1/19/2021 9:30 am [Reply](#)

Approved together with VPAP stage reviewers

Curriculog

1/19/2021 9:30 am [Reply](#)

Graduate Curriculum has force approved this proposal.

Graduate Curriculum

1/19/2021 9:16 am [Reply](#)

Approved together with originator

Curriculog

1/19/2021 9:16 am [Reply](#)

Graduate Curriculum has force approved this proposal.

Curriculog

12/4/2020 8:24 am [Reply](#)

Graduate Curriculum has force rejected this proposal.

Graduate Curriculum

12/4/2020 8:15 am [Reply](#)

Please note below general guidelines for the needed reviews (an email has been sent directly to the proposer):

1. Remove all mentions of "same as," of "this is not a new degree," etc.
2. Consider that fields such as Highlights, Career Outcomes, and so forth, will be the source for the later display of the dual across the degrees directory and eventually other communications - so these fields need to be edited to reflect exactly what applicants will see.
3. Accreditation fields also need revision, and can be linked to the original program, but must be mentioned in the rationale if standards are still met even with the credit reduction/structural differences in content.
4. Clarify changes in the learning outcomes from the changes in courses/credits. So we must review the original learning outcomes (of both parts of the dual), check if any of them are maybe connected to certain content or certain amount of credits and specific specializations, etc., and make a parallel to the dual, indicating if there are changes, and then why or why not - very clearly.
5. Communicate all these details, and all details needed, for both "parts"/programs in the dual. Both programs need to be covered in the proposal with equal emphasis/detailing in every field.

for assistance please contact gradcurriculum@unlv.edu

Curriculog

12/4/2020 8:15 am [Reply](#)

Graduate Curriculum has rejected this proposal on VPAP/ Graduate College Dean Review Step.

Curriculog

11/19/2020 3:07 pm [Reply](#)

MBA Director has approved this proposal on Originator.

Curriculog

10/22/2020 9:42 am [Reply](#)

MBA Director has launched this proposal.

Curriculog

10/22/2020 9:32 am [Reply](#)

MBA Director imported from the map 2021-2022 Working Graduate Catalog into the following proposal fields: I. General Information: Program Type, I. General Information: Degree Type, I. General Information: Degree Name, III. Program Information: Prospective Curriculum.