

CEM - 730 - Foundations of Big Data Analytics for Construction Management

2 Graduate Course Create 2021-22

I. Course Information

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

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.

Department*

Civil and Environmental Engineering and Construction

Prefix:*

CEM

Number:* 730

Is a new Prefix being suggested? Yes No

Suggested Prefix

Long Course Name:* Foundations of Big Data Analytics for Construction Management

Short Course Name* Analytics for Infra.

Tip: 25 characters max. for short name (abbreviations are acceptable if needed)

Tips

avoid the use of the words *student*, *course*, and *covers*
incomplete sentences are ok
avoid repeating the course title
(50 words max)

Catalog Description*

Explores big data analytics and corresponding methods within the construction management environment. Emphasis on **unstructured data analysis** including National Language Processing, large-scale sensor data analysis, data collection, preparation, processing, and interpretation. Crosslisted with CEE 730. Includes differential fees.

Is this course a culminating experience?* Yes No**If Yes, to which programs?****First Term Course Offered*****Explanation for Course Create***

The new faculty joined our department, so we are offering new course in her area of expertise. This course is regarding data analytics and natural language processing for construction management students. Other courses related to data analytics offered in UNLV are more focused on data processing and computing/programming skills; however, students in civil and construction will need skills to address current ongoing industrial questions using data analysis techniques. This course also focused on unstructured data analytics techniques. Our department has not offered any data analytics courses before. The demand of this course is high, because our students need data analytics course taught by our own faculty.

Are you adding a Service-Learning designation to this course?* Yes No

If the Service-Learning designation is being added to this course:

A syllabus in Word or PDF format must accompany this form.

Graduate syllabi must meet the minimum criteria as required by the Provost's office (See Semester Memo under Executive Vice President and Provost Policies and Forms www.unlv.edu/policies). Graduate courses that are linked to undergraduate courses (300/500 and 400/600 level joint courses) must clearly state in the syllabus how the class experience and expectations are different for graduate students, what additional requirements students enrolled in the graduate level course must fulfill, and how the grading scale will be applied to graduate students.

Please attach a current syllabus by navigating to the Proposal Toolbox and clicking  in the top right corner.

Information about Service-Learning is available [here](#). Faculty can visit the [faculty Service-Learning page](#) as well as the [UNLV Guide for Service Learning](#) for additional information.

If adding Service-Learning designation, syllabus is attached Attached

II. Catalog Information

Will this be an experimental (x) course? Yes No

Has this course number been used previously as an Experimental (X) course? Yes No

If yes, X-Course Prefix

X-Course Code

Program(s) impacted by this new course* MSCM

Tip (note): A Program Change form will need to be submitted to add the new course into a program.

Detail the changes to the program catalog entry required due to the creation of this course.* This course will be listed under Speciality Courses in the MSCM Catalog.

Fixed/Variable Credits* Fixed Variable

If fixed, enter number of credits. If variable, enter minimum and maximum credits (E.g., 1-3)

Number of Credits 3

Course is Repeatable* Yes No

If yes, the maximum number of credits that may be earned is

Grading System* Letter Grade S/U Thesis/Dissertation

Is this a Special Topics course? Yes No

Sub-topic(s)

Are topics repeatable? Yes No

If yes, number of credits

Prerequisites CEEC Graduate Standing

Corequisites

Does this course have any non-credit components? Yes No

- If yes, indicate component(s)**
- Clinical
 - Discussion
 - Field Studies
 - Independent Study
 - Internship
 - Laboratory
 - Lecture
 - Practicum
 - Research
 - Seminar
 - Supervision
 - Thesis Research

- CROSS-LISTING / Same As, will this course be:***
- Same As=Undergraduate: same content and same career (UG/UG). Graduate: Same/similar course content and same career (Grad/Grad)
 - Cross-listing= Cross-listed courses contain the same or similar content and may be in different programs (eg., WMST 497 & SOC 497) or different careers (e.g., BIOL 467 & BIOL 667 or PSC 722 & PHIL 728)
 - Not Cross-Listed or Same As

If yes, list the course CEE 730

If yes, please include below the rationale for crosslisting, answering to the following questions:

- 1) What aspect of graduate preparation is met via this course that goes beyond the undergraduate program?
- 2) What common aspects are offered in the crosslistings and what grad level pieces are not?
- 3) What would be beneficial in offering the crosslisted courses from a graduate education perspective?

Crosslisting Rationale: This course is cross listed only with graduate course
N/A
Both construction management (MSCM) and Civil Engineering students can sit together in the class and share their experience

Indicate the instructional modes that should be available for scheduling*

- In Person Supplemental Web
- Field Study
- Hybrid
- Independent Study
- Television
- Web-based
- Web-based w/ on/off campus meeting

Differential fees required for this course? (if yes, please clarify on explanation field above)

- Yes No

III. Evaluation of Library Resources

A. This section is completed by the faculty member originating this proposal—indicate library resources that will be needed to support this course

Will this course creation require changes to library resources?*

- Yes No

Please indicate library resources that will be needed to support students taking this course*


- Core journals
- Core books (not required texts)
- Electronic resources (e.g., databases, videos, media, etc.)


Critically needed journals for this subject area:

Core books needed:

Electronic Resources:

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.

B. This section is completed by the librarian.

Level of support the
Library can provide

Library Comments

IV. Syllabus

A syllabus in Word or PDF format must accompany this form.

Graduate syllabi must meet the minimum criteria as required by the Provost's office (See Semester Memo under Executive Vice President and Provost Policies and Forms <https://www.unlv.edu/policies/current-policies>). Graduate courses that are linked to undergraduate courses (300/500 and 400/600 level joint courses) must clearly state in the syllabus how the class experience and expectations are different for graduate students, what additional requirements students enrolled in the graduate level course must fulfill, and how the grading scale will be applied to graduate students.

Attachments List


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

Attached syllabus* Attached

V. 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.

Date faculty voted
on proposal January 28, 2021


Result of vote 16/0/0
(Number of
yes/no/abstention
votes)

Manner of vote Email
(online, in-person,
etc.)

VI. 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.

Date faculty voted 2/22/21
on proposal

Result of vote 4/0/0
(Number of
yes/no/abstention
votes)

Manner of vote online
(online, in-person,
etc.)

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

PS Processing Notes

PS Processing Date 04/13/2021

Initials EJ

Acalog Processing
Notes

Aalog Processing 04/13/2021
Date

Initials EJ

Comments for CEM - 730 - Foundations of Big Data Analytics for Construction Management

Curriculog	4/13/2021 12:45 pm Reply
This proposal has been completed.	
Curriculog	4/13/2021 12:45 pm Reply
REG Curriculum has approved this proposal on Implementation: Catalog and PeopleSoft.	
REG Curriculum	4/13/2021 12:45 pm Reply
PS & Acalog done. 4/13/2021. EJ	
Curriculog	4/5/2021 8:25 am Reply
Emily Lin has approved this proposal on Graduate College Dean.	
Curriculog	4/2/2021 10:36 am Reply
James Navalta has approved this proposal on behalf of Graduate Course Review Committee. See Graduate Course Review Committee 3-24-2021 for more information.	
Curriculog	4/2/2021 8:44 am Reply
Graduate Curriculum has approved this proposal on Graduate Course Review Committee.	
Curriculog	2/25/2021 10:19 pm Reply
Mohamed Trabia has approved this proposal on School/College Associate Dean/ Dean.	
Melissa Morris	2/22/2021 3:16 pm Reply
College Committee Voted unanimously to approve this proposal via email on 2/22/21	
Curriculog	2/22/2021 3:16 pm Reply
Melissa Morris has approved this proposal on School/College Committee.	
Curriculog	2/22/2021 10:29 am Reply
CEEC Chair has approved this proposal on Department Chair.	

Curriculog

2/22/2021 10:00 am [Reply](#)

CEEC Graduate Coordinator has approved this proposal on Graduate Coordinator.

Curriculog

2/22/2021 9:38 am [Reply](#)

Graduate Curriculum has approved this proposal on Technical Review.

CEEC Graduate Coordinator

2/18/2021 1:21 pm [Reply](#)

We have made corrections according to your comments.

Curriculog

2/18/2021 1:21 pm [Reply](#)

CEEC Graduate Coordinator has approved this proposal on Originator.

Graduate Curriculum

2/1/2021 4:39 pm [Reply](#)

- Please review CEE 730 proposal: if both courses are to be created please acknowledge all points below and also differentiate courses in title, description, and syllabus.

comments also displayed in CEE 730:

- Please review and clarify rationale for course create, how does the new course impact the curriculum? what is the demand for the new course? how course differs from any other analytics course?

- Please review crosslisting, the course cannot be crosslisted with itself.

- Please review description to identify how course differs from any other analytics course? (e.g. within the IDGP Data Analytics program)

- Please adjust short course name to reflect specificity of course, e.g. "Analytics for Infra."

- Please review and adjust syllabus to reflect points above, also please include further topics or topic examples in the syllabus.

for assistance please contact gradcurriculum@unlv.edu

Curriculog

2/1/2021 4:39 pm [1 Reply](#) | [Reply](#)

Graduate Curriculum has rejected this proposal on Technical Review.

CEEC Graduate Coordinator

2/18/2021 1:14 pm

- CEE 730 and CEM 730 course are the same course but with different prefix. CEM 730 version will be taken by our MSCM students, where as CEE 730 will be taken by our civil engineering students.

- This has been clarified in the section "Explanation for creating the course."

- This course is cross listed with CEE 730 which has different prefix.

- This has been explained in the section "Explanation for creating the course"

- We have followed your recommendation for short course name.

- We have reviewed and adjust the syllabus and incorporate your comments.

Curriculog

1/28/2021 6:40 pm [Reply](#)

CEEC Graduate Coordinator has approved this proposal on Originator.

Curriculog

1/28/2021 2:15 pm [Reply](#)

CEEC Graduate Coordinator has launched this proposal.