

Master of Science - Data Analytics

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)*

IDGP - Data Analytics

Program Type*

Master's

Degree Type*

Master of Science

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

If program level is other, please specify

Degree Name* Master of Science - Data Analytics

II. Program Administration Information

Graduate Coordinator(s) for Proposed Program* Kazem Taghva

Department(s) contact information: email, phone number* Computer Science, kazem.taghva@unlv.edu, 702-895-3681

Total Required Credits* 36

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* Initially, four courses will be taught online (DA 621, DA 622, DA 651, DA 790). Later on, other courses will be added.

Typical Time to Degree* two 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 11.0401

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)* Fall - August 1st, Spring - December 1st, Summer - May 1st

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. Administrated 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 assistantship survey. Please contact gradcurriculum@unlv.edu for assistance in accessing the survey.

Graduate Assistant Stipend* 12,000

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*

The proposal is to create an interdisciplinary M.S. in Data Analytics, which will be housed in the Graduate College per UNLV's Interdepartmental Graduate Programs policies. Resources between the various colleges will be shared as specified by the deans from the respective colleges in a memorandum of understanding facilitated by the Graduate College. Students will take courses in several colleges/schools for the core and then electives in their area of specialization. The set of core classes in technology and management for all students will be offered by the College of Engineering and the Lee Business School. The specialized classes in statistical analysis will be offered by the Colleges of Sciences, Hospitality, Liberal Arts, and the School of Public Health.

The program is designed to appeal to and accept a wide variety of students from a wide variety of academic disciplines and the goal is that students will be able to acquire this degree and enter careers in their area of specialization with mid-level data analytical capabilities. From there, they will be able to grow their careers as their experience and application of these skills in their field increases. This program will utilize the strengths of the College of Engineering's Computer Science Department, which can provide the technical expertise of dealing with database technology, programming, and machine learning. The Lee Business School's Department of Management, Entrepreneurship, and Technology faculty will provide the expertise in managerial aspects of data, governance, and the application of data analytics in an organizational environment to solve problems. The program will rely on the other participating colleges to provide statistical techniques training that are required for data analysis in specific disciplines.

Aspirational Peer Examples of Similar Degrees (Provide Institutions and weblinks)*

Northwestern University, MS in Analytics,
<https://www.mccormick.northwestern.edu/analytics/>

Learning Outcomes*

1. Demonstrate a basic level of technical knowledge related to coding, data manipulation, and data properties.
2. Demonstrate a mastery of in-depth knowledge of fundamental and basic statistical principles.
3. Formulate, update and communicate regarding data analytic solutions.

**Program
Assessment
Overview***

Each year, the program will assess the program by the number of students in the culminating course, and the number of papers submitted or accepted in conferences and journals.

The full assessment report is attached to this proposal

**Accreditation
Information***

Northwest Commission on Colleges and Universities, ABET

Program Highlights*

The creation of the first university-wide interdisciplinary graduate program incorporating six colleges/schools is proposed for an M.S. in data analytics. This will provide the core offerings needed for students to understand the required technical, mathematical, and organizational issues for appropriate analysis of data and the ability for students to take courses in the college/school specific to their interests

**Career
Opportunities***

Based on available data from the U.S. Bureau of Labor Statistics, the Western Region of the U.S. is experiencing high and increasing demand for individuals with technology and statistical training. (<http://www.bls.gov/oes/current/oes151111.htm#st>). It is anticipated that Nevada will experience the same upward trend for careers that build upon information and computer research science.

Based on the data produced by NSHE's Statewide Workforce Supply and Demand Report, over the next five years, there will be a significant increase in the state-wide demand for the individuals with training in computational and statistical subject matters applied to management and analysis of data.

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

The following is the list of the foundational faculty and departments who will be involved with the program:

Faculty 1, Professor, Howard R. Hughes College of Engineering, Department of Computer Science

Faculty 2, Assistant Professor, Howard R. Hughes College of Engineering, Department of Computer Science

Faculty 3, Assistant Professor, Howard R. Hughes College of Engineering, Department of Computer Science

Faculty 4, Assistant Professor, Howard R. Hughes College of Engineering, Department of Computer Science

Faculty 4, Professor, Lee Business School, Department of Management, Entrepreneurship, and Technology

Faculty 5, Professor, Lee Business School, Department of Management, Entrepreneurship, and Technology

Faculty 6, Associate Professor, Lee Business School, Department of Management, Entrepreneurship, and Technology

Faculty 7, Assistant Professor, Lee Business School, Department of Management, Entrepreneurship, and Technology

Faculty 8, Professor, William F. Harrah College of Hospitality, Department of Resort Gaming and Golf Management


Faculty 9, Professor, School of Public Health, School of Community Health Sciences

Faculty 10, Associate Professor, College of Sciences, Department of Mathematical Science, Biostatistics


Faculty 11, Assistant Professor, College of Sciences, Department of Mathematical Science, Statistics

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

The program is designed to appeal to and accept a wide variety of students from a wide variety academic disciplines and the goal is that students will be able to acquire this degree and enter careers in their area of specialization with mid-level data analytical capabilities. From there, they will be able to grow their careers as their experience and application of these skills in their field increases.

This program will utilize the strengths of the College of Engineering's Computer Science Department, which can provide the technical expertise of dealing with database technology, programming, and machine learning. The Lee Business School's Department of Management, Entrepreneurship, and Technology faculty will provide the expertise in managerial aspects of data, governance, and the application of data analytics in an organizational environment to solve problems.

The program will rely on the other participating colleges to provide statistical techniques training that are required for data analysis in specific disciplines.

Plan Admission Requirements

Application deadlines ([LINK](#))

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

Applicants will be requested to submit:

- Completed undergraduate Bachelor's degree.
- Minimal mathematics background is required (equivalent to MATH 127 or 128).
- Graduate Record Examinations test scores placing the student in the top 50% of test-takers (i.e., 309 or higher) will be given preference.
- Official transcript of all university-level education from accredited institutions. Unofficial transcripts can be accepted at the time of application, however, official transcripts must be submitted upon acceptance.
- International students must follow the English proficiency requirements (<https://www.unlv.edu/graduatecollege/english-proficiency>)
- Two letters of recommendation concerning the potential for success in the graduate program.
- Statement of purpose explaining interest in the program.
- Minimum GPA and further requirements for all domestic and international applicants can be found at the Graduate College Admission and Registration Requirements page ([LINK](#))

Students are accepted into a degree program as described in the Graduate

Catalog. The faculty and corresponding sub-disciplines and sub-plans within

the described programs are subject to change at any time.

Plan Requirements

Total Credits Required: 36

Course Requirements

Required Courses – Credits: 18

Complete 18 credits by completing all of the following courses:

ITE 621 Programming For Data Analytics I	3
ITE 622 Programming for Data Analytics II	3
ITE 651 Managing Big Data and Web Databases	3
MIS 761 Business Analytics Methods and Tools	3
MIS 769 Big Data Analytics for Business	3
MIS 776 Business Intelligence	3

Statistical Courses – Credits: 6

Complete 6 credits of statistical courses from the following courses or other advisor approved courses.

EAB 770 Applied Statistical Methods for Categorical Data	3
EAB 783 Multivariate Methods for the Health Sciences	3
HOA 730 Statistical Analysis for Hospitality	3
STA 691 Statistics for Scientists I	3

Elective Courses – Credits: 9

Complete nine credits of advisor approved courses.

Culminating Experience – Credits: 3

DA 790 - Culminating Experience in Data Analytics

Degree Requirements

Students must complete 36 credits of approved coursework:

Students will choose an advisor and two other committee members, and will present their work for the committee to collectively decide on a Satisfactory/Unsatisfactory basis.

Students must obtain a 3.0 GPA in order to graduate. A student can have no more than one grade less than B-.

Plan Graduation Requirements

The student must successfully complete a culminating project.

The student must submit all required forms to the Graduate College and then apply for graduation 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.*

DA 790 - Culminating Experience in Data Analytics

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)*

N/A

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 10/14/2020


Result of vote 12(Yes)-0(No)-1(Ab)

Manner of vote online (Colleges of Engineering, Sciences, Liberal Arts, Hospitality, the School of Public Health, and the Lee Business School)

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 10/26/2020

Result of vote 6 yes; 0 no; 0abs

Manner of vote online (Colleges of Engineering, Sciences, Liberal Arts, Hospitality, the School of Public Health, and the Lee Business School)

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 Master of Science - Data Analytics

Curriculog	11/12/2020 11:13 am Reply
This proposal has been completed.	
Curriculog	11/12/2020 11:13 am Reply
Graduate Curriculum has approved this proposal on Implementation: Catalog and PeopleSoft.	
Curriculog	11/11/2020 7:36 am Reply
Christopher Heavey has approved this proposal on Provost (GRAD).	
Curriculog	11/3/2020 3:15 pm Reply
Emily Lin has approved this proposal on Graduate College Dean.	
Curriculog	11/3/2020 3:00 pm Reply
Graduate Curriculum has approved this proposal on Graduate Programs Committee.	
Curriculog	11/3/2020 2:25 pm Reply
Gregory Moody has approved this proposal on behalf of Graduate Programs Committee. See /agenda:169/form Graduate Programs Committee Agenda - Nov 3, 2020 for more information.	
Curriculog	10/26/2020 2:12 pm Reply
Emily Lin has approved this proposal on School/College Associate Dean/ Dean.	
Curriculog	10/26/2020 2:12 pm Reply
Emily Lin has approved this proposal on School/College Committee.	
Curriculog	10/26/2020 11:45 am Reply
Chin-Chun Hsu has approved this proposal on School/College Committee.	
Curriculog	10/26/2020 10:24 am Reply
Mohamed Trabia has approved this proposal on School/College Committee.	

Curriculog10/26/2020 9:39 am [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.

Curriculog10/26/2020 9:39 am [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.

Curriculog10/23/2020 9:03 am [Reply](#)

Mohamed Trabia was added to the IDGP Data Analytics Graduate College/School curriculum committee role.

Curriculog10/23/2020 9:01 am [Reply](#)

Chin-Chun Hsu was added to the IDGP Data Analytics Graduate College/School curriculum committee role.

Graduate Curriculum10/16/2020 8:28 am [Reply](#)

Approved with and on behalf of dept. Chair - Dr. Taghva

Graduate Curriculum10/16/2020 8:27 am [Reply](#)

Approved with and on behalf of grad coord - Dr. Taghva

Curriculog10/16/2020 8:27 am [Reply](#)

Graduate Curriculum has force approved this proposal.

Graduate Curriculum10/16/2020 8:26 am [Reply](#)

Approved with and on behalf of grad coord. - Dr. Taghva

Curriculog10/16/2020 8:26 am [Reply](#)

Graduate Curriculum has force approved this proposal.

Curriculog10/15/2020 4:05 pm [Reply](#)

Graduate Curriculum has approved this proposal on Technical Review.

Graduate Curriculum10/15/2020 3:58 pm [Reply](#)

Approved at VPAP - moving forward after routing restructuring (operational)

Curriculog

10/15/2020 3:58 pm [Reply](#)

Graduate Curriculum has force approved this proposal.

Graduate Curriculum

10/15/2020 3:57 pm [Reply](#)

Created together with and on behalf of proposer, Dr. Taghva (CS Chair) -

Curriculog

10/15/2020 3:57 pm [Reply](#)

Graduate Curriculum has force approved this proposal.

Curriculog

10/15/2020 3:41 pm [Reply](#)

Graduate Curriculum has launched this proposal.

Curriculog

10/15/2020 3:32 pm [Reply](#)

Graduate Curriculum 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.