☐**PUBLIC**
☐**INDEPENDENT**

NEW PROGRAM PROPOSAL FOR ROUTINE REVIEW

When finished, please save and email to: he.academicprogramactions@dhe.mo.gov

Sponsoring Institution: University of Missouri-St. Louis

Program Title: Data Science and Analysis

Degree/Certificate: BS-Bachelor of Science

If other, please list: Click here to enter text

Options: Biology; Computer Science; Economics; Mathematics; Social Science; Supply Chain Analytics

Delivery Site: UMSL Campus

CIP Classification: 30.7101

Implementation Date: Fall 2021

Is this a new off-site location? ☐ **Yes**   ☒ **No**

If yes, is the new location within your institution's current CBHE-approved service region? ☐
If no, public institutions should consult the comprehensive review process

Is this a collaborative program?   ☐Yes   ☒No
If yes, please complete the collaborative programs form on last page.

Please list similar or comparable programs at Missouri public institutions of higher education.
For public institutions only

N/A

CERTIFICATIONS:

☒ The program is within the institution's CBHE approved mission. *(public only)*

☒ The program will be offered within the institution's CBHE approved service region. *(public only)*

☒ The program builds upon existing programs and faculty expertise

☒ The program does not unnecessarily duplicate an existing program in the geographically-applicable area.

☒ The program can be launched with minimal expense and falls within the institution's current operating budget. *(public only)*

AUTHORIZATION

Name/Title of Institutional Officer	Signature	Date

PROGRAM CHARACTERISTICS AND PERFORMANCE GOALS

Although all of the following guidelines may not be applicable to the proposed program, please carefully consider the elements in each area and respond as completely as possible in the format below.

Quantification of performance goals should be included wherever possible.

1. Student Preparation
- Any special admissions procedures or student qualifications required for this program which   exceed regular university admissions, standards, e.g., ACT score, completion of core curriculum, portfolio, personal interview, etc. Please note if no special preparation will be required.
  There are no special entrance requirements to enroll in Data Science and Analysis. However, evidence from the Certificate in Data Science, indicates that students should have a penchant for quantitative literacy if they hope to complete the degree program "on time." Specifically, everyone in this program will have to pass a course in calculus. If a student needs preparatory work to enroll in and pass a calculus class, their time to graduation will be lengthened,

- Characteristics of a specific population to be served, if applicable.
  N/A

2. Faculty Characteristics
- Any special requirements (degree status, training, etc.) for assignment of teaching for this degree/certificate.
  There are no additional requirements (above standard HLC/accreditation requirements) needed for faculty to teach in this program.

- Estimated percentage of credit hours that will be assigned to full time faculty. Please use the term "full time faculty" (and not FTE) in your descriptions here.
  The vast majority (estimated 85%) of these courses will be taught by current full-time UMSL faculty. As a practical matter, the courses for this proposed program are already being taught by UMSL faculty.

- Expectations for professional activities, special student contact, teaching/learning innovation.
  We do not expect that faculty teaching these courses will need any special training or take on any additional responsibilities for advising, recruiting, or other administrative tasks.

3. Enrollment Projections
- Student FTE majoring in program by the end of five years.
   34

- Percent of full time and part time enrollment by the end of five years.
  Full-time: 75%; Part-time: 25%

STUDENT ENROLLMENT PROJECTIONS

YEAR	1	2	3	4	5
Full Time	7	12	18	25	30
Part Time	4	5	7	9	10
Total	11	17	25	34	40

4. Student and Program Outcomes
- Number of graduates per annum at three and five years after implementation.

Year 3: 7 ; Year 5: 12

- Special skills specific to the program.
  N/A

- Proportion of students who will achieve licensing, certification, or registration.
  N/A

- Performance on national and/or local assessments, e.g., percent of students scoring above the 50th percentile on normed tests; percent of students achieving minimal cut-scores on criterion-referenced tests. Include expected results on assessments of general education and on exit assessments in a particular discipline as well as the name of any nationally recognized assessments used.
  N/A

- Placement rates in related fields, in other fields, unemployed.
  N/A

- Transfer rates, continuous study.
  Click here to enter text

5. Program Accreditation

- Institutional plans for accreditation, if applicable, including accrediting agency and timeline. If there are no plans to seek specialized accreditation, please provide rationale.

This program will be accredited by HLC through the UMSL and the College of Arts and Sciences. The topic of additional, external accreditation was discussed at the College of Arts and Sciences Advisory Council. This forum indicated accreditations from an external entity is not necessary, instead the skill sets and reputation of the program are much more important. Reputation is especially important for us as most of our graduates are expected to stay in this area. Therefore, we will focus on maintaining our reputation for high-quality graduates and providing the right skills as opposed to external accreditation.

6. Program Structure

A. Total credits required for graduation: 120

B. Residency requirements, if any:
   UMSL requires at least 30 out of the last 36 hours to be earned at UMSL, online courses are included

C. General education: Total credits:
   45

Courses (specific courses OR distribution area and credits)

Course Number	Credits	Course Title
See attachment.		

D. Major requirements: Total credits: [Click here to enter text]

Course Number	Credits	Course Title

E. Free elective credits: [Click here to enter text]
    (sum of C, D, and E should equal A)

F. Requirements for thesis, internship or other capstone experience:
[Click here to enter text]

G. Any unique features such as interdepartmental cooperation:
[Click here to enter text]

7. Need/Demand

☒Student demand

☒Market demand

☒Societal demand

☒I hereby certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful.

On July 1, 2011, the Coordinating Board for Higher Education began provisionally approving all new programs with a subsequent review and consideration for full approval after five years.

COLLABORATIVE PROGRAMS

- **Sponsoring Institution One:** Choose an institution

- **Sponsoring Institution Two:** Choose an institution

- **Other Collaborative Institutions**: Click here to enter text

- **Length of Agreement:** Click here to enter text

- **Which institution(s) will have degree-granting authority?** Click here to enter text

- **Which institution(s) will have the authority for faculty hiring, course assignment, evaluation and reappointment decisions?** Click here to enter text

- **What agreements exist to ensure that faculty from all participating institutions will be involved in decisions about the curriculum, admissions standards, exit requirements?**
  Click here to enter text

- **Which institution(s) will be responsible for academic and student-support services, e.g., registration, advising, library, academic assistance, financial aid, etc.?**
  Click here to enter text

- **What agreements exist to ensure that the academic calendars of the participating institutions have been aligned as needed?**
  Click here to enter text

*Please save and email this form to***: he.academicprogramactions@dhe.mo.gov**

PROGRAM STRUCTURE

1. Total credits required for graduation:

General education (and Jr writing):	45
Core courses:	18-20
Emphasis area:	18-31
Free electives or transferred credits:	30-39
Total:	120

2. Residency requirements, if any:

UMSL requires at least 30 out of the last 36 hours to be earned at UMSL, online courses are included

3. General education

Total credits for general education courses: 45 (includes Jr. level writing)

Courses (specific course or distribution area and credit hours):

Course	Hrs	Course	Hrs	Course	Hrs
First-year writing	3	Information literacy	3	Social sciences	9
Communication proficiency	3	US history & government	3	Math & Life/Natural sciences	9
Mathematics proficiency	3	Humanities & fine arts	9	Jr. Writing	3

4. Major requirements

Total credits specific to degree: 36-51 (depending on emphasis area)

Courses (specific course or distribution area and credit hours):

Course	Hrs	Course	Hrs	Course	Hrs
---CORE--		CMP SCI 4342	3	SOCIAL SCIENCE	18
MATH 1800 (or 1100)*	3-5	--EMPHASIS--*		SUPPLY CHAIN ANALYTICS	18
STATISTICS COURSE (DOMAIN SPECIFIC)*	3	BIOLOGY	25		
MATH 4005	3	COMPUTER SCIENCE	31		
CMP SCI 1250*	3	ECONOMICS	21-22		
CMP SCI 4200	3	MATHEMATICS	25		

5. Free elective credits

Free Electives or transfer credits: 30-39

6. Requirement for thesis, internship, or other capstone experience:

None.

7. Any unique features such as interdepartmental cooperation:

This program is interdisciplinary by design, combining coursework from Mathematics, Statistics, and Computer Science with a domain focus as determined by each student. It has been designed by a curriculum committee of members from each of these units. The Deans from each unit have endorsed the degree program (see earlier state