



New Program Report

Date Submitted:

06/15/2020

Institution

Truman State University

Site Information

Implementation Date:

8/17/2020 12:00:00 AM

Added Site(s):

Selected Site(s):

Truman State University, 100 East Normal, Kirksville, MO, 63501-9980

CIP Information

CIP Code:

110802

CIP Description:

A program that prepares individuals to design and manage the construction of databases and related software programs and applications, including the linking of individual data sets to create complex searchable databases (warehousing) and the use of analytical search tools (mining). Includes instruction in database theory, logic, and semantics; operational and warehouse modeling; dimensionality; attributes and hierarchies; data definition; technical architecture; access and security design; integration; formatting and extraction; data delivery; index design; implementation problems; planning and budgeting; and client and networking issues.

CIP Program Title:

Data Modeling/Warehousing and Database Administration

Institution Program Title:

Data Science and Analytic Storytelling

Degree Level/Type

Degree Level:

Master Degree

Degree Type:

Master of Science

Options Added:

Collaborative Program:

N

Mode of Delivery

Current Mode of Delivery

Online

Student Preparation



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New Program Report

Special Admissions Procedure or Student Qualifications required:

No special procedures differ from regular admissions standards, however, completion of STAT 190 and CS 170 (or their equivalents) are pre-requisite to being able to complete the coursework in the program.

Specific Population Characteristics to be served:

This degree is intended for students with undergraduate degrees, whose interest is in developing communication skills along with learning more about data science. Graduates will be ready to pursue a career in data science and data analytics fields, particularly in positions that require regular presentations

of conclusions from data to other professionals. The program is chiefly aimed at working professionals who wish to advance in their careers or retool their skills.

Faculty Characteristics

Special Requirements for Assignment of Teaching for this Degree/Certificate:

A graduate degree in Statistics, Computer Science or a related area will be required to teach program courses. Within some courses, faculty from other areas, such as Communication, Art, and English may be asked to contribute module content.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:

It is expected that all courses in this program will be assigned to full-time faculty. It may occasionally be necessary to assign a specialized course to a qualified part time faculty member, but that is not currently intended in the program plan.

Expectations for professional activities, special student contact, teaching/learning innovation:

Faculty members are expected to regularly participate in professional activities, such as consulting, workshops, conferences, or by taking classes in data science or related areas. Faculty will communicate with students via Blackboard, regular zoom meetings, and email. We work to incorporate best practices from Truman's undergraduate programs into this online environment, working to build a community of learners. Courses will be compliant with "Quality Matters" standards.

Student Enrollment Projections Year One-Five

Year 1	Full Time: 0	Part Time: 7	
Year 2	Full Time: 0	Part Time: 10	
Year 3	Full Time: 2	Part Time: 12	Number of Graduates: 10
Year 4	Full Time: 3	Part Time: 15	
Year 5	Full Time: 4	Part Time: 20	Number of Graduates: 10

Percentage Statement:

n/a

Program Accreditation

Institutional Plans for Accreditation:

This is not a field in which accreditation is an option at present.

Program Structure

Total Credits:

30



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New Program Report

Residency Requirements:

It is currently assumed that all students will complete the totality of their program at Truman. Transfer requests will be taken on an as-needed basis.

General Education Total Credits:

30

Major Requirements Total Credits:

30

Course(s) Added

COURSE NUMBER	CREDITS	COURSE TITLE
PDAT 610G	3	Introduction to Data Science
PDAT 611G	3	Big Data Management
PDAT 613G	3	Data Mining
PDAT 624G	3	Principles of Design in Data Visualization
PDAT 625G	3	Ethics and Data Security
PDAT 615G	3	Machine Learning
PDAT 630G	3	Thesis Credit
PDAT 622G	3	Narrative, Argument, and Persuasion with Data

Free Elective Credits:

6

Internship or other Capstone Experience:

Students may elect a thesis of either 3 or 6 credits (6 credits covers 3 of the 6 elective credits, if chosen). A student may also elect a 3 credit practicum course as part of their electives.

Assurances

I certify that the program is clearly within the institution's CBHE-approved mission. The proposed new program must be consistent with the institutional mission, as well as the principal planning priorities of the public institution, as set forth in the public institution's approved plan or plan update.

I certify that the program will be offered within the proposing institution's main campus, CBHE-approved service region or CBHE-approved off-site location.

I certify that the program will not unnecessarily duplicate an existing program within the geographically applicable area.

I certify that the program will build upon existing programs and faculty expertise.

I certify that the program can be launched with minimal expense and falls within the institution's current operating budget.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

Contact Information

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MINCH

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New Program Report

Phone: 660-785-4107

Truman State University

Master's in Data Science and Analytic Storytelling

Program Structure:

The program requires completing 30 credits. The required courses are listed below. Five of the courses already exist for the Graduate Certificate in Data Science certificate program. Six new courses will be developed to support the master's program, including practical courses: PDAT 626 and PDAT 630.

Required: 24 credits: PDAT 610G, 611G, 613G, 615G, 622G, 624G, 625G, 630G (3 credits)

Electives: 6 credits from PDAT 617G, PDAT 620G, PDAT 626G, or additional credits in PDAT 630G.

Course Number	Course Title	Credit Hours
PDAT 610G*	Introduction to Data Science	3
PDAT 611G*	Big Data Management	3
PDAT 613G*	Data Mining	3
PDAT 615G*	Machine Learning	3
PDAT 617G	Python for Data Science	3
PDAT 620G*	Data Science Certificate Capstone	3
PDAT 622G	Narrative, Argument, and Persuasion with Data	3
PDAT 624G	Principles of Design in Data Visualization	3
PDAT 625G	Ethics and Security	3
PDAT 626G	Practicum in Data Storytelling	3
PDAT 630G	Thesis	3 or 6

Total Hours 30

*Data Science Graduate Certificate (Stackable Credential – First Awarded – Already Exists)