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| For Academic Affairs and Research Use Only |
| Proposal Number |  |
| CIP Code:  |  |
| Degree Code: |  |

**NEW CERTIFICATE PROGRAM FORM**

(Also requires Arkansas Department of Higher Education (ADHE) approval)

**[ ] Undergraduate Curriculum Council**

**[X ] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| Kelly Fish | 3/2/2021 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| James Doering | 3/2/2021 |

**Department Chair** |

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**Head of Unit (if applicable)**   |
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| John Mello | 3/3/2021 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Melody Lo | 3/3/2021 |

**College Dean** |

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**Graduate Curriculum Committee Chair** |
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**General Education Committee Chair (if applicable)**   |

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| Alan Utter | 4/2/2021 |

**Vice Chancellor for Academic Affairs** |

1. **Contact Person** (Name, Email Address, Phone Number)

Dr. Matthew Hill
mdhill@astate.edu
662.801.4082

1. **Name of proposed Certificate Program (Program must consist of 6-21 semester credit hours):**

Graduate Certificate in Business Analytics

1. **Proposed effective date:**

Fall 2021

1. **Reason for proposed program implementation:**

The purpose of this program is to offer an opportunity for individuals to increase their knowledge and skills in business analytics. Furthermore, this program offers access to graduate business study for those hesitant to commit to the MBA program.

Graduates of this program will be well-positioned to enter a growing field and earn a relatively high salary. According to the Bureau of Labor Statistics **(**https://www.bls.gov):

* Demand for careers related to business analytics is expected to increase by 11% through 2029
* Median annual pay is $85,260 nationally

The career website [www.indeed.com](http://www.indeed.com) indicates an average base salary of $73,080 for jobs related to business analytics in Arkansas (https://www.indeed.com/career/business-analyst/salaries/AR).

1. **Provide the following:**
	* 1. Curriculum outline - List of courses in new program – Underline required courses

MIS 6103 Fundamentals of Business Analytics

MIS 6203 Business Intelligence Using Case Studies

MIS 6303 Big Data Analytics with AWS

MIS 6403 Data Driven Strategic Insights

* + 1. Total semester credit hours required for proposed program

12

* + 1. New courses and new course descriptions

MIS 6103 Fundamentals of Business Analytics

Short name: MIS 6103 Fund of Business Analytics

Examines basic tools for making informed managerial decisions from business data. Topics include descriptive statistics, correlation, regression analysis, data mining, simulation, optimization, and linear programming.

3 hours

MIS 6203 Business Intelligence Using Case Studies

Short name: MGMT 6203 BI Using Case Studies

Uses case studies to apply tools and techniques from business analytics to create business intelligence that can inform decision making. Specific topics include using Python to create data tables and to enable data visualization.

3 hours

MIS 6603 Big Data Analytics with AWS

Short name: MIS 6603 Big Data Analytics with AWS

Applies Amazon Web Services (AWS) to analyze data sets that are too large or complex for traditional data-processing software. AWS is used to build, secure, and maintain analytics solutions for big data. This course also prepares students for AWS certifications.

3 hours

MIS 6403 Data Driven Strategic Insights

Short name: MIS 6403 Data Driven Strategic Insights

Prepares students to derive strategic insights from business analytics by using data-intensive case studies. An emphasis is placed on identifying the appropriate business analytics given the business insights needed. Cloud-based software platforms are utilized to work with large datasets.

* + 1. Program goals and objectives

This certificate will be considered a sub-segment of the MBA program. The MBA program has a fully developed assessment plan to include the following student learning outcomes.
Students will

* demonstrate an ability to communicate effectively in writing
* demonstrate an ability to use oral communication effectively
* demonstrate an ability to lead and productively participate in group situations
* understand the role of business ethics when solving problems and making decisions
* apply quantitative and qualitative knowledge to solve problems and make decisions

The Graduate Certificate in Business Analytics will contribute to all of these outcomes and will specifically develop students’ knowledge application/problem solving skills, writing and oral presentation skills, and leadership/group participation skills.

* + 1. Expected student learning outcomes

The Graduate Certificate in Business Analytics will specifically develop students’ knowledge application/problem solving skills, critical thinking, and the application of quantitative and qualitative knowledge to solve problems and make decisions.

Overall program-level outcome for this certificate: Students will master the skills and competencies associated with business analytics.

* + 1. Documentation that program meets employer needs

A mix of formal and informal discussions with employers and industry professionals located throughout the region suggest significant demand for in-depth knowledge of business analytics. Statistics cited by the Bureau of Labor Statistics confirm this as well. Specifically mentioned skills include understanding 1) how to work with large and unstructured data sets, 2) how to draw actionable business insights from data, and 3) describing and visualizing data. The proposed Graduate Certificate in Business Analytics is designed to deliver on each of these aspects.

* + 1. Student demand (projected enrollment) for proposed program

25

* + 1. Program approval letter from licensure/certification entity, if required (attach)
		2. Name of institutions offering similar programs and the institution(s) used as model to develop proposed program

St. Louis University, University of North Carolina Greensboro, and University of Texas – San Antonio.

* + 1. Proposed program review date (within 10 years of program implementation)

2026

1. **Will this program be offered:**
	1. **Traditional/Face-to-face** No
	2. **Distance/Online** Yes
		1. **If yes, indicate mode of distance delivery, and the percentage of courses offered via this modality (<50%, 50-99%, or 100%).**

100%

* + 1. **If online, will it be offered through Global Initiatives/Academic Partnerships (AP)?**

No

1. **Will this program be offered off-campus?** No
	1. **If yes, identify the off-campus location**

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**Bulletin Changes**

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| **Instructions**  |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.** **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  |

A program that prepares individuals to apply data science to solve business challenges. Includes instruction in machine learning, optimization methods, computer algorithms, probability and stochastic models, information economics, logistics, strategy, consumer behavior, marketing, and visual analytics.

***Graduate Certificate in Business Analytics***

The Graduate Certificate in Business Analytics prepares individuals to apply tools and techniques from data science to provide business insights for a wide range of fields and occupations (e.g., financial accounting and reporting, information economics, consumer behavior, logistics, strategic management). Business analytics includes instruction in descriptive statistics, data visualization, optimization methods, simulation techniques, cloud-based computing, and machine learning.

 **Business Analytics**

**Graduate Certificate**

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| **University Requirements:** |  |
|  See Graduate School Degree Policies for additional information (p.p. 22-23) |  |
| **Core Requirements:** | Sem. Hrs. |
| MIS 6103 Fundamentals of Business Analytics | 3 |
| MIS 6203 Business Intelligence Using Case Studies | 3 |
| MIS 6303 Big Data Analytics with AWS | 3 |
| MIS 6403 Data Driven Strategic Insights | 3 |
| **Total Required Hours:** | 12 |

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