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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)

**[X] Undergraduate Curriculum Council**

**[ ] 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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| Jason L. Causey | 10/8/2020 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Abhijit Bhattacharyya | 10/8/2020 |

**Department Chair** |

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**Head of Unit (if applicable)**   |
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| Jason Stewart | 10/8/2020 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Abhijit Bhattacharyya | 10/8/2020 |

**College Dean** |

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

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**Vice Chancellor for Academic Affairs** |

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

Jason Causey, jcausey@astate.edu, (870) 972-3978 ext. 8182

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

Undergraduate Certificate in Data Analytics

1. **Proposed effective date:**

Fall 2021

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

  There is a large and expanding need for data scientists and data analysts within the state. This was underscored by Governor Asa Hutchinson in 2017 by the creation of a Blue Ribbon Commission on Data Analytics and Computing. The Commission’s Executive Summary and full report can be found at <https://www.acds.co/blueribbon> . The commission recommended the launch of a $25 million public-private, nonprofit entity to address business challenges in data analytics and computing, as well as focus on workforce development in those fields. Various workforce analyses conducted across the state underscore the significant need for data scientists and analysts. As a result of the Commission’s report and various workforce analyses, the [Arkansas Center for Data Sciences](https://www.acds.co/) (<https://www.acds.co/>) was established to transform existing industries through the integration of technical and business skills, the advancement of talent pipelines, and ongoing upgrades to relevant workforce skills. There is a pervasive need for data scientists and data analytics in all sectors of the economy such as social sciences, health and medicine, business, engineering, and education, to name a few, and graduates trained in those disciplines will have an edge if they have some exposure to the discipline of data analytics. This self-contained undergraduate certificate is intended to provide them with that exposure.

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

Students signing up for the new certificate are likely to have taken PHIL 1103 (Introduction to Philosophy) as part of the Humanities Requirement and MATH 1023 (College Algebra) as part of the Math requirement in their General Education curriculum.

PHIL 1103 Introduction to Philosophy

MATH 1023 College Algebra or MATH course that requires MATH 1023 as a prerequisite

PHIL 3723 Computers, Ethics, and Society

STAT 3233 Applied Statistics I

STAT 3243 Regression Analysis and ANOVA

CS 1114 Concepts of Programming

DATA 3003 Applied Database and Data Mining

DATA 3023 Data Visualization and Data Communication

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

25 hours

* + 1. New courses and new course descriptions

None: All courses for the certificate are part of the University Gen. Ed. Requirements, or part of the BS in Data Science and Data Analytics program.

* + 1. Program goals and objectives

The Undergraduate Certificate in Data Analytics is open to all majors except DSDA majors and is intended to provide an exposure to the field of data analytics.

* + 1. Expected student learning outcomes

1) Identify societal and ethical impacts as well as the responsibility that come with access to data

2) Critically assess and remediate issues with data organization and data quality

* + 1. Documentation that program meets employer needs

The Data Science and Data Analytics planning committee hosted two panels with employers of data scientists and data analysts as well as academic practitioners of Data Science/Data Analytics in the state, there is significant employment potential

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

30 student/year (based on an assumption of 5 per college of the six participating colleges).

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

University of Arkansas at Fayetteville has been used as a model (BS in Data Science and Data Analytics Certificate). Other programs in Arkansas include. BS in Business Administration in Business Analytics, Arkansas Tech University
Other related programs in Arkansas can be found at <https://www.datascienceprograms.org/in/arkansas>.

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

Fall 2030

1. **Will this program be offered:**
	1. **Traditional/Face-to-face**  Yes
	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%).**

50-99%. (Modality of program delivery is on-campus. Any changes to the modality will not happen without the approval of the program steering committee, participating departments and the participating colleges.)

* + 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.**  |

After Page 185 and before the heading “Engineering”, following the new section “Data Science and Data Analytics program”. Please see the bulletin changes included in the proposal for the BS in Data Science and Data Analytics program proposal, which also includes this section for context.

**Certificate in Data Analytics**

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| **General Education Requirements** | **Sem. Hrs.** |
| MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite | 3 |
| PHIL 1103, Introduction to Philosophy | 3 |
| **Sub-total** | **6** |
| **Required courses** | **Sem. Hrs.** |
| CS 1114, Concepts of Programming | 4 |
| DATA 3003, Applied Database and Data Mining | 3 |
| DATA 3023, Data Visualization and Data Communication | 3 |
| PHIL 3723, Computers, Ethics and Society | 3 |
| STAT 3233, Applied Statistics I  | 3 |
| STAT 3243, Regression Analysis and Analysis of Variance (ANOVA) | 3 |
| **Sub-total** | **19** |
| **Total Required Hours** | **25** |

Note that the that the first two listed courses – MATH 1023 and PHIL 1103 – can also count towards the General Education requirement for all Baccalaureate, Associate of Arts, Associate of Science and Associate of General Studies degrees. This certificate is available to all students except those enrolled in the BS in Data Science and Data Analytics.