

## Program Change Request

### New Program Proposal

Date Submitted: 10/30/17 4:26 pm

Viewing: **DATA-M : Data Analytics Minor**

Last edit: 12/01/17 4:17 pm

Changes proposed by: tellenbe

Catalog Pages Using this Program [Industrial Engineering \(INEG\)](#) [Data Analytics \(DATA\)](#)

#### In Workflow

1. ENGR Dean Initial
2. Provost Initial
3. Director of Program Assessment and Review
4. Registrar Initial
5. Institutional Research
6. INEG Chair
7. ENGR Curriculum Committee
8. ENGR Faculty
9. WCOB Dean
10. ARSC Dean
11. ENGR Dean
12. Global Campus
13. Provost Review
14. University Course and Program Committee
15. Faculty Senate
16. Provost Final
17. Provost's Office-- Documentation sent to System Office
18. Higher Learning Commission
19. Board of Trustees
20. ADHE Final
21. Provost's Office-- Notification of Approval
22. Registrar Final
23. Catalog Editor Final

Submitter: User ID: tellenbe Phone: 575-3157

Program Status: Active

Academic Level: Undergraduate

Type of proposal: Minor

Select a reason for this new program: Adding New Minor or Additional Major--(LON 3)

Effective Catalog Year: Fall 2018

College/School Code: College of Engineering(ENGR)

Department Code: Department of Industrial Engineering(INEG)

Program Code: DATA-M

Degree: Minor

CIP Code: 11.0401 - Information Science/Studies.

Program Title: Data Analytics Minor

Program Delivery Method: On Campus

Is this program interdisciplinary?  
No

Does this proposal impact any courses from another College/School?  
Yes

College(s)/School(s)	College/School Name
	Walton College of Business(WCOB)
	Fulbright College of Arts and Sciences(ARSC)

What are the total hours needed to complete the program? 15-17

#### Approval Path

1. 10/12/17 6:17 pm Norman Dennis (ndennis): Rollback to Initiator
2. 10/24/17 3:33 pm Norman Dennis (ndennis): Approved for ENGR Dean Initial
3. 10/26/17 5:20 pm Terry Martin (tmartin): Approved for Provost Initial
4. 10/28/17 7:39 pm Alice Griffin (agriffin): Rollback to Initiator
5. 10/30/17 4:09 pm Norman Dennis

### Program Requirements and Description

#### Requirements

Specifically, the minor requires completion of 15-17 credits of coursework, including

- 1 Course (3 credits) of [Applied Statistics and Math Modeling](#) Foundation,
- 2 Courses (6-8 credits) of [Computing and Informatics](#) Foundation, and
- 2 Courses (6 credits) of [Analytics](#) Foundation.

Foundation in **Applied Statistics and Math Modeling** (Select 1 of the following for 3 credits)

[INEG 2333](#) Applied Probability and Statistics for Engineers II (Sp, Fa)

[ELEG 3143](#) Probability & Stochastic Processes (Sp)

[STAT 2023](#) Biostatistics (Sp)

[STAT 3013](#) Introduction to Probability (Sp, Su, Fa)

Foundation in **Computing and Informatics** (Select 2 courses, 6-8 credits)

[CSCE 2004](#) Programming Foundations I (Sp, Fa)

[CSCE 2014](#) Programming Foundations II (Sp, Fa)

[INEG 4683](#) Decision Support in Industrial Engineering (Sp)

[INEG 4833](#) Introduction to Database Concepts for Industrial Engineers (Irregular)

[ISYS 2263](#) Principles of Information Systems (Sp, Fa)

[STAT 4003](#) Statistical Methods (Sp, Fa)

[STAT 4001L](#) Statistics Methods Laboratory (Sp, Fa)

Foundation in **Analytics** (Select 2 courses, 6 credits)

[ECON 4743](#) Introduction to Econometrics (Sp)

[ECON 4753](#) Forecasting (Fa)

[ISYS 4193](#) Business Analytics and Visualization (Fa)

[ISYS 4293](#) Business Intelligence (Sp)

[STAT 4333](#) Analysis of Categorical Responses (Sp)

(ndennis): Rollback to Initiator

6. 10/31/17 9:13 am  
Norman Dennis  
(ndennis): Approved for ENGR Dean Initial
7. 10/31/17 2:38 pm  
Terry Martin  
(tmartin): Approved for Provost Initial
8. 10/31/17 4:52 pm  
Alice Griffin  
(agriffin): Approved for Director of Program Assessment and Review
9. 11/02/17 10:54 am  
Lisa Kulczak  
(lkulcza): Approved for Registrar Initial
10. 11/02/17 10:55 am  
Gary Gunderman  
(ggunderm): Approved for Institutional Research
11. 11/03/17 3:53 pm  
Ed Pohl (epohl): Approved for INEG Chair
12. 11/07/17 1:49 pm  
Manuel Rossetti  
(rossetti): Approved for ENGR Curriculum Committee
13. 11/07/17 1:51 pm  
Norman Dennis  
(ndennis): Approved for ENGR Faculty
14. 11/09/17 7:32 pm  
Karen Boston  
(kboston): Approved for WCOB Dean
15. 11/29/17 2:56 pm  
Jeannine Durdik  
(jdurdik): Approved for ARSC Dean
16. 11/30/17 1:14 pm  
Norman Dennis  
(ndennis): Approved for ENGR Dean
17. 11/30/17 1:31 pm  
Kiersten Bible  
(kbible): Approved for Global Campus
18. 12/01/17 10:42 am  
Terry Martin  
(tmartin): Approved for Provost Review

8-Semester Plan

**Program Costs** The new minor will exploit existing resources and expertise in Data Analytics on campus. Thus, there are no additional costs required for program implementation. However, in parallel, the Institute for Advanced Data Analytics is planning to submit a proposal to the National Science Foundation (NSF) Scholarships in Science, Technology, Engineering and Mathematics (S-STEM) program to obtain financial resources to recruit, retain, and promote undergraduate students who are interested in this minor program, especially those with low-income and academically talent.

**Library Resources** NONE

**Instructional Facilities** NONE

**Faculty Resources** NONE

List Existing Certificate or Degree Programs that Support the Proposed Program

Program(s)
INEGBS - Industrial Engineering, Bachelor of Science in Industrial Engineering
ELEGBS - Electrical Engineering, Bachelor of Science in Electrical Engineering
CSCEBS - Computer Science, Bachelor of Science in Computer Science
STAT-M - Statistics Minor
ISYSBS - Information Systems, Bachelor of Science in Business Administration
ECNCBA - Economics, Bachelor of Arts

Are Similar Programs available in the area?

No

**Estimated Student Demand for Program** 30-50

**Scheduled Program Review Date** NA

**Program Goals and Objectives**

19. 12/18/17 11:03 am  
 Alice Griffin  
 (agriffin): Approved  
 for University  
 Course and Program  
 Committee

**Program Goals and Objectives**

The primary objective of the Data Analytics minor is to prepare students for entry-level jobs in fields that apply Data Analytics and for graduate work in disciplines that utilize Data Analytics. The program will equip students with both hard and soft skills to analyze complex business problems using large datasets and turn all that raw information into actionable insight. The proposed minor will provide a means for our graduates to distinguish themselves by obtaining technical skills and knowledge in quantitative methodologies and technologies, and to demonstrate to potential employers that they are competent and ready for data analytics professionals.

Learning Outcomes

**Learning Outcomes**

The Analytics program will equip students with a solid amalgamation of give capabilities:

- (1) Ability to use informatics knowledge to design and deploy an infrastructure to collect, organize, and retrieve business data,
- (2) Ability to apply data management and computation to effectively manipulate, store, and analyze very large amounts of data using state-of-the-art technologies,
- (3) Ability to develop and implement mathematical/statistical models to provide abstractions of business problems,
- (4) Ability to adapt the business analytics concept to interpret and communicate meaningful pattern of business data leading to industry insights and/or business decisions, and
- (5) Ability to harness business insights from the data and use and translate it into actions, decisions and business practice.

Description and Justification for this request

Description of request	Justification for request
creation of a minor in Data Analytics	Data analytics, which encompasses data collection, analysis of data, and making decisions from data is a global megatrend that will offer staggering business opportunities in decades to come. Data analytics professionals have successfully shown significant impact on improving business across industries globally. Although there are a lot of professionals in the workforce in Northwest Arkansas, only a minor fraction is equipped with knowledge and skills in data analytics. There is an ever-increasing need of a larger and well-prepared workforce in data analytics professionals in almost all business sectors in Northwest Arkansas. There is an explosion of market demand among employers in Northwest Arkansas for qualified graduates in the NW Arkansas region with data analytics skills.

Upload attachments [DATA-M - New Option - Ltrs of Support.pdf](#)  
[DATA-M - New Option - Ltr of Notification.docx](#)

Reviewer Comments **Norman Dennis (ndennis) (10/12/17 6:17 pm)**: Rollback: revise LON to reflect correct working population of NW Arkansas. Revise description of change to simple say creation of a minor in Data Analytics. The rest you can put in justification if you want, but it too should be shortened. Note to registrar Walton and Fulbright, at some level, should be included in workflow.

**Alice Griffin (agriffin) (10/28/17 7:10 pm)**: Changed program code from dept code of INEG to DATA-M. Revised LON for formatting and inserted approval dates.

**Alice Griffin (agriffin) (10/28/17 7:39 pm)**: Rollback: Please change response to using courses from another college. Also address discrepancies between curriculum in requirements and LON.

**Norman Dennis (ndennis) (10/30/17 4:03 pm)**: Fixed interdisciplinary box and added Walton and Fulbright to the colleges whose courses would be affected.

**Norman Dennis (ndennis) (10/30/17 4:09 pm)**: Rollback: I made the change that Alice requested but it did not update the work flow. You will have to make the change in order for the workflow to be updated.

**Alice Griffin (agriffin) (10/31/17 4:51 pm)**: ADHE revised template for LON. Inserted revisions and uploaded revised copy.

**Lisa Kulczak (lkulcza) (11/02/17 10:54 am)**: Admin adjust of program name and of degree.

**Alice Griffin (agriffin) (12/01/17 10:53 am)**: Changed date for scheduled program review to NA. Minors are not included in program reviews.

**Alice Griffin (agriffin) (12/01/17 11:01 am)**: Minor edit to LON to incorporate changes to template from ADHE.

**Alice Griffin (agriffin) (12/01/17 4:14 pm)**: Revised approval dates in LON. Renamed forms to match naming convention for BOT documentation.

**Alice Griffin (agriffin) (12/01/17 4:17 pm)**: Corrected approval date in LON from 2017 to 2018.

