

Date Submitted: 09/22/22 8:57 am

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

Last approved: 04/08/22 8:48 am

Last edit: 10/12/22 11:31 am

Changes proposed by: cassady

Catalog Pages Using
this Program[Data Analytics \(DATA\)](#)[Industrial Engineering \(INEG\)](#)Submitter: User ID: [cassady tellenbe](#) Phone:
[575-3156 575-3157](#)

Program Status Active

Academic Level Undergraduate

Type of proposal Minor

Select a reason for this modification

Making Minor Changes to an Existing Certificate, Degree or Program (including 15 or fewer hours, admission/graduation requirements, Focused Studies or Tracks)

Effective Catalog Year Fall 2023

College/School Code
College of Engineering (ENGR)Department Code
Department of Industrial Engineering (INEG)

Program Code DATA-M

Degree Minor

CIP Code

In Workflow

1. ENGR Dean Initial
2. Director of Curriculum Review and Program Assessment
3. Registrar Initial
4. Institutional Research
5. INEG Chair
6. ENGR Curriculum Committee
7. ENGR Faculty
8. ENGR Dean
9. Global Campus
10. Provost Review
11. Undergraduate Council
12. Faculty Senate
13. Provost Final
14. Registrar Final
15. Catalog Editor Final

Approval Path

1. 10/10/22 6:50 pm
Kevin Hall (kdhall):
Approved for ENGR Dean Initial
2. 10/12/22 11:46 am
Alice Griffin (agriffin): Approved for Director of Curriculum Review and Program Assessment
3. 10/18/22 4:34 pm
Gina Daugherty

- (gdaugher):
Approved for
Registrar Initial
4. 10/18/22 4:50 pm
Doug Miles
(dmiles): Approved
for Institutional
Research
5. 10/21/22 5:12 pm
Ed Pohl (epohl):
Approved for INEG
Chair
6. 11/01/22 9:05 am
Manuel Rossetti
(rossetti): Approved
for ENGR
Curriculum
Committee
7. 11/02/22 2:55 pm
Kevin Hall (kdhall):
Approved for ENGR
Faculty
8. 11/02/22 3:00 pm
Kevin Hall (kdhall):
Approved for ENGR
Dean
9. 11/02/22 3:20 pm
Suzanne Kenner
(skenner): Approved
for Global Campus
10. 11/03/22 7:56 am
Jim Gigantino
(jgiganti): Approved
for Provost Review

History

1. May 11, 2018 by
Tamara Ellenbecker
(tellenbe)

2. May 27, 2020 by
Lisa Kulczak (lkulcza)
3. Jun 1, 2020 by Lisa
Kulczak (lkulcza)
4. Jan 12, 2021 by
Tamara Ellenbecker
(tellenbe)
5. May 18, 2021 by
Tamara Ellenbecker
(tellenbe)
6. Apr 8, 2022 by Gina
Daugherty
(gdaugher)

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?

No

What are the total 15-18 ~~15-17~~
hours needed to
complete the
program?

Program Requirements and Description

Requirements

Requirements for the minor in Data Analytics: The minor requires completion of 15-18 ~~15-17~~ credits of coursework, including:

One course from Applied Statistics and Math Modeling group

3-4

[INEG 2314](#)

[Statistics for Industrial Engineers I](#)

<u>INEG 2333</u>	Applied Probability and Statistics for Engineers II	
<u>INEG 3313</u>	Engineering Probability and Statistics	
<u>ELEG 3143</u>	Probability & Stochastic Processes	
<u>STAT 2823</u>	Biostatistics	
<u>STAT 3013</u>	Introduction to Probability	
Two courses from Computing and Informatics group		6-8
<u>CSCE 2004</u>	Programming Foundations I	
<u>CSCE 2014</u>	Programming Foundations II	
<u>INEG 4683</u>	Decision Support in Industrial Engineering	
<u>INEG 3833</u>	Introduction to Database Concepts for Industrial Engineers	
<u>ISYS 2263</u>	Principles of Information Systems	
<u>STAT 3003</u>	Statistical Methods	
<u>STAT 3001L</u>	Statistics Methods Laboratory	
Two courses from the Analytics group		6
<u>CSCE 4143</u>	Data Mining	
or <u>INEG 4143</u>	Data Mining	
<u>CSCE 4273</u>	<u>Big Data Analytics and Management</u>	
<u>CSCE 4613</u>	Artificial Intelligence	
<u>ECON 4743</u>	Introduction to Econometrics	
<u>ECON 4753</u>	Forecasting	
<u>INEG 4163</u>	Introduction to Modern Statistical Techniques for Industrial Applications	
<u>ISYS 4193</u>	Business Analytics and Visualization	
<u>ISYS 4293</u>	Business Intelligence	
<u>STAT 4333</u>	Analysis of Categorical Responses	
Total Hours		15-18

8-Semester Plan

Are Similar Programs available in the area?

No

Estimated Student 30-50

Demand for Program

Scheduled Program NA

Review Date

Program Goals and Objectives

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 of the request

Description of specific change

Justification for this change

Description of specific change	Justification for this change
<p>Adding INEG 2314 Stat for IE I to the Applied Statistics and Math Modeling group.</p> <p>Adding CSCE 4273 Big Data Analytics and Management to the Analytics group.</p>	<p>INEG has restructured their undergraduate statistics courses. INEG 2314 now covers the content included in INEG 2333. INEG 2333 is staying on the list for now, because many "in progress" students completed 2333 before 2314 was created.</p> <p>CSCE 4273 is an obvious choice for the Analytics group. Not including it previously was an oversight.</p>

Upload attachments

Reviewer Comments

Alice Griffin (agriffin) (10/12/22 11:31 am): Revised the introductory text from 15-17 hours to 15-18 hours to match the course list. College is encouraged to review for accuracy.

Key: 635