

Program Change Request

Date Submitted: 12/22/21 2:04 pm

Viewing: **DTSCBS-BUDA : Data Science: Business**

Data Analytics Concentration

Last approved: 05/18/21 6:51 pm

Last edit: 02/09/22 8:53 am

Changes proposed by: schubert

Catalog Pages Using
this Program

[Data Science B.S. with Business Data Analytics](#)

[Data Science \(DTSC\)](#)

Submitter: User ID: schubert Phone:
5-2264

Program Status Active

Academic Level Undergraduate

Type of proposal Concentration

Select a reason for this modification

Making Minor Changes to an Existing Certificate or Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding/changing Focused Study or Track)

Effective Catalog Year Fall 2022

College/School Code
College of Engineering (ENGR)

Department Code
Department of Engineering Dean (ENGD)

Program Code DTSCBS-BUDA

Degree Bachelor of Science

CIP Code

In Workflow

1. ENGR Dean Initial
2. Director of Curriculum Review and Program Assessment
3. Registrar Initial
4. Institutional Research
5. ENGD Chair
6. ENGR Curriculum Committee
7. ENGR Faculty
8. ENGR Dean
9. ARSC Dean
10. WCOB Dean
11. Global Campus
12. Provost Review
13. University Course and Program Committee
14. Faculty Senate
15. Provost Final
16. Registrar Final
17. Catalog Editor Final

Approval Path

1. 12/23/21 2:24 pm
Kevin Hall (kdhall):
Approved for ENGR
Dean Initial
2. 01/05/22 1:09 pm
Alice Griffin
(agriffin): Approved
for Director of

Curriculum Review
and Program
Assessment

3. 01/06/22 1:23 pm
Gina Daugherty
(gdaugher):
Approved for
Registrar Initial
4. 01/06/22 3:50 pm
Doug Miles
(dmiles): Approved
for Institutional
Research
5. 01/20/22 1:11 pm
Kevin Hall (kdhall):
Approved for ENGD
Chair
6. 01/20/22 1:16 pm
Manuel Rossetti
(rossetti): Approved
for ENGR
Curriculum
Committee
7. 01/20/22 3:21 pm
Kevin Hall (kdhall):
Approved for ENGR
Faculty
8. 01/20/22 3:41 pm
Kevin Hall (kdhall):
Approved for ENGR
Dean
9. 01/20/22 4:10 pm
Jeannie Hulen
(jhulen): Approved
for ARSC Dean
10. 02/09/22 9:02 am
Alan Ellstrand
(aellstra): Approved
for WCOB Dean

- 11. 02/09/22 9:07 am
Suzanne Kenner
(skenner): Approved
for Global Campus
- 12. 02/09/22 9:51 am
Ketevan
Mamiseishvili
(kmamisei):
Approved for
Provost Review

History

- 1. May 7, 2020 by Lisa
Kulczak (lkulcza)
- 2. May 8, 2020 by
Charlie Alison
(calison)
- 3. May 18, 2021 by
Karl Schubert
(schubert)

30.3001 - Computational Science.

Program Title

Data Science: Business Data Analytics Concentration

Program Delivery

Method

On Campus

Is this program interdisciplinary?

Yes

College(s)/School(s)

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

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

No

What are the total 21
 hours needed to
 complete the
 program?

Program Requirements and Description

Requirements

Required Business Data Analytics Concentration Courses

<u>ACCT 2013</u>	Accounting Principles	3
<u>ACCT 2023</u>	Accounting Principles II	3
WCOB 1033	Data Analysis and Interpretation	3
<u>ISYS 4193</u>	Business Analytics and Visualization	3
<u>ISYS 4293</u>	Business Intelligence	3
Elective Business Data Analytics Concentration Courses (Select 6 hours)		6
Elective Business Data Analytics Concentration Courses (Select 9 hours)		9
<u>ECON 4743</u>	Introduction to Econometrics	
<u>ECON 4753</u>	Forecasting	
<u>FINN 3013</u>	Financial Analysis	
<u>FINN 3043</u>	Principles of Finance	
<u>ISYS 4213</u>	ERP Fundamentals	
<u>MKTG 3433</u>	Introduction to Marketing	
<u>MKTG 3633</u>	Marketing Research	

Total Hours

21

8-Semester Plan

Data Science B.S. with Business Data Analytics Concentration

Eight-Semester Program

First Year	Units
	FallSpring
<u>MATH 2554</u> Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1)	4 1
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)	4
<u>ENGL 1013</u> Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3
<u>DASC 1001</u> Introduction to Data Science	1
<u>DASC 1104</u> Programming Languages for Data Science	4

<u>MATH 2564</u> Calculus II (ACTS Equivalency = MATH 2505)	4
<u>ECON 2143 Basic Economics: Theory and Practice (Satisfies General Education Outcome 3.3)</u>	3
<u>ENGL 1033</u> Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)	3
<u>DASC 1204</u> Introduction to Object Oriented Programming for Data Science	4
<u>DASC 1222</u> Role of Data Science in Today's World	2
ACCT 2013 Accounting Principles	- 3
Year Total:	16 16
Second Year	Units
	FallSpring
<u>DASC 2594</u> Multivariable Math for Data Scientists	4
<u>INEG 2313 Applied Probability and Statistics for Engineers I4</u> or <u>STAT 3013 Introduction to Probability</u>	3
<u>DASC 2213</u> Data Visualization and Communication	3
<u>DASC 2113</u> Principles and Techniques of Data Science	3
WCOB 1033 Data Analysis and Interpretation	3 -
ACCT 2023 Accounting Principles II	3 -
<u>State Minimum Core Fine Arts Elective (Satisfies General Education Outcome 3.1)2</u>	3
<u>SEVI 2053</u> Business Foundations (Data Science Majors-only section)	3
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2)	- 3
<u>INEG 2333 Applied Probability and Statistics for Engineers II4</u> or <u>STAT 3003 Statistical Methods</u>	3
<u>DASC 2103</u> Data Structures & Algorithms	3
INEG 2313 Applied Probability and Statistics for Engineers I4 or STAT 3013 Introduction to Probability	- 3
<u>DASC 2203</u> Data Management and Data Base	3
<u>ACCT 2013 Accounting Principles</u>	3
Year Total:	16 15
Third Year	Units
	FallSpring
<u>PHIL 3103</u> Ethics and the Professions (Satisfies General Education Outcome 5.1)	3
<u>DASC 3103</u> Cloud Computing and Big Data	3
<u>ISYS 4193</u> Business Analytics and Visualization	3
INEG 2333 Applied Probability and Statistics for Engineers II4 or STAT 3003 Statistical Methods	3 -
<u>State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)</u>	4
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.2 and 3.3)2	3
ISYS 4293 Business Intelligence	- 3
<u>DASC 3203</u> Optimization Methods in Data Science	3

<u>DASC 3213</u> Statistical Learning	3
ECON 2143 Basic Economics: Theory and Practice (Satisfies General Education Outcome 3.3)	- 3
State Minimum Core Natural Science with Lab Elective (Satisfies General Education Outcome 3.4)	- 4
<u>ACCT 2023</u> Accounting Principles II	3
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2)2	3
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.3 and 4.1)2	3
Year Total:	16 15
Fourth Year	Units
	FallSpring
<u>DASC 4892</u> Data Science Practicum I	2
<u>DASC 4113</u> Machine Learning	3
<u>DASC 4123</u> Social Problems in Data Science and Analytics	3
Business Data Analytics Elective	3 -
State Minimum Core Fine Arts Elective (Satisfies General Education Outcome 3.1)3	3 -
Business Data Analytics Electives	6
<u>DASC 4993</u> Data Science Practicum II (Satisfies General Education Outcome 6.1)	3
<u>ISYS 4293</u> Business Intelligence	3
Business Data Analytics Elective	3
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.3 and 4.1)4	- 3
General Education Elective3	3
Year Total:	14 12
Total Units in Sequence:	120
1 Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for <u>MATH 2554</u> .	
2 Students must complete the <u>State Minimum Core requirements</u> as outlined in the Catalog of Studies. The courses that meet the state minimum core also fulfill many of the university's <u>General Education requirements</u> , although there are additional considerations to satisfy the general education learning outcomes. Students are encouraged to consult with their academic adviser when making course selections.	
3 Students are required to complete 40 hours of upper-division courses (3000-4000 level). It is recommended that students consult with their adviser when making course selections.	
4 Data Science Statistics and Computational Analytics Concentration students are advised to select <u>STAT 3013/STAT 3003</u> to meet the prerequisites required in the concentration.	
5 Students are required to complete 40 hours of upper-division courses (3000-4000 level). It is recommended that students consult with their adviser when making course selections.	

Are Similar Programs available in the area?

No

Estimated Student See DTSCBS PLAN

Demand for Program

Scheduled Program See DTSCBS PLAN

Review Date

Program Goals and

Objectives

Program Goals and Objectives

See DTSCBS PLAN

Learning Outcomes

Learning Outcomes

See DTSCBS PLAN

Description and justification of the request

Description of specific change	Justification for this change
Corrections were made to match the original Program-wide 8-semester plan.	Ensuring the Data Science Program cohorts are cohesive and managing student advising in the original Program-wide 8-semester plan.

Upload attachments

Reviewer Comments

Alice Griffin (agriffin) (01/05/22 11:44 am): Inserted Analytics into each header of catalog copy to be consistent with the Program Title field for the name of the concentration. College is encouraged to review for accuracy.

Gina Daugherty (gdaugher) (01/06/22 11:19 am): Adjusted inline course references.