Date Submitted: 03/03/21 4:48 pm

Viewing: DTSCBS-BUDA : Data Science: Business Data Analytics Concentration

Last approved: 05/08/20 12:46 pm

Last edit: 03/10/21 3:06 pm

Changes proposed by: schubert

Catalog Pages Using this Program

Data Science B.S. with Business Data Analytics

Data Science (DTSC)

Submitter:	User ID:	schubert ~~kboston~~	Phone: 5-2264 ~~5-4622~~
Program Status	Active		
Academic Level	Undergraduate		
Type of proposal	Concentration		

Select a reason for this modification

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

Effective Catalog Year	Fall 2021
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 Program Assessment and Review
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. Provost's Office--Notification of Approval
17. Registrar Final
18. Catalog Editor Final

Approval Path

1. 03/04/21 12:29 pm Norman Dennis (ndennis): Approved for ENGR Dean Initial
2. 03/09/21 10:05 am Alice Griffin (agriffin): Approved

for Director of Program Assessment and Review
3. 03/10/21 3:07 pm Lisa Kulczak (lkulcza): Approved for Registrar Initial
4. 03/10/21 3:39 pm Gary Gunderman (ggunderm): Approved for Institutional Research
5. 03/10/21 3:58 pm Norman Dennis (ndennis): Approved for ENGD Chair
6. 03/10/21 5:06 pm Manuel Rossetti (rossetti): Approved for ENGR Curriculum Committee
7. 03/10/21 5:54 pm Norman Dennis (ndennis): Approved for ENGR Faculty
8. 03/10/21 5:56 pm Norman Dennis (ndennis): Approved for ENGR Dean
9. 03/10/21 9:15 pm Jeannie Hulen (jhulen): Approved for ARSC Dean
10. 03/16/21 2:42 pm Karen Boston (kboston):

Approved for WCOB Dean
11. 03/16/21 2:42 pm Suzanne Kenner (skenner): Approved for Global Campus
12. 03/29/21 11:14 am Terry Martin (tmartin): Approved for Provost Review

History

1. May 7, 2020 by Lisa Kulczak (lkulcza)
2. May 8, 2020 by Charlie Alison (calison)

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 hours needed to 21

complete the program?

Program Requirements and Description

Requirements

Required Business Data Concentration Courses

ACCT 2013	Accounting Principles	3
ACCT 2023	Accounting Principles II	3
WCOB 1033	Data Analysis and Interpretation	3
ISYS 4193	Business Analytics and Visualization	3
ISYS 4293	Business Intelligence	3
Elective Business Data Analytics Concentration Courses (Select 6 hours)		6
FINN 3043	Principles of Finance	
FINN 3013	Financial Analysis	
ECON 4743	Introduction to Econometrics	
ECON 4753	Forecasting	
MKTG 3433	Introduction to Marketing	
MKTG 3633	Marketing Research	
Total Hours		21

8-Semester Plan

Data Science B.S. with Business Data Concentration Eight-Semester Program

First Year	Units Fall	Spring
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1)1	4	
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)	4	
DASC 1001 Introduction to Data Science	1	
DASC 1104 Programming Languages for Data Science	4	
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)		4
DASC 1204 Introduction to Object Oriented Programming for Data Science		4
DASC 1222 Role of Data Science in Today's World		2
ACCT 2013 Accounting Principles		3

~~Choose one of the following (recommend ENGL 1033)~~	~~-~~	~~3~~
ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)		3
~~ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023)~~		
Year Total:	16	16

Second Year	Units	
	Fall	Spring
DASC 2594 Multivariable Math for Data Scientists	4	
~~DASC 2103 Data Structures & Algorithms~~	~~3~~	~~-~~
DASC 2113 Principles and Techniques of Data Science	3	
WCOB 1033 Data Analysis and Interpretation	3	
ACCT 2023 Accounting Principles II	3	
DASC 2213 Data Visualization and Communication	**3**	
DASC 2103 Data Structures & Algorithms		**3**
INEG 2313 Applied Probability and Statistics for Engineers I4 or STAT 3013 Introduction to Probability		3
MGMT 2053 Business Foundations		3
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2)		3
DASC 2203 Data Management and Data Base		3
~~DASC 2213 Data Visualization and Communication~~	~~-~~	~~3~~
Year Total:	16	15

Third Year	Units	
	Fall	Spring
PHIL 3103 Ethics and the Professions (Satisfies General Education Outcome 5.1)	3	
DASC 3103 Cloud Computing and Big Data	3	
ISYS 4193 Business Analytics and Visualization	3	
INEG 2333 Applied Probability and Statistics for Engineers II4 or STAT 3003 Statistical Methods	3	
~~University Core Social Science Elective~~	~~3~~	~~-~~
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.2 and 3.3)2	**3**	
ISYS 4293 Business Intelligence		3
DASC 3203 Optimization Methods in Data Science		3
DASC 3213 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
Year Total:	15	16

Fourth Year	Units	
	Fall	Spring

DASC 4892 Data Science Practicum I	2	
DASC 4113 Machine Learning	3	
DASC 4123 Social Problems in Data Science and Analytics	3	
Business Data Analytics Elective	3	
~~University Core Fine Arts Elective~~	~~3~~	-
State Minimum Core Fine Arts Elective (Satisfies General Education Outcome 3.1)3	**3**	
DASC 4993 Data Science Practicum II (Satisfies General Education Outcome 6.1)		3
Business Data Analytics Elective		3
~~University Core Social Science Elective~~	-	~~3~~
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.3 and 4.1)4		**3**
General Education Elective5		3
Year Total:	14	12

Total Units in Sequence: 120

1Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 2554.

2The Social Science Elective courses which satisfy General Education Outcomes 3.2 and 3.3 include: HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2003, or HIST 2013. Note, courses cannot be counted twice in degree requirements.

3The Fine Arts Elective courses which satisfy General Education Outcome 3.1 include: ARCH 1003, ARHS 1003, COMM 1003, DANC 1003, LARC 1003, MLIT 1003, MLIT 1003H, MLIT 1013, MLIT 1013H, MLIT 1333, THTR 1003, THTR 1013, or THTR 1013H.

4The Social Sciences Elective courses which satisfy General Education Outcomes 3.3 and 4.1 include: ANTH 1023, COMM 1023, HDFS 1403, HDFS 2413, HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2093, HUMN 1114H, HUMN 2114H, INST 2013, INST 2813, INST 2813H, PLSC 2013, PLSC 2813, PLSC 2813H, RESM 2853, SOCI 2013, SOCI 2013H, or SOCI 2033.

5Students 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 Demand for Program: See DTSCBS PLAN

Scheduled Program Review Date: See DTSCBS PLAN

Program Goals and Objectives

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
Revised formatting of the eight semester degree plan. Inserted the General Education language. Also added footnotes and hyper-linked courses for access to course details.	To provide consistency with the General Education curriculum language. Footnotes provides list of courses that specifically meets each General Education Outcome on behalf of the college. Changes to the English requirement needs campus approval.AG
Exchanged Fall <--> Spring for DASC 2103 and DASC 2213.	Moved to provide training on visualization and communication earlier in the sequence.

Upload attachments

Reviewer Comments

Key: 745