

Date Submitted: 02/20/23 4:27 pm

Viewing: **DTSCBS-SODA : Data Science: Social Data Analytics Concentration**

Last approved: 05/23/22 11:25 am

Last edit: 03/14/23 2:34 pm

Changes proposed by: schubert

Catalog Pages Using this Program

[Data Science B.S. with Social Data Analytics Concentration](#)  
[Data Science \(DTSC\)](#)

Submitter:

User ID: schubert

Phone: 575-2264 ~~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, 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 Engineering Dean (ENGD)

Program Code

DTSCBS-SODA

Degree

Bachelor of Science

CIP Code

30.3001 - Computational Science.

Program Title

Data Science: Social Data Analytics Concentration

Program Delivery Method

On Campus

Yes

Is this program interdisciplinary?

College(s)/School(s)

College/School Name

College of Engineering (ENGR)

Fulbright College of Arts and Sciences (ARSC)

Walton College of Business (WCOB)

Yes ~~No~~

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

College(s)/School(s)

College/School Name

Fulbright College of Arts and Sciences (ARSC)

What are the total hours needed to complete the program?

120 ~~20~~

- 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. ARSC Dean

9. ENGR Dean

10. WCOB Dean

11. Global Campus

12. Provost Review

13. Undergraduate Council

14. Faculty Senate

15. Provost Final

16. Registrar Final

17. Catalog Editor Final

- Approval Path
1. 02/16/23 3:43 pm  
Kevin Hall (kdhall):  
Approved for ENGR Dean Initial

2. 02/20/23 2:40 pm  
Alice Griffin  
(agriffin): Rollback to Initiator

3. 02/20/23 4:13 pm  
Kevin Hall (kdhall):  
Rollback to Initiator

4. 02/20/23 4:42 pm  
Kevin Hall (kdhall):  
Approved for ENGR Dean Initial

5. 02/21/23 9:39 am  
Alice Griffin  
(agriffin): Approved for Director of Curriculum Review and Program Assessment

6. 02/22/23 3:09 pm  
Gina Daugherty (gdaughter):  
Approved for Registrar Initial

7. 02/23/23 11:31 am  
Doug Miles (dmiles): Approved for Institutional Research

8. 02/24/23 10:27 am  
Kevin Hall (kdhall):  
Approved for ENGD Chair

9. 02/28/23 4:04 pm  
Manuel Rossetti (rossetti): Approved for ENGR Curriculum Committee

10. 03/01/23 10:18 am  
Kevin Hall (kdhall):  
Approved for ENGR Faculty

11. 03/01/23 10:27 am  
Jeannie Hulen

Program Requirements and Description

Requirements

Required Social Data Analytics Concentration Courses

- (jhulen): Approved for ARSC Dean
12. 03/13/23 4:02 pm  
Kevin Hall (kdhall): Approved for ENGR Dean
13. 03/13/23 4:20 pm  
Alan Ellstrand (aellstra): Approved for WCOB Dean
14. 03/13/23 4:29 pm  
Suzanne Kenner (skenner): Approved for Global Campus
15. 03/13/23 4:58 pm  
Jim Gigantino (jgiganti): Approved for Provost Review
16. 04/21/23 4:39 pm  
Alice Griffin (agriffin): Approved for Undergraduate Council

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)
4. Apr 11, 2022 by Karl Schubert (schubert)
5. May 23, 2022 by Gina Daugherty (gdaugher)

<a href="#">SOCI 2013</a>	General Sociology (ACTS Equivalency = SOCI 1013)	3
<del>SOCI 3001L</del>	<del>Social Science Data Analytics Lab</del>	<del>1</del>
<a href="#">SOCI 3303</a>	Social Data and Analysis	3
<a href="#">SOCI 3301L</a>	Social Data and Analysis Laboratory	1
<a href="#">SOCI 3313</a>	Social Research	3
<del>SOCI 4253</del>	<del>Social Impact of Data Analytics</del>	<del>3</del>
Elective Social Data Analytics Concentration Courses (Select 6 hours)		6
<u>Elective Social Data Analytics Concentration Courses (Select 10 hours)</u>		<u>10</u>
<a href="#">GEOS 3013</a>	Foundations of Geospatial Data Analysis	
<a href="#">GEOS 3543</a>	Geospatial Applications and Information Science	
<a href="#">GEOS 3563</a>	Geospatial Data Mining	
<a href="#">GEOS 4553</a>	Introduction to Raster GIS	
<a href="#">PLSC 3603</a>	Scope and Methods of Political Science	
<a href="#">PLSC 4213</a>	Campaigns and Elections	
<a href="#">SCWK 4073</a>	Social Work Research and Technology I	
<a href="#">SOCI 4013</a>	Special Topics in Sociology	
<a href="#">SOCI 4183</a>	Social Network Analysis	
Total Hours		20



## 8-Semester Plan

**Data Science B.S. with Social Data Analytics Concentration****Eight-Semester Program**

First Year	Units
	Fall/Spring
<a href="#">MATH 2554</a> Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) <sup>1</sup>	4
<del>State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)</del>	<del>4</del> -
<a href="#">ENGL 1013</a> Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3
<del><a href="#">DASC 1001</a> Course DASC 1001 Not Found</del>	<del>3</del> -
<a href="#">DASC 1003 INTRODUCTION TO DATA SCIENCE</a> <del>Course DASC 1003 INTRODUCTION TO DATA SCIENCE Not Found</del>	<u>3</u> =
<a href="#">DASC 1104</a> Programming Languages for Data Science	4
<a href="#">MATH 2564</a> Calculus II (ACTS Equivalency = MATH 2505)	4
<a href="#">ECON 2143</a> Basic Economics: Theory and Practice (Satisfies General Education Outcome 3.3)	3
<a href="#">ENGL 1033</a> Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)	3
<a href="#">DASC 1204</a> Introduction to Object Oriented Programming for Data Science	4
<del><a href="#">DASC 1222</a> Course DASC 1222 Not Found</del>	- <del>2</del>
<a href="#">DASC 1223 ROLE OF DATA SCIENCE IN TODAY'S WORLD</a> <del>Course DASC 1223 ROLE OF DATA SCIENCE IN TODAY'S WORLD Not Found</del>	<u>3</u> =
Year Total:	14 17
Second Year	Units
	Fall/Spring
<a href="#">DASC 2594</a> Multivariable Math for Data Scientists	4
<a href="#">STAT 3013</a> Introduction to Probability <sup>4</sup>	3
or <a href="#">INEG 2323</a> Probability and Stochastic Processes for Industrial Engineers	
<a href="#">DASC 2213</a> Data Visualization and Communication	3
<a href="#">DASC 2113</a> Principles and Techniques of Data Science	3
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2) <sup>2</sup>	3
<a href="#">SEVI 2053</a> Business Foundations (Data Science Majors-only section)	3
<a href="#">STAT 3003</a> Statistical Methods <sup>4</sup>	3-4
or <a href="#">INEG 2314</a> Statistics for Industrial Engineers I	
<del><a href="#">DASC 2103 Data Structures &amp; Algorithms</a></del>	- <del>3</del>
<a href="#">State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)</a> <sup>2</sup>	= <u>4</u>
<a href="#">DASC 2203</a> Data Management and Data Base	3
<a href="#">SOCL 2013</a> General Sociology (ACTS Equivalency = SOCL 1013) (Satisfies General Education Outcomes 3.3, 4.1, and 4.2) <sup>5</sup>	3
Year Total:	16 16
Third Year	Units
	Fall/Spring
<del><a href="#">PHIL 3103</a> Ethics and the Professions (Satisfies General Education Outcome 5.1)</del>	<del>3</del> -
<a href="#">DASC 2133 DATA PRIVACY ETHICS</a> <del>Course DASC 2133 DATA PRIVACY &amp; ETHICS Not Found</del> (Satisfies General Education Outcome 5.1) <sup>3</sup>	<u>3</u> =
<a href="#">DASC 3103</a> Cloud Computing and Big Data	3
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4) <sup>2</sup>	4
<a href="#">SOCL 3303</a> Social Data and Analysis	3
<a href="#">SOCL 3301L</a> Social Data and Analysis Laboratory	1
<a href="#">SOCL 3313</a> Social Research	3
<a href="#">DASC 3203</a> Optimization Methods in Data Science	3
<a href="#">DASC 3213</a> Statistical Learning	3
<a href="#">SOCL 4253</a> Social Impact of Data Analytics	3
<del><a href="#">SOCL 3001L Social Science Data Analytics Lab</a></del>	- <del>1</del>
<del>State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2)</del> <sup>2</sup>	- <del>3</del>
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.2 and 3.3) <sup>2</sup>	3
Year Total:	17 12
Fourth Year	Units
	Fall/Spring
<a href="#">DASC 4892</a> Data Science Practicum I	2
<a href="#">DASC 4113</a> Machine Learning	3
<a href="#">DASC 4123</a> Social Problems in Data Science and Analytics	3
Social Data Analytics Elective	3
<del>General Elective<sup>6</sup></del>	<del>3</del> -
<a href="#">Social Data Analytics Elective</a>	<u>3</u> =
<a href="#">DASC 4993</a> Data Science Practicum II (Satisfies General Education Outcome 6.1)	3
General Education Electives <sup>3</sup>	4
<a href="#">State Minimum Core Fine Arts Elective (Satisfies General Education Outcome 3.1)</a> <sup>2</sup>	= <u>3</u>
Social Data Analytics Elective	4
Year Total:	14 14

Total Units in Sequence: 120

<sup>1</sup> Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for [MATH 2554](#).

<sup>2</sup> Students must complete the [State Minimum Core requirements](#) as outlined in the Catalog of Studies. The courses that meet the state minimum core also fulfill many of the university's [General Education requirements](#), 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.

<sup>3</sup> 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.

<sup>4</sup> Data Science Statistics and Computational Analytics Concentration students are advised to select [STAT 3013/STAT 3003](#) to meet the prerequisites required in the concentration.

<sup>5</sup> [SOCL 2013](#) General Sociology is a required course for the Social Data Analytics Concentration. The course may also be used to meet three hours toward the State Minimum Core Social Science requirements. As such,

students may complete three hours of general education electives in lieu of an additional State Minimum Core Social Science requirement for a total of 7 hours of general education electives.

No

Are Similar Programs available in the area?

Estimated Student Demand for Program

See DTSCBS PLAN

Scheduled Program Review Date

See DTSCBS PLAN

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
DASC 1001 & DASC 1222 are updated to DASC 1003 and DASC 1223 as initially designed. DASC 2103 is moved to CMPA Concentration Required matching the original program design.	These provide the courses with the appropriate number of hours and improved course sequencing.
INEG 2314 then INEG 2323 sequence is changed to better match sequencing of STAT 3013 and 3003 per discussions with INEG.	
SOCI 4253 and 3001L sequence (these are joined courses/labs despite the different numbering) were deleted as they are not available and will likely be reworked in the future to fit into the broader SOCI and DASC curriculum.	

Upload attachments [UoA BS DASC Suggested Plan of Study \(8-semester\) v23-8a.pdf](#)

Reviewer Comments **Alice Griffin (agriffin) (02/20/23 2:38 pm):** Reformatted course listing for DASC 1003 and DASC 1223, removed notation regarding First-Year Science Program. Removed comment field and entered course title in the add course field. Also, reformatted DASC 2133, placing course title in the add course field for consistency with campus formatting.

**Alice Griffin (agriffin) (02/20/23 2:40 pm):** Rollback: The credit hours were not originally included with DASC 1223. When included, the program reflected 123 credit hours. Please address the discrepancy in order for the program to total the maximum 120 hours in the eight semester plan.

**Kevin Hall (kdhall) (02/20/23 4:13 pm):** Rollback: rolled back at request of submitter

**Alice Griffin (agriffin) (02/21/23 9:39 am):** Changed the reason for the modification from minor changes that qualify for the shortened approval process to making minor changes. This action was taken because the deletion of SOCI courses impacted courses from ARSC. Thus, this minor program change will require campus approval.

**Alice Griffin (agriffin) (03/14/23 2:34 pm):** Changed total hours field from 20 to 120 as requested by the Registrar's Office.