

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](tel:575-226452264)

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

College(s)/School(s): Yes No Is this program interdisciplinary?

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?

College(s)/School(s): Yes No

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

History

- May 7, 2020 by Lisa Kulczak (lkulcza)
- May 8, 2020 by Charlie Alison (calison)
- May 18, 2021 by Karl Schubert (schubert)
- Apr 11, 2022 by Karl Schubert (schubert)
- May 23, 2022 by Gina Daugherty (gdaugher)

SOCI 2013	General Sociology (ACTS Equivalency = SOCI 1013)	3
50E1 3001L	Social Science Data Analytics Lab	3
SOCI 3303	Social Data and Analysis	3
SOCI 3301L	Social Data and Analysis Laboratory	1
SOCI 3313	Social Research	3
50E1 4253	Social Impact of Data Analytics	3
Elective Social Data Analytics Concentration Courses (Select 6 hours)		6
Elective Social Data Analytics Concentration Courses (Select 10 hours)		10
GEOS 3013	Foundations of Geospatial Data Analysis	
GEOS 3543	Geospatial Applications and Information Science	
GEOS 3563	Geospatial Data Mining	
GEOS 4553	Introduction to Raster GIS	
PLSC 3603	Scope and Methods of Political Science	
PLSC 4213	Campaigns and Elections	
SCWK 4073	Social Work Research and Technology I	
SOCI 4013	Special Topics in Sociology	
SOCI 4183	Social Network Analysis	
Total Hours		20

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

First Year	Units
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) ¹	Fall/Spring 4
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)	4 -
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3
DASC 1001 Introduction to Data Science	3 -
DASC 1003 INTRODUCTION TO DATA SCIENCE Course DASC 1003 INTRODUCTION TO DATA SCIENCE Not Found	<u>3</u> =
DASC 1104 Programming Languages for Data Science	4
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)	4
ECON 2143 Basic Economics: Theory and Practice (Satisfies General Education Outcome 3.3)	3
ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)	3
DASC 1204 Introduction to Object Oriented Programming for Data Science	4
DASC 1222 Role of Data Science in Today's World	3 -
DASC 1223 ROLE OF DATA SCIENCE IN TODAY'S WORLD Course DASC 1223 ROLE OF DATA SCIENCE IN TODAY'S WORLD Not Found	<u>3</u> =
Year Total:	14 17
Second Year	Units
	Fall/Spring
DASC 2594 Multivariable Math for Data Scientists	4
STAT 3013 Introduction to Probability ⁴	3
or INEG 2323 Probability and Stochastic Processes for Industrial Engineers	
DASC 2213 Data Visualization and Communication	3
DASC 2113 Principles and Techniques of Data Science	3
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2)²	3
SEVI 2053 Business Foundations (Data Science Majors-only section)	3
STAT 3003 Statistical Methods ⁴	3-4
or INEG 2314 Statistics for Industrial Engineers I	
DASC 2103 Data Structures & Algorithms	3 -
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)²	4 -
DASC 2203 Data Management and Data Base	3
SOCL 2013 General Sociology (ACTS Equivalency = SOCL 1013) (Satisfies General Education Outcomes 3.3, 4.1, and 4.2) ⁵	3
Year Total:	16 16
Third Year	Units
	Fall/Spring
PHIL 3103 Ethics and the Professions (Satisfies General Education Outcome 5.1)	3 -
DASC 2133 DATA PRIVACY ETHICS Course DASC 2133 DATA PRIVACY & ETHICS Not Found (Satisfies General Education Outcome 5.1) ³	<u>3</u> =
DASC 3103 Cloud Computing and Big Data	3
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4)²	4
SOCL 3303 Social Data and Analysis	3
SOCL 3301L Social Data and Analysis Laboratory	1
SOCL 3313 Social Research	3
DASC 3203 Optimization Methods in Data Science	3
DASC 3213 Statistical Learning	3
SOCL 4253 Social Impact of Data Analytics	3
SOCL 3001L Social Science Data Analytics Lab	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 3.2 and 3.3) ²	3
Year Total:	17 12
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
Social Data Analytics Elective	3
General Elective⁶	3 -
Social Data Analytics Elective	<u>3</u> =
DASC 4993 Data Science Practicum II (Satisfies General Education Outcome 6.1)	3
General Education Electives³	4
State Minimum Core Fine Arts Elective (Satisfies General Education Outcome 3.1)²	3 =
Social Data Analytics Elective	4
Year Total:	14 14
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 [MATH 2554](#).

2

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.

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 [STAT 3013/STAT 3003](#) to meet the prerequisites required in the concentration.

5

[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
<p>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.</p> <p>INEG 2314 then INEG 2323 sequence is changed to better match sequencing of STAT 3013 and 3003 per discussions with INEG.</p> <p>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.</p>	<p>These provide the courses with the appropriate number of hours and improved course sequencing.</p>

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.