New Program Proposal

The following must be submitted to complete a new program request:

Submission Checklist:

☒ New Program Proposal
☒ Business Plan (https://www.ache.edu/index.php/forms/)
☒ Undergraduate or Graduate Curriculum Plan (https://www.ache.edu/index.php/forms/)

Primary Contact Information

Institution: University of South Alabama
Contact: Dr. Madhuri Mulekar
Title: Chair
Email: mmulekar@southalabama.edu
Telephone: 251-460-6391

Program Information

Date of Proposal Submission: 9/12/2025
Award Level: Bachelor's Degree
Award Nomenclature (e.g., BS, MBA): BS
Field of Study/Program Title: Data Science and Applied Statistics
CIP Code (6-digit): 30.7001

Administration of the Program

Name of Dean: Dr. Andrzej Wierzbicki
Name of College/School: College of Arts and Sciences
Name of Chairperson: Dr. Madhuri Mulekar
Name of Department/Division: Mathematics and Statistics

Implementation Information

Proposed Program Implementation Date: 8/18/2026
Anticipated Date of Approval from Institutional Governing Board: Click or tap to enter a date.
Anticipated Date of ACHE Meeting to Vote on Proposal: 12/12/2025
SACSCOC Sub Change Requirement (Notification, Approval, or NA): NA
Other Considerations for Timing and Approval (e.g., upcoming SACSCOC review):

New Program Proposal

I. Program Description

A. Concise Program Summary (one paragraph) to be included in ACHE Agenda:

This BS in data science and applied statistics will prepare students in how to collect, analyze, and interpret complex data to solve problems and make informed decisions. This degree unifies different aspects from statistics, data analysis, machine learning, and related methods. It will prepare students to pursue jobs with businesses, research institutions, and government agencies that are collecting data and using outcomes for decision-making.

B. Specific Rationale (Strengths) for the Program

List three (3) to five (5) strengths of the proposed program as specific rationale for recommending approval of this proposal.

1. Organizations need more data scientists to analyze large amounts of data and make informed decisions. Data is becoming increasingly important for decision-making, and data scientists can have a significant impact. According to the U.S. Bureau of Labor Statistics, data scientist positions will continue to be among the fastest-growing jobs in 2024. The projected increase in job openings from 2023 to 2033 is 36%. In addition, the World Economic Forum's Future of Jobs 2023 report estimates that by 2027, the demand for AI and machine learning specialists will increase by 40%, and for data analysts, scientists, engineers, BI analysts, and other big data and database professionals will grow by 30%–35%.
2. A degree in Data science and applied statistics opens the door to a variety of careers in different industries, including but not limited to finance, healthcare, education, marketing, and government. It offers graduates a range of career paths to suit their skills and interests. Some common jobs for graduates include data scientist, statistician, analytics manager, data analyst, research scientist, predictive modeler, bioinformatics analyst, data mining manager, machine learning manager, etc.
3. The skills and knowledge gained in a Data Science and applied statistics program, such as data analysis, problem-solving, and critical thinking, are highly sought after by employers and are also highly transferable, making it possible for graduates to switch careers and transition into new industries.
4. A degree in Data science and applied statistics can lead to a rewarding and challenging career with excellent earning potential and the opportunity to make a difference in a number of different areas and industries.

C. External Support (Recommended)

List external entities (more may be added) that may have supplied letters of support attesting to the program's strengths and attach letters with the proposal at the end of this document.

N/A

D. Student Learning Outcomes

List four (4) to seven (7) of the student learning outcomes of the program.

1. Students will demonstrate ability to manage large data sets.
2. Students will develop skills to write codes to manage and analyze data.
3. Students will demonstrate ability to select appropriate statistical techniques for real-world data analysis situations.
4. Students will develop skills in written communication and oral presentation of statistical findings.

E. Similar Programs at Other Alabama Public Institutions

List programs at other Alabama public institutions of the same degree level and the same (or similar) CIP codes. If no similar programs exist within Alabama, list similar programs offered within the 16 SREB states. If the proposed program duplicates, closely resembles, or is similar to any other offerings in the state, provide justification for any potential duplication.

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
30.7001	Bachelor of Science in Data Science	UA	The projected market demand for next 10 years indicates considerable need for jobs within this field therefore this program will help meet the industry need.

F. Relationship to Existing Programs within the Institution

Nearly all new programs have some relationship to existing offerings through shared courses, faculty, facilities, etc. Is the proposed program associated with any existing offerings within the institution, including options within current degree programs? **Yes** ☒ **No** ☐

If ***yes***, please describe these relationships including whether or not the program will replace or compete with existing offerings: (***Note:*** If this is a graduate program, list any existing undergraduate programs which are directly or indirectly related. If this is a doctoral program, also list related master's programs.)

The courses being offered as a part of this program are a part of the existing university curriculum therefore this program will utilize the existing faculty and resources.

If ***not***, please describe how the institution plans to support a program unrelated to existing offerings.

G. Collaboration

Have any collaborations **within your institution** (i.e., research centers, across academic divisions, etc.) been explored? **Yes ☐ No ☒**

If ***yes***, provide a brief explanation of the proposed collaboration plan(s) for the program:

Have collaborations with **other institutions or external entities** (i.e., local business, industries, etc.) been explored? **Yes ☐ No ☒**

If ***yes***, provide a brief explanation of the proposed collaboration plan(s) for the program:

H. Programmatic Accreditation

Select the appropriate program accreditor from the drop-down menu below:

Choose an item.

Provide a detailed timeline for gaining accreditation (i.e., when will full candidacy be reached?):

I. Professional Licensure

Will the program be considered a Professional Licensure Program based on the following definition: **Yes ☐ No ☒**

Professional Licensure Program: As defined in federal regulations, an instructional program that is designed to meet educational requirements for a specific professional license or certification that is required for employment in an occupation or is advertised as meeting such requirements.

If ***yes***, please explain:

Select the appropriate licensure body from the table below:

Choose an item.

Select the appropriate license from the table below:

Choose an item.

J. Professional Certification

Will students earn industry certifications while completing the degree or be prepared for industry certifications upon graduation? **Yes ☐ No ☒**

If ***yes***, please explain:

K. Admissions

Provide any additional admissions requirements beyond the institution's standard admissions process/policies for this degree level. Include prerequisites, prior degrees earned, etc.

None

L. Mode of Delivery

Provide the planned delivery format(s) of the program as defined in policy (i.e., in-person, online, hybrid). Please also note whether any program requirements can be completed through competency-based assessment.

This program can be completed fully online or hybrid.

Can students complete the entire degree program through distance education (100% online) based on the following definition? **Yes ☐ No ☒**

Distance Education: An academic program for which required instructional activities can be completed entirely through distance education modalities. A distance education program may have in-person requirements that are non-instructional (e.g., orientation, practicum).

M. Instructional Site(s)

Provide the planned location(s) where the program will be delivered (i.e., main campus, satellite campus, off-campus site.) If the program will be offered at an off-campus site, provide the existing site name or submit an ***Off-Campus Site Request*** if new.

Will more than 50% of this program be offered at an off-campus site(s) **Yes ☐ No ☒**

If ***yes***, which sites?

N. Industry Need

Using the federal **Standard Occupational Code (SOC) System**, indicate the top three occupational codes related to post-graduation employment from the program. A full list of SOCs can be found at https://www.onetcodeconnector.org/find/family/title#17.

SOC 1 (**required**): 13-1111

SOC 2 (optional): 15-1252

SOC 3 (optional): 13-1161

Briefly describe how the program fulfills a specific industry or employment need for the State of Alabama. As appropriate, discuss alignment with Alabama's Statewide or Regional Lists of In-Demand Occupations (https://www.ache.edu/index.php/policy-guidance/) or with emerging industries as identified by Innovate Alabama or the Economic Development Partnership of Alabama (EDPA).

Data Analysts and Statisticians are hired by different industries under different job titles for their data analysis skills. Some of the job examples from the Alabama Demand Occupations ACCCP 2023-2024 are as follows but note that this list is quite incomplete and does not include many in-demand jobs such as data analysts.

Management analysts 6,500 employed in 2021 (up by 1,000 compared to 2020). Median salary: $87,048.
Software developers 14,670 employed in 2021. Median salary: $99,507.
database administrators, 2,290 employed in 2021. Median salary: $78,793.
Market research analysts and marketing specialists: 6,560 employed in 2021. Median salary: 51,443.
Marketing managers, 1,740 employed in 2021.
According to 365Data Science, the most significant percentage of job offers for Data Scientists is in Technology & Engineering (28.2%), followed by job postings from HR companies (19%) hiring for various industries. Data science is also gaining popularity in Health & Life Sciences (13%), Financial and Professional Services (10%), and Primary Industries & Manufacturing (8.7%).

O. Additional Education/Training

Please explain whether further education/training is required for graduates of the proposed program to gain entry-level employment in the SOC occupations selected above.

None

P. Student Demand

Please explain how you projected the student enrollment numbers in the **Business Plan, Lines 24-27** and provide evidence to substantiate student demand (i.e., surveys, enrollments in related courses, etc.).

An article in AmStat News (Nov 2024) titled Data science, analytics degrees see explosive growth mentions that from 2019 to 2023, bachelor's degrees in data science increased by 81%. Gray's PES market scorecard shows student demand to be in 93rd percentile for 180-mile and all AL, 97th percentile for Southeast region, and 99th percentile for National market.

The department of mathematics and statistics teaches about 400 students each in Fall and Spring semesters and about 100 in Summer. With about 900 students in the first required course every year, the department has ample opportunity to recruit students for proposed program. Most students are unaware of such job opportunities, however faculty can provide such information to students increasing their interest levels.

II. Program Resources and Expenses

A. All Proposed Program Personnel

Provide all personnel counts for the proposed program.

Employment Status of Program Personnel		Personnel Information		
		Count from Proposed Program Department	Count from Other Departments	Subtotal of Personnel
Current	Full-Time Faculty	10		10
	Part-Time Faculty	1		1
	Administration			
	Support Staff			
**New To Be Hired	Full-Time Faculty			
	Part-Time Faculty			
	Administration			
	Support Staff			
		Personnel Total		

Provide justification that the institution has proposed a sufficient number of faculty (full-time and part-time) for the proposed program to ensure curriculum and program quality, integrity, and review:

The department currently has ten full-time faculty involved in teaching of statistics-related courses. Of these 10 faculty, six are tenured or tenure-track who teach introductory-level as well as higher level including graduate level courses, and four instructional faculty who primarily teach introductory statistics (along with 100-level or developmental math) courses.

Note: Include ***any new funds*** designated for compensation costs (faculty, administration, and/or support staff to be hired) in the **Business Plan, Line 7 - Personnel Salaries and Benefits**. Current personnel salary/benefits ***should not be included*** in the Business Plan.

B. Proposed Faculty Roster*

Complete the following **Faculty Roster** to provide a brief summary and qualifications of current faculty and potential new hires specific to the program.

***Note**: Institutions must maintain and have current as well as additional faculty curriculum vitae available upon ACHE request for as long as the program is active, but CVs are **not** to be submitted with this proposal.

Current Faculty			
1	2	3	4
CURRENT FACULTY NAME (FT, PT)	**COURSES TAUGHT including Term, Course Number, Course Title, & Credit Hours (D, UN, UT, G, DU)**	**ACADEMIC DEGREES and COURSEWORK Relevant to Courses Taught, including Institution and Major; List Specific Graduate Coursework, if needed**	**OTHER QUALIFICATIONS and COMMENTS Related to Courses Taught and Modality(ies) (IP, OL, HY, OCIS)**
FT	MA 506 (GR, 3 hrs) Statistics for Teachers ST 335 (UG, 3 hrs) Applied Regression Analysis ST 550 (GR,3 hrs) Environmental Statistics ST 545 (GR, 3 hrs) Stat in Research II	Madhuri Mulekar, Professor and Chair, Ph.D., Statistics	
FT	ST 210 (UG, 3 hrs) Stat Reason and Application ST 335 (UG, 3 hrs) Applied Regression Analysis ST 355 (UG 3 hrs) Nonparametric Stat Methods MA 599 (UG, 3 hrs) Thesis ST 590 (GR, 3 hrs) Sp Topic:	Frazier Bindele, Associate Professor, Ph.D., Statistics	
FT	ST 315 (UG, 3 hrs) ST 210 (UG, 3 hrs) Stat Reason and Application MA 599 (UG, 3 hrs) Thesis ST 540 (GR, 3 hrs) Stat in Research I ST 494 (GR 3 hrs)	Paramahansa Pramanik, Assistant Professor, Ph.D. Mathematics	
FT	ST 315 (UG, 3 hrs) Applied Probability-Statistics ST 210 (UG, 3 hrs) Stat Reason and Application ST 335 (UG, 3 hrs) Applied Regression Analysis ST 540 (GR, 3 hrs) Stat in Research I ST 545 (GR, 3 hrs) Stat in Research II	Olivia Atutey, Assistant Professor, Ph.D. Statistics	
FT	ST 210 (UG, 3 hrs) Stat Reason and Application ST 340 (UG, 3 hrs) Design-Analysis of Experiments ST 475 (UG, 3 hrs) Stat Computing and Graphics ST 575 (GR, 3 hrs) Stat Computing and Graphics ST 540 (GR, 3 hrs) Stat in Research I	Chase Holcombe, Assistant Professor, Ph.D., Applied Stastics	
FT	ST 210 (UG, 3 hrs) Stat Reason and Application MA 550 (GR, 3 hrs) MA 451 (GR, 3 hrs) ST 550 (GR, 3 hrs) Environmental Statistics	Mathias Muia, Assistant Professor, Ph.D., Mathematics	

New Program Proposal

Current Faculty			
1	2	3	4
CURRENT FACULTY NAME (FT, PT)	**COURSES TAUGHT including Term, Course Number, Course Title, & Credit Hours (D, UN, UT, G, DU)**	**ACADEMIC DEGREES and COURSEWORK Relevant to Courses Taught, including Institution and Major; List Specific Graduate Coursework, if needed**	**OTHER QUALIFICATIONS and COMMENTS Related to Courses Taught and Modality(ies) (IP, OL, HY, OCIS)**
FT	ST 210 (UG, 3 hrs) Stat Reason and Application MA 112 (UG, 3 hrs) Precalculus Algebra MTH 101 (U, 3 hrs) MA 110 (UG, 3 hrs) Finite Mathematics	Sonna Farmer, Senior Instructor, MS., Statistics	
FT	ST 210 (UG, 3 hrs) Stat Reason and Application MTH 100 (UG 3 hrs) Mathematics in Society MA 111 (UG, 3 hrs) Math in Society MA 113 (UG, 3 hrs) Precalculus Trigonometry	Laurelin Waites, Instructor, MS, Mathematics	
FT	ST 210 (UG, 3 hrs) Stat Reason and Application MTH 100 (UG 3 hrs) Mathematics in Society MA 112 (UG, 3 hrs) Precalculus Algebra MA 110 (UG, 3 hrs) Finite Mathematics	Humaira Khair, Instructor, Statistics	
FT	ST 210 (UG, 3 hrs) Stat Reason and Application MA 112 (UG, 3 hrs) Precalculus Algebra MA 126 (UG, 3 hrs) Calculus II MA 110 (UG, 3 hrs) Finite Mathematics MA 113 (UG, 3 hrs) Precalculus Trigonometry	Joshua Lioi, Assistant Professor (of instruction), Ph.D., Applied Mathematics	
PT	ST 210 (UG, 3 hrs) Stat Reason and Application	Jennifer Moore, M.S., Applied Statistics	

Abbreviations: (FT, PT): Full-Time, Part-Time; (D, UN, UT, G, DU): Developmental, Undergraduate Nontransferable, Undergraduate Transferable, Graduate, Dual: High School Dual Enrollment
Course Modality: (IP, OL, HY, OCIS): In-Person, Online, Hybrid, Off-Campus Instructional Site

C. Equipment

Will any special equipment be needed specifically for this program? **Yes ☐ No ☒**

If ***yes***, list the special equipment and include all special equipment costs in the ***Business Plan, Line 8***:

D. Facilities

Will new facilities or renovations to existing infrastructure be required specifically for the program? **Yes ☐ No ☒**

If ***yes***, describe the new facilities or renovations and include all *new* facilities and/or *renovation* costs in the ***Business Plan, Line 9***:

E. Assistantships/Fellowships

Will the institution offer any assistantships specifically for this program? **Yes ☐ No ☒**

If ***yes***, provide the number of assistantships to be offered and include all *new* costs for assistantships in the ***Business Plan, Line 10.***

Explain the function of the Assistantships (i.e., teaching, research, etc.)?:

F. Library

Will any **additional** library resources be purchased to support the program? **Yes ☐ No ☒**

If ***yes***, briefly describe new resources to be purchased and include the cost of new library resources in the ***Business Plan, Line 11***:

G. Accreditation Expenses

If programmatic accreditation was indicated above, please include all accreditation costs in the ***Business Plan, Line 12*** and itemize and explain below:

H. Other Costs

Please include all other costs incurred with program implementation, such as marketing or recruitment, in the ***Business Plan, Line 13*** and explain below:

III. Program Revenue and Funding

A. Tuition Revenue: Please describe how you calculated the tuition revenue that appears in the ***Business Plan, Line 17***. Specifically, did you calculate using cost per credit hour or per term? Did you factor in differences between resident and non-resident tuition rates?
Note: Tuition Revenue should be proportional to total enrollment.

B. External Funding: Will the proposed program require external funding (*e.g.*, Perkins, Foundation, Federal Grants, Sponsored Research, etc.)? **Yes ☐ No ☒**

If ***yes***, please include all external funding in the ***Business Plan, Line 18*** and explain specific sources and funding below:

C. Reallocations: For each year will tuition revenue and/or external funding cover projected expenses? **Yes ☐ No ☒**

If ***not***, budget reallocation may be required. Please include all reallocations in the ***Business Plan, Line 19*** and describe below how your institution will cover any shortfalls in any given year.

ACADEMIC DEGREE PROGRAM BUSINESS PLAN								
INSTITUTION:	**University of South Alabama**							
PROGRAM NAME:	**BS in Data Science**						**CIP CODE:**	**30.7001**
SELECT LEVEL:	**UNDERGRADUATE (ASSOCIATE)**							
ESTIMATED *NEW* EXPENSES TO IMPLEMENT PROPOSED PROGRAM								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**TOTAL**
PERSONNEL SALARIES & BENEFITS	$0	$0	$0	$0	$0	$0	$0	$0
EQUIPMENT	$0	$0	$0	$0	$0	$0	$0	$0
FACILITIES	$0	$0	$0	$0	$0	$0	$0	$0
ASSISTANTSHIPS/FELLOWSHIPS	$0	$0	$0	$0	$0	$0	$0	$0
LIBRARY	$0	$0	$0	$0	$0	$0	$0	$0
ACCREDITATION	$0	$0	$0	$0	$0	$0	$0	$0
OTHER COSTS	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EXPENSES	$0	$0	$0	$0	$0	$0	$0	**$0**
***NEW* REVENUES AVAILABLE FOR PROGRAM SUPPORT**								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**TOTAL**
TUITION + FEES	$72,000	$144,000	$288,000	$302,400	$302,400	$302,400	$302,400	$1,713,600
EXTERNAL FUNDING								$0
REALLOCATIONS								$0
TOTAL REVENUES	$72,000	$144,000	$288,000	$302,400	$302,400	$302,400	$302,400	**$1,713,600**
ENROLLMENT PROJECTIONS								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**AVERAGE**
FULL-TIME ENROLLMENT HEADCOUNT	**No data reporting**	10	20	21	21	21	21	**19.00**
PART-TIME ENROLLMENT HEADCOUNT		5	10	10	10	10	10	**9.17**
TOTAL ENROLLMENT HEADCOUNT		15	30	31	31	31	31	**28.17**
***NEW* ENROLLMENT HEADCOUNT**		8	9	10	10	12	12	**10.17**
Validation of Enrollment			**NO**	**YES**	**YES**	**YES**	**YES**	
DEGREE COMPLETION PROJECTIONS								
Note: Do not count Lead "0"s and Lead 0 years in computing the average annual degree completions.								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**AVERAGE**
DEGREE COMPLETION PROJECTIONS	**No data reporting**	0	0	6	8	10	12	**9.00**

Undergraduate Curriculum Plan

Undergraduate Curriculum Checklist:

1. Overview ☑
2. Components ☑
3. Options (as required) ☑

1. Undergraduate Overview

Enter the credit hour value for all applicable components (N/A if not applicable).
The credit hours MUST match the credit hours in the Curriculum Components table.

Curriculum Overview of Proposed Program	
Credit hours required in **General Education**	53
Credit hours required in **Program Courses & Required Electives**	68
Credit hours in **Program Options (concentrations/specializations/tracks)**	0
Credit hours in **Free Electives**	0
Credit hours in required **Capstone/Internship/Practicum**	0
Total Credit Hours Required for Completion:	**121**

Maximum number of credits that can be transferred in from another institution and applied to the program:	60
Intended program duration in semesters for full-time students:	8
Intended program duration in semesters for part-time students:	12-14

Does the program require students to demonstrate industry-validated skills, specifically through an embedded industry-recognized certification, structured work-based learning with an enployer partner, or alignment with nationally recognized industry standards?: **NO**

If **yes**, please explain (i.e., number of hours required, etc.):

NO

Does the program inlcude any concentrations/ tracks/ options?

If **yes**, please explain (i.e., define):

2. Undegraduate Components

Please provide all course information as indicated in the following table. Indicate new courses with "Y" in the associated column. If the course includes a required work-based learning component, such as an internship or practicum course, please indicate with a "Y" in the WBL column.

Insert Additional Rows as Needed				
Institution:	University of South Alabama			
Program Name:	BS in Data Science			
Program Level:	UNDERGRADUATE (BACHELOR'S)			
Curriculum Components of Proposed Program				
Course Number	**Course Name**	**Credit Hours**	**New? (Y)**	**WBL? (Y)**
General Education Courses		**53**		
~~Area I - Written Composition~~				
~~A. Complete the following:~~				
EH 101	English Composition I	3		
~~B. Complete the following:~~				
EH 102	English Composition II	3		
~~Area II - Humanities & Fine Arts~~				
~~A. Complete the following:~~				
CA 110	Public Speaking	3		
~~B. Select one of the following: 1~~		3		
EH 215	Brit Lit before 1785			
EH 216	Brit Lit after 1785			
EH 225	Am Lit before 1865			
EH 226	Am Lit after 1865			
EH 235	World Lit before 1650			
EH 236	World Lit after 1650			
~~C. Select one of the following:~~		3		
ARH 100	Survey of Art			
ARH 103	Art History I			
ARH 123	Art History II			
ARS 101	Art Appreciation			
DRA 110	Introduction to Theatre			
MUL 101	Introduction to Music			
~~D. Select six hours from the following:~~		6		
AFR 101	Intro to African Amer Studies			
ARH 100	Survey of Art			
ARH 103	Art History I			
ARH 123	Art History II			
ARH 203	Survey of Non-Western Art			
ARS 101	Art Appreciation			
CLA 110	Intro Anc Greek Roman Culture			
DRA 110	Introduction to Theatre			
EH 215	Brit Lit before 1785			
EH 216	Brit Lit after 1785			
EH 225	Am Lit before 1865			
EH 226	Am Lit after 1865			
EH 235	World Lit before 1650			
EH 236	World Lit after 1650			
JHS 101	Intro to Jewish Studies			
JOU 252	Media Literacy Digital Age			

LG 201	Intermediate Latin I			
LG 202	Intermediate Latin II			
LG 211	Intermediate French I			
LG 212	Intermediate French II			
LG 213	Accelerated Inter French - H			
LG 221	Intermediate Chinese I			
LG 222	Intermediate Chinese II			
LG 231	Intermediate Spanish I			
LG 232	Intermediate Spanish II			
LG 234	Inter Spanish Accel -H			
LG 251	Intermediate German I			
LG 252	Intermediate German II			
LGS 110	Intro American Sign Language I			
LGS 111	Intro American Sign Lang II			
LGS 201	Intermediate Japanese I			
LGS 202	Intermediate Japanese II			
LGS 206	Intermediate Arabic I			
LGS 207	Intermediate Arabic II			
LGS 271	Intermediate Korean I			
LGS 272	Intermediate Korean II			
MUL 101	Introduction to Music			
PHL 110	Introduction to Philosophy			
PHL 120	Critical Thinking			
PHL 121	Introduction to Logic			
PHL 131	Introduction to Ethics			
PHL 220	Medical Reasoning			
PHL 231	Social Ethics			
PHL 240	Western Philosophy: Classical			
REL 100	Intro to the Study of Religion			
REL 200	Old Testament/Hebrew Bible			
REL 201	Survey of the New Testament			
Area III – Natural Sciences & Mathematics				
A. Select 3-4 hours from the following:		3		
MA 110	Finite Mathematics			
MA 111	Math in Society			
MA 112	Precalculus Algebra			
MA 113	Precalculus Trigonometry			
MA 115	Precal Algebra-Trigonometry			
MA 120	Calculus and Its Applications			
MA 125	Calculus I			
MA 126	Calculus II			
MA 227	Calculus III			
MA 237	Linear Algebra I			
MA 238	Differential Equations I			
B. Select 8-10 hours from the following:		8		
Students cannot receive credit for both BLY 101 and BLY 121 or for both BLY 102 and BLY 122.				
AN 121	Biological Anthropology: The Story of Us			

& 121L	and Biological Anthropology Lab: The Story of Us			
BLY 101	Life Science I			
& 101L	and Life Science I Laboratory			
or BLY 121	General Biology I			
& 121L	and General Biology I Lab			
BLY 102	Life Science II			
& 102L	and Life Science II Lab			
or BLY 122	General Biology II			
& 122L	and General Biology II Laboratory			
BLY 205	Intro Environmental Sci			
BMD 110	Introduction to A & P I			
BMD 111	Introduction to A & P II			
CH 101	Survey of Inorg and Org Chem			
& 101L	and Survey Inorg-Org Chem Lab			
CH 131	General Chemistry I			
& 131L	and General Chemistry I Lab			
CH 132	General Chemistry II			
& 132L	and General Chemistry II Lab			
ENV 101	Principles of Sustainability			
GEO 101	Environmental Geography			
& 101L	and Environmental Geography Lab			
GEO 102	Earth and the Environment			
& 102L	and Earth and the Environment Lab			
GY 111	Physical Geology			
& 111L	and Physical Geology Lab			
GY 112	Earth History			
& 112L	and Earth History Lab			
MAS 134	Ocean Science			
& 134L	and Ocean Science Lab			
MET 140	Introduction to Meteorology			
& 140L	and Intro to Meteorology Lab			
PH 101	Introduction to Astronomy			
& 101L	and Introduction to Astronomy Lab			
PH 104	Concepts of Physics			
& 104L	and Concepts of Physics Laboratory			
PH 114	Physics with Algebra-Trig I			
& 114L	and Alg-Trig Based Physics I Lab			
PH 115	Physics with Algebra -Trig II			
& 115L	and Alg-Trig Based Physics II Lab			
PH 201	Calculus-Based Physics I			
& 201L	and Calculus-Based Physics I Lab			
PH 202	Calculus-Based Physics II			
& 202L	and Calculus-Based Physics II Lab			
Area IV – History, Social & Behavioral Sciences				
A. Select one of the following:		3		
HY 101	HY of Western Civilization I			
HY 102	HY of Western Civilization II			
HY 121	World Civilization I			
HY 122	World Civilization II			
HY 135	US History to 1877			
HY 136	US History since 1877			

B. Select three of the following:		9		
AN 100	Intro to Cultural Anthropology			
AN 101	Intro Archaeology-Bio Anthro			
CA 100	Intro to Communication			
CA 211	Interpersonal Comm			
CJ 105	Introduction to Criminal Justice			
ECO 215	Prin of Microeconomics			
ECO 216	Prin of Macroeconomics			
GEO 114	People, Places, Environment			
GEO 115	World Regional Geography			
GS 101	Intro to Gender Studies			
HY 101	HY of Western Civilization I			
HY 102	HY of Western Civilization II			
HY 121	World Civilization I			
HY 122	World Civilization II			
HY 135	US History to 1877			
HY 136	US History since 1877			
IS 100	Global Issues			
IST 201	Seasons of Life			
NAS 101	Intro Native American Studies			
PSC 130	Intro to US Government			
PSY 120	Introduction to Psychology			
PSY 250	Life Span Development			
SY 109	Introductory Sociology			
SY 112	Social Problems			
Area V				
A. Foreign Language - Select six hours from any one group of the following: 2		6		
LG 101	Introductory Latin I			
& LG 102	and Introductory Latin II			
LGS 106	Introductory Arabic I			
& LGS 107	and Introductory Arabic II			
LG 111	Introductory French I			
& LG 112	and Introductory French II (or proficiency test)			
LG 121	Introductory Chinese I			
& LG 122	and Introductory Chinese II			
LG 131	Introductory Spanish I			
& LG 132	and Introductory Spanish II (or proficiency test)			
LG 141	Intro Classical Greek I			
& LG 142	and Intro Classical Greek II			
LG 151	Introductory German I			
& LG 152	and Introductory German II (or proficiency test)			
LGS 171	Introductory Korean I			
& LGS 172	and Introductory Korean II			
B. Natural Sciences/Math - Select 3-4 hours lab science or math/stat courses from the following:		3		
AN 121	Biological Anthropology: The Story of Us			
& 121L	and Biological Anthropology Lab: The Story of Us			

BLY 101	Life Science I			
& 101L	and Life Science I Laboratory			
or BLY 121	General Biology I			
& 121L	and General Biology I Lab			
BLY 102	Life Science II			
& 102L	and Life Science II Lab			
or BLY 122	General Biology II			
& 122L	and General Biology II Laboratory			
BMD 110	Introduction to A & P I			
BMD 111	Introduction to A & P II			
CH 101	Survey of Inorg and Org Chem			
& 101L	and Survey Inorg-Org Chem Lab			
CH 131	General Chemistry I			
& 131L	and General Chemistry I Lab			
CH 132	General Chemistry II			
& 132L	and General Chemistry II Lab			
GEO 101	Environmental Geography			
& 101L	and Environmental Geography Lab			
GEO 102	Earth and the Environment			
& 102L	and Earth and the Environment Lab			
GY 111	Physical Geology			
& 111L	and Physical Geology Lab			
GY 112	Earth History			
& 112L	and Earth History Lab			
MAS 134	Ocean Science			
& 134L	and Ocean Science Lab			
PH 101	Introduction to Astronomy			
& 101L	and Introduction to Astronomy Lab			
PH 104	Concepts of Physics			
& 104L	and Concepts of Physics Laboratory			
PH 114	Physics with Algebra-Trig I			
& 114L	and Alg-Trig Based Physics I Lab			
PH 115	Physics with Algebra -Trig II			
& 115L	and Alg-Trig Based Physics II Lab			
PH 201	Calculus-Based Physics I			
& 201L	and Calculus-Based Physics I Lab			
PH 202	Calculus-Based Physics II			
& 202L	and Calculus-Based Physics II Lab			
ST 210	Stat Reason and Application			
MA 112 - MA 299 (except MA 201 and MA 202)				
Program Courses and Required Electives		**68**		
Major Requirements				
A. Complete the following:				
MA 125	Calculus I (hours are counted as part of gen ed)	0		
MA 126	Calculus II (hours are counted as part of gen ed)	0		
ST 210 Or ST 315	Stat Reason and Application OR Applied Probability-Statistics	3		
MA 237 Or MA 267	Linear Algebra I OR Discrete Math Structures	3		

CSC 120 CSC 231 CSC 332 CSC 324 OR CIS 324	Prob Solv and Prog Concepts Intro Data Structures Algs Adv Data Structures and Algs Database Concepts	14		
ST 335	Applied Regression Analysis	3		
ST 460	Multivariate Stat Analysis	3		
ST 475	Statistical Computing and Graphics	3		
ST 478	Stat Learning Tech in Data Science	3		
B. Select 6 hours from the following:		18		
ST 340	Design and Analysis of Expts			
ST 350	Applied Time Series			
ST 355	Nonparametric Statistical Methods			
ST 415	Stat Qual Control Reliability			
ST 425	Applied Linear Models			
ST 450	Categorical Data Analysis			
ST 480	Statistical Practicum - W			
ST 490	Special Topics			
ST 494	Directed Studies			
ST 499	Honor Senior Project - H			
CSC 416	AI Theory and Programming			
A minor is required for this program		18		
Program Options (enter total credit hours from all options below)		**0**		
Free Electives		**0**		
Capstone/Internship/Practicum		**0**		
Total Credit Hours Required for Completion:		**121**		

UNIVERSITY OF SOUTH ALABAMA

September 12, 2025

Dr. Robin McGill
Director of Instruction and Special Projects
Alabama Commission on Higher Education
100 N. Union Street
Montgomery, AL 36104-3758

Dear Dr. McGill,

Enclosed you will find a proposal for a Bachelor of Science in Data Science and Applied Statistics (CIP 30.7001). This program will utilize existing faculty with no additional resourced required.

If approved, this program will be implemented in the Fall semester of 2026.

Please let me know if additional information is required. We thank you for your assistance and welcome your feedback on these proposals.

Sincerely,

Andi M. Kent

Andrea (Andi) M. Kent, Ph.D.
Executive Vice President and Provost

AMK/aeg

cc: Dr. Charles Guest
Dr. Andrzej Wierzbicki
Dr. Julie Estis
Dr. Gordon Mills