Abilene Approval Chart for Curriculum Changes

A = Approve I = Information Item R = Respond In Writing

Course Number: or Degree Plan(s): Minor in Statistics and Data Science

A minor in Statistics and Data Science equips you with high-demand skills to tackle complex information by blending statistical modeling, programming, and data visualization. It empowers students from any discipline to decode, illustrate, and implement data-driven strategies with modern software tools and programming languages.

	Campus-Level Academic Review[1]	Dept./School	College	Dean	TEC	AUAC/Grad	Provost
	Change to a Course Include signatures from all chairs/program directors for cross-listed courses.[1]						
1.	Title (description unchanged)	A	A	A	I	I	I
2.	Description (not affecting content)	A	A	A	I	I	I
3.	Course term(s)	A	I	A	I	I	I
4.	Content (change of course outcomes)	A	A	A	I	I	A
5.	Number of credit hours	A	A	A	A	A	A
6.	Course number within the hundred	A	A	I	I	I	I
7.	Course number beyond the hundred	A	A	A	A	A	A
8.	Prerequisites	A	A	A	I	I	I
9.	Course restriction (e.g., majors only, junior standing)	A	A	A	A	A	A
10.	Level change (U to G *or* G to U)	A	A	A	A	A	A
11.	Cross list course	A	A	A	A	A	A
12.	Department of record	A	A	A	A	A	A
13.	Open or close a course	A	A	A	A	A	A
	Change to a Degree Plan						
14.	Educational Program — Revise	A	A	A	A	A	A
15.	Educational Program — Adopt/revise admission requirements	A	A	A	A	A	A
16.	GPA — Revise program-required GPA	A	A	A	A	A	A
17.	Minor — Revise	A	A	A	A	A	A

	Full Review	Dept./School	College	Dean	TEC	AUAC/Grad	Provost	Campus Faculty	Senior VPAA	President
	Change to Catalog Information (for Campus)									
18.	General requirements for Bachelor's and Associate Degrees	–	–	–	–	A	A	A	A	I
19.	Policies governing academic probation and suspension	–	–	–	–	A	A	A	A	I
20.	Requirements for graduating with honors	–	–	–	–	A	A	A	A	I
	Change to a Degree Plan									
21.	Educational Program — Add or Discontinue [3]	A	A	A	A	A	A	A	A	I
22.	Educational Program — Discontinue (Provost-proposed)	R	–	R	A	A	A	A	A	I
23.	Minor — Add or Discontinue	A	A	A	A	A	A	–	A	I
24.	Minor — Discontinue (Provost-proposed)	R	–	R	A	A	A	–	A	I
25.	Degree — Add or Discontinue	A	A	A	A	A	A	A	A	I
26.	Degree — Discontinue (Provost-proposed)	R	–	R	A	A	A	A	A	I

	Change to General Education Requirements for Undergraduates (System)	Dept./School	College	Dean	AUAC	Provost	UGEC	University Faculty	Senior VPAA	President
27.	Change course outcomes of an included course	A	A	A	A	A	A	–	A	I
28.	Add or drop a required course from the General Education Requirements	A	–	A	–	A	A	A	A	I
29.	Add or drop a course from a menu within the General Education Requirements	A	–	A	–	A	A	–	A	I
30.	Comprehensive revision of General Education Requirements	–	–	–	–	A	A	A	A	I

Notes

[2] Any change to a cross-listed course requires the signature of both department chairs or program directors overseeing the course to ensure that the courses stay in sync. This includes courses taught at other campuses (e.g. BIBL 101 and BIBO 101).

[3] For undergraduate majors, a minimum of 30 hours is required. These programs must have a minimum of 6 elective hours, unless the requirements of external accrediting bodies make it impossible. Master's programs must include a minimum of 30 hours, and doctoral programs must include a minimum of 30 hours beyond the master's.

[4] When a department/school or dean proposes closing a program, approval routing follows the typical process beginning with the department/school. An administrative proposal by the provost or senior vice president for academic affairs would follow the "provost-proposed" routing on the chart.

Updated 8/1/2023

Department/School(s)

John Ehrke 02/24/26

Chair Signature Date

Chair/Program Director Signature Date

College Academic Council(s)

Kathleen Lee 03/02/2026

Chair Signature Date

Chair Signature Date

Dean(s)

Charles S Mantooth 3/11/2026

Signature Date

Signature Date

Teacher Education Council

Signature Date

Campus Academic Council:
Abilene Undergraduate or Abilene Graduate

Signature Date

Provost

Signature Date

University General Education Council

Signature Date

University Faculty

Abilene Faculty Senate Chair signature Date

Dallas Faculty Council Chair signature Date

Senior Vice President for Academic Affairs

Signature Date

President

Signature Date

Abilene New Track or Minor Application Instructions

Use this template to propose a new track of an existing degree program or a non-degree plan, which includes a minor. For a new educational program — undergraduate major, graduate degree, or certificate — use the New Program Application.

Process Overview

Step 1: Develop and Refine Proposal
The applicant completes the proposal and submits it to the vice provost, who requests any revisions necessary to create an accurate, complete picture of the track or minor and ensure that it aligns with institutional policies and processes so that it will be ready to implement upon approval. After the vice provost is satisfied with revisions, the vice provost sends the proposal for review to:

1. the library dean's designee for library resources review
2. the SACSCOC liaison for substantive change review

Step 2: Curriculum Approval Process
After all reviews are complete, the vice provost will return the full proposal to the applicant, who will begin the process outlined on the campus approval chart to add a new track or minor. This includes approval by the department/school, college academic council, dean, Teacher Education Council if it's a teaching certification program, campus academic council, and provost for a new track, with the addition of the senior vice president for academic affairs for a new minor.

New Track or Minor Application

1. Program Identification
   A. Title of track or minor - Statistics and Data Science Minor

   B. Identify as track or minor - Minor in BS SDS degree

   C. Home department or school (and associated degree program, if track) -
   Onstead College of Science and Engineering
   Mathematics Department

   D. Developer(s) and credentials
   John Ehrke, Ph.D. Mathematics - Differential Equations - Baylor University
   Randy Nguyen, Ph.D. Statistics - Biostatistics Concentration - Baylor University

   E. Where program will be offered and delivery method
   Abilene Residential - Face to Face Delivery - Mathematics Department

   F. Proposed date of implementation - Fall 2026

2. Program Details
    1. Description. Summarize this course of study in 50 to 200 words.

        Statistics and data science are an interdisciplinary area of mathematics where mathematicians use numerical methods and algorithms to gain insight from various types of data. The student completing this degree will learn to blend statistics, computer science, and content knowledge in a given area to analyze data for patterns, make predictions and provide rationale for decision making. The major areas include data wrangling and cleaning, data visualization, and an introduction to artificial intelligence and machine learning. Students will become proficient in the use of market leading technologies in Python, SQL, R, SAS and Tableau. Heavily featured in business, healthcare, finance, engineering, computer science, research science and general decision making there is no shortage of areas in which to apply the field.

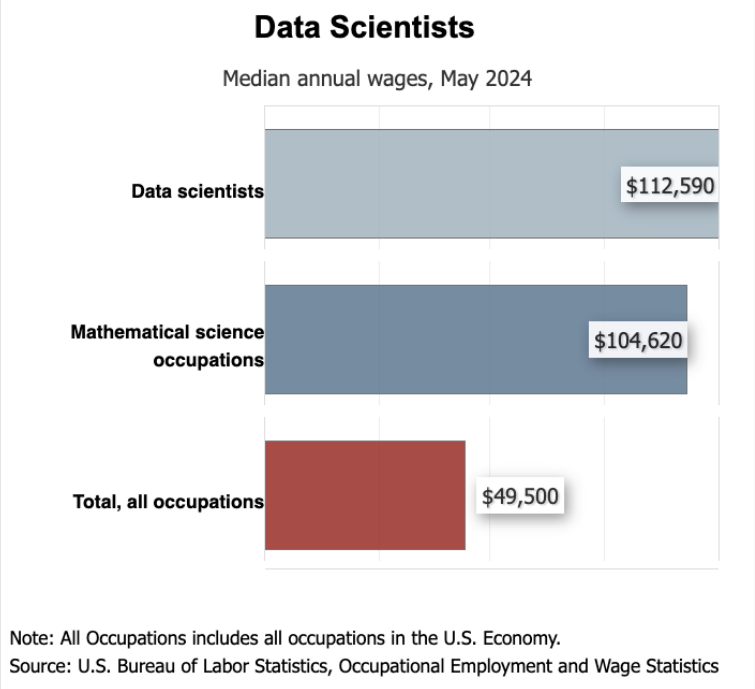
    2. Market need. What students will be drawn to this program? What types of careers will they pursue after graduation? What is the job market/outlook like in this area?

        This minor has tremendous appeal across campus. The new courses developed that serve this minor have wide applicability to other departments on campus that seek to raise the data analytics and quantitative skills of their majors. Indeed, several departments have already inquired about adding new courses like SDS 387 - Data Visualization in R and Python to their degree plans.

        Students interested in this program include any student interested in science from a computational perspective. It has tremendous appeal to the areas of business, computer science and healthcare. For these reasons, our track is designed to encourage interdisciplinary exploration in these areas. I also suspect a large number of mathematics students will declare this track as well.

        Upon graduation, students completing this minor will likely be looking to join healthcare companies, insurance companies, banking and financial services, government, aerospace and defense contractors, higher education, telecommunications, sports, corporate research and operations teams, etc.. Most of the jobs will ask graduates to do the same basic tasks of data wrangling, data management and analysis, while some will demand higher level skills involving algorithm creation, or deliverables across the full data science pipeline.

        According to the U.S. Bureau of Labor Statistics, employment of data scientists is projected to grow 34 percent from 2024 to 2034, much faster than the average for all occupations. As seen below, the salary for professionals in this field far outpaces most other degrees on campus, even others within the department. This minor will provide a springboard to students pursuing quantitative degrees at the graduate level.



3. Estimate total enrollment for each of the first five years.
   Year 1 - 5
   Year 2 - 10
   Year 3 - 15
   Year 4 - 20
   Year 5 - 30
   I think this is a conservative estimate of the number of minors we can expect in the program.

3. Rationale and Need for Program
   1. Mission fit. How does the course of study fit with the university's mission to educate students for Christian service and leadership throughout the world? How does the course of study fit with the university's current strategic plan or emphases?

      There are not many areas of our world that data doesn't touch. Increasingly, more decisions are data based and we face an ever increasing surge of technological advancement riding the wave of advances in machine learning, deep learning, and artificial intelligence. ACU should seek to build graduates that have a strong ethical foundation to speak into these areas. We should produce graduates capable of not only analyzing data for the benefit of humanity, but have the ethical framework to do so responsibly and call out those who use these tools irresponsibly, unethically, or with veiled intent.

      The skills cultivated by this minor are vital to a campus culture that wishes to be more research oriented. At most universities statisticians and data scientists are responsible for collaboration on a variety of interdisciplinary projects campus

wide. They teach and collaborate with other faculty, allowing those faculty access to the necessary skills to enhance their own research. Not to mention, the students generated from this program raise the level of undergraduate research for all programs that intersect with this one. As ACU's strategic plan involves the attainment and maintaining of R2 status, ACU must seriously consider the level (or lack thereof) of quantitative infrastructure to make such a status viable. This minor plays a pivotal role in strengthening that infrastructure and could be used to support multiple graduate level programs (and undergraduate) in need of elevating data related outcomes.

2. Disciplinary benchmarking. Use the benchmark schools that you named in 2.A.3 to respond, plus any other programs you have reviewed. How does this program curriculum compare to other programs in your discipline? Which Texas universities already offer this program? You may also note other peer institutions that offer the program.

Texas Private & Public Universities

University	Minor Title	Credit Hours	Core Course Examples
Rice University	Data Science	22–26	DSCI 101 (Intro to DS), STAT 315 (Prob & Stats), DSCI 302 (Data Science Tools), Capstone
Baylor University	Data Science	18	CSI 1430 (Intro to CS), CSI 3335 (Database Systems), STA 3381 (Statistical Methods)
Southern Methodist University (SMU)	Data Science	16–18	DS 2301 (Intro to DS), DS 2302 (Ethics & Data), STAT 2331 (Intro to Statistical Methods)
Trinity University	Data Science	19–21	CSCI 1311 (Intro to Programming), MATH 1320 (Statistical Analysis), DATA 3301 (Theory & Practice)
St. Edward's University	Data Analysis	18	BUSI 2305 (Business Stats), COSC 1301 (Intro to Computing), MATH 3335 (Intro to DS)
Texas Christian University (TCU)	Data Science	18	COSC 10403 (Intro to Programming), MATH 30853 (Stats & Data Analysis), COSC 40103 (Data Mining)

University of North Texas (UNT)	Data Science	18	ADTA 4130 (Data Analytics & Visualization), ADTA 4230 (Ethics in DS), INFO 3010 (Intro to DS)

Our sister schools have different approaches to data science, often integrating it into Business Analytics or Computer Science rather than offering a standalone "Data Science Minor."

- **Harding University**: Does not currently list a standalone "Data Science Minor." However, they offer a Data Analytics Certificate and heavy data concentrations within the Computer Science (B.S.) program.
- **Pepperdine University**: Offers a **Minor in Data Science** through Seaver College. It requires approximately **20 units**, focusing on Calculus, Computer Science I, and Applied Data Science.
- **Oklahoma Christian University**: Does not list a specific "Data Science Minor" but offers a Computer Science Minor (18 hours) and includes Data Analytics coursework (e.g., ACCT-4713) within their business and accounting tracks.
- **Lipscomb University**: Offers a **Data Science Minor** requiring **18 hours**. Core courses include DS 2013 (Intro to Data Science) and DS 3013 (Data Analysis and Visualization).

3. Make a case for why we should maintain all existing tracks in this major (if a track) or note which ones will be closed.

   The minor in Statistics and Data Science has no real overlap with other existing minors on campus at this point. There is a proposed AI minor coming which might overlap in some ways but I do not have the full details on that. There is a small amount of overlap with the Math Minor, but the inclusion of SDS 387 and PHYS 475 as required courses is wholly different, as is the emphasis on Statistics over Math.

4. Curriculum
   1. Degree plan. List the major requirements as they would appear in the catalog. For undergraduate degree plans, include 74 credit hours of major requirements

and electives, and mark which courses are the capstone and writing-intensive courses. Minors are 18 hours with at least 6 hours of upper-division courses.

Minor: Statistics and Data Science (MSDS)

- MATH 377 - Statistical Methods I Credit Hours: 3
- SDS 378 - Data Visualization in R and Python Credit Hours: 3
- PHYS 453 - Machine Learning Credit Hours: 3

Choose 3 courses from:

- IT 220 - Introduction to Databases and Database Management Systems Credit Hours: 3
- IT 263 - Analytics 2: Data Management Credit Hours: 3
- IS 432 - Analytics 3: Data Mining Credit Hours: 3
- IS 442 - Analytics 4: Business Analytics Projects Hour: 3
- CS 467 - Introduction to Artificial Intelligence Hours: 3
- MATH 341 - Numerical Methods Credit Hours: 3
- SDS 475 - Sports Analytics Credit Hours: 3
- MATH 477 - Statistical Methods II Credit Hours: 3
- MATH 478 - Mathematical Statistics Credit Hours: 3
- SDS 479 - Multivariate Analysis Credit Hours: 3
- SDS 486 - Biostatistics Credit Hours: 3
- MATH 498 - Mathematics Internship Credit Hours: 3

Total: 18 Credit Hours

B. Course coordination. Attach a memo or email of support from the department chair of each department outside the home department that will provide a course for the track or minor.

Memos are attached in the proposal email.

C. Courses. Create a table with one row for every course, existing and new, included in the track or minor requirements. Create five columns that provide the following information:
    1. Rotation and frequency (e.g., fall odd years)
    2. Whether the course is required or on a menu
    3. Which track(s, existing and new) the course serves, if applicable
    4. Current faculty credentialed to teach (everyone who is eligible to teach the course, not just who *will* teach the course)

Courses (New Courses Highlighted in Yellow, Courses Changed Due to Proposal Highlighted in Orange)	**Rotation/ Frequency**	**Required?**	**Tracks Served**	**Credentialed Faculty**
MATH 377 - Statistical Methods I	Fall / Spring	Yes	BS MATH BS MASC BS MATT BA MATH-APP BA MATH-PURE BS MSDS	David Hendricks Randy Nguyen John Ehrke Jordan Broussard Hana Jang
SDS 387 - Data Visualization in R and Python	Spring	Yes	BS MATH BS MASC BA MATH-APP BS MSDS	John Ehrke Randy Nguyen Hana Jang
SDS 475 - Sports Analytics	Spring, odd	Menu	BS MATH BS MASC BA MATH-APP BS MSDS	John Ehrke Randy Nguyen Austin Basye (adjunct)
MATH 477 - Statistical Methods II	Spring, even	Menu	BS MSDS BS MASC BA MATH-APP BS MSDS	David Hendricks Randy Nguyen John Ehrke Jordan Broussard Hana Jang
MATH 478 - Mathematical Statistics	Spring, odd	Menu	BS MASC BS MSDS	David Hendricks Randy Nguyen John Ehrke
SDS 479 - Multivariate Analysis	Fall, odd	Menu	BS MATH BS MASC BA MATH-APP BS MSDS	John Ehrke Randy Nguyen David Hendricks

SDS 486 - Biostatistics	Fall, even	Menu	BS MATH BS MASC BA MATH-APP BS MSDS	John Ehrke Randy Nguyen David Hendricks Josh Brokaw
MATH 498 - Mathematical Internship	Fall, Spring	Menu	BS MATH BS MASC BA MATH-APP BA MATH-PURE BS MSDS	John Ehrke Randy Nguyen David Hendricks Jordan Broussard Hana Jang
CS 341 - Numerical Methods	Fall, even	Menu	BS MATH BA MATH-APP BS MSDS	John Ehrke David Hendricks Randy Nguyen Hana Jang Jordan Broussard
CS 467 - Introduction to Artificial Intelligence	Spring	Menu		
IS 432 - Analytics 3: Data Mining	Fall, Spring	Menu		
IS 442 - Analytics 4: Business Analytics Projects	Spring	Menu		
IT 220 - Introduction to Databases and Database Management Systems	Fall	Menu		
IT 263 - Analytics 2: Data Management	Fall, Spring	Menu		
PHYS 453 - Machine Learning	Spring, even	Yes		Michael Daugherity Robert Brown Larry Isenhower Joseph Atchison Randy Nguyen John Ehrke

D. New courses. For each new course included in the program requirements, list the following information. The vice provost will insert a curriculum approval schedule to set deadlines for introducing each new course.
    1. Proposed subject code and course number
    2. Course title and description

3. Existing tracks/programs in which the courses will also be used, if applicable (see highlighted yellow rows in table above)

SDS 387 - Data Visualization in R and Python (3-0-3) Spring.
Introduces the basic visualization principles of modern data science using R and Python. The course addresses how to perform various exploratory data analysis (EDA) techniques, import and transform different data structures, and communicate the results. Interactive visualizations such as dashboards and animations are introduced through various projects and case studies. **Prerequisite: IS 222, MATH 123 or MATH 377.**

SDS 475 - Sports Analytics (3-0-3) Spring, odd years.
An introduction to statistical methods and consulting aimed at analyzing sports using observational data on players and teams. Study sports related problems, utilize statistical tools to find solutions and interpret those results to sports professionals. Participate in a semester-long sports analytics project in partnership with an ACU athletics team. **Prerequisite: MATH 377.**

SDS 479 - Multivariate Analysis (3-0-3) Fall, odd years.
Introduces statistical models and procedures for describing, visualizing, and analyzing random vector response data. Generalizes classical test statistics from univariate to multivariate. Examines linear and quadratic dimension reduction, the multivariate normal distribution, inference on multivariate parameters, and supervised and unsupervised classification methods for high-dimensional data. **Prerequisite: MATH 325, MATH 377.**

SDS 486 - Biostatistics (3-0-3) Fall, even years.
Introduction to statistical concepts and methods for biological and biomedical data featuring case studies. Includes descriptive statistics, probability and distributions, estimation, exploratory methods, tests of hypotheses, error types, significance, confidence levels, sample size determination for randomized control trials, power analysis for clinical trials, categorical data, regression, correlation, and survival analysis. **Prerequisite: IS 222, MATH 123 or MATH 377. Same as BIOL 483.**

5. Required Institutional Support
   A. Faculty requirements and availability.
      1. Describe the new track or minor's impact on faculty workload. Your narrative should provide supporting evidence that the number of full-time faculty members will be adequate to support the program.

         The delivery of this new minor relies mostly on the hours netted through the hiring of Dr. Randy Nguyen who was hired explicitly for this role. In replacing Mr. Smallwood, who is still adjuncting for us, we effectively picked up an additional 6 hours each semester. Those additional hours are being used to teach many of the courses in this track. Add to that the fact that Dr. Nguyen was given 3 hours of release time to help with the

creation of this new track and we are looking at anywhere from 6 - 9 hours each semester being earmarked for this track. This fits the needs of the track well. Should Mr. Smallwood be unable to continue adjuncting we will probably need to secure an additional adjunct to support the department.

MATH 278 is directly replacing MATH 187 so no additional hours to teach are required there. SDS 396 and SDS 496 will meet at the same time at MATH 397 and MATH 497 and have a single course instructor so no additional hours to teach those courses are required. One change we came to after analyzing class offering patterns is MATH 377 will need to go from a Fall only course to a Fall/Spring course to accommodate the track. We will need to watch enrollment closely in this course to determine the optimal offering schedule and may have some semesters where the course is not offered if the need is too low. Luckily, we have a few options for substitution for the course if this adversely affects any students.

We have designed the offerings in such a way that there is one new to the department SDS course running in the Fall and 2 new to the department SDS courses running in the Spring each year. This is a total of 9 hours increase spread over the year. As was mentioned above, we secured that increase with the addition of Randy netting us 6 hours each semester. We have secured adjunct help for offering SDS 475 - Sports Analytics, but even if the adjunct were unavailable, offering the course every other year is still viable.

The major issue affecting our ability to comfortably teach this track is the growth of our 100 level courses through enrollment increases in COBA/nursing and our service courses for engineering. We will be unable to be flexible in the number of sections offered for certain courses and will need to waitlist students in some of our 100 level courses. This is a good problem to have and the university should support a culture of waitlisting for low level, non major courses so as to not overload those classes.

2. If program delivery requires a faculty hire, provide an expected salary range and forecast potential faculty availability.

   Long term, if the program is successful, we would be asking for an additional hire to ease enrollment pressures across the board, but we are not seeking that at this moment.

   In the future, we will probably seek a new line in the department anyway due to enrollment pressures from Engineering / COBA / Nursing as we have become somewhat adjunct dependent at the 100 level.

3. If the plan includes part-time instructors, include total cost per year for adjunct pay.

   The total cost of adjuncts to support this program are $5000 every other year or $2500 per year initially. If Mr. Smallwood stops adjuncting, we will

need to secure an additional adjunct to cover his classes at the cost of $15,000 per year. This will not be needed with an additional faculty line as described in 5.A.2.

B. Impact on existing programs. Identify any existing programs/majors from which the new program would draw students and estimate enrollment effects on existing programs in the home department or other departments.

I do not anticipate any negative impact from the minor. Instead I believe we will have significant interest in the minor from all across campus and especially in pre-health professions, business, CS, and Physics. We have targeted these areas in particular to make the barrier of entry to the minor reduced.

C. Staff requirements. Indicate need for new staff (providing expected salary range and forecast suitable applicant availability) and evaluate effect on existing loads of current staff who will serve the program.

No new staff are needed.

D. Library resources. Identify discipline-specific library resources necessary to serve the requirements of the program. These may be existing holdings and services and new ones.

1. Describe how faculty and students will access information electronically and on site, and explain how they will receive instruction about how to do this.

I do not expect to need any new holdings or services from the library to support this minor. Most of the tools used are open source and freely available to the public. Textbooks being used for the program are also open source. This is due to the nature of the content being in a constant state of update; constant upkeep of libraries, packages, and data sets along with the evolution of analytical tools keeps the materials freely available.

Students learn about Python and R in CS 120, MATH 287 and MATH 377. Excel and Tableau are discussed in IS 222 and IT 263. The first week in each of those classes is devoted to getting students set up with the proper technology and references for these tools. The same is true of SAS in MATH 477. We will use Jupyter notebooks (or Google Collab) for working in Python and R Studio for working in R. These are already available through the MATH VDI so no additional support from IT will be needed other than ongoing maintenance. Students will also have the option to download these directly to personal computers for work in and out of the classroom.

We will coordinate with Engineering/Physics and CS on versioning and editors so students in those disciplines have a seamless experience in our program.

2. Describe requirements to support students in their access to and use of learning resources.

   It is recommended for students in this degree to have a laptop capable of running R and Python. For those that do not, the MATH VDI will have versions of Python and R Studio ready for use. SAS is provided via the VDI through a site license and taught through the lab in MATH 477.

   As mentioned previously, the library is minimally impacted by the degree since most materials are open source and available online free of charge.

E. Physical resources. Identify needs for classroom, lab, and office space and impacts on existing space use. List necessary equipment. Provide costs for any construction or equipment.

   There are no additional physical resources needed to support the program. Dr. Nguyen already has an established office space. We already have a computer lab that serves the needs of the degree. No additional costs for construction or equipment are needed.

F. Scholarships. Will the unit provide any unique scholarships to students in the program?

   Students in the BS SDS and SDS Minor are eligible to apply for the same scholarships for which all other math majors are eligible. This includes the McReynolds scholarship, the Jenna Jones memorial math scholarship, Mathematics Endowed Scholarship and the Hays scholarship. The Riggs and Bolin scholarships are for different specified degrees.

G. Recruiting. To whom should the degree be marketed? What additional recruiting beyond general recruiting to the university will be needed, and what costs will we incur?

   A statistics and data science minor should be marketed to individuals with a strong background in mathematics, statistics, and computer science, including recent high school graduates and those looking to enter in quantitative fields like economics or physics. Additionally, we should attract students wishing to become professionals in diverse industries like healthcare, finance, technology, and e-commerce who are looking for a career in a high-demand, data-driven role.
   For recent graduates and high school students

   - Emphasize foundational skills: Highlight that a strong foundation in math (including calculus, probability, and statistics) and computer science is crucial.
   - Showcase industry versatility: Illustrate that a data science degree is a gateway to a wide range of industries, not just tech. Use examples from retail, healthcare, and finance to show the broad applicability of the skills.
   - Promote career growth: Position the degree as a way to build a future-proof career in an in-demand field with high growth potential.

For a broader audience

- Highlight the "data is everywhere" angle: Stress that data science is a fundamental skill for the modern economy, applicable in nearly every field, from agriculture to telecommunications.
- Focus on problem-solving and impact: Frame data science not just as a technical skill, but as a way to solve complex problems and drive decision-making in any organization.
- Focus on how “needed” graduates in this area are and how attractive students will look to employers with even so much as a minor in this area.
- Mention flexible career paths: Point out the benefits of a data science career, such as the potential for flexible work arrangements and the ability to switch roles or industries.

H. Additional cost to deliver track or minor. Total expenses from sections A to H. Clarify which expenses are one-time and which are ongoing.

Apart from faculty time invested to teach the degree as outlined in 5.A. there is no additional cost to deliver this track.

Stop here and submit to the vice provost. Section 6 is not required for all applications, and you will only need to complete it if requested by the SACSCOC liaison.

6. Additional Information Required if Requested
    1. Employment demand and career possibilities.
        1. Identify jobs that graduates would be qualified to pursue.
        2. Use official databases to establish the job market for graduates of the program. Use the U.S. Bureau of Labor Statistics and Texas Workforce Commission; other sources that may be helpful are authorities on regional labor markets (e.g., metropolitan Chambers of Commerce) and current industry reports.
        3. Use the crosswalk document provided by IPEDS to take your previously identified CIP code and find the associated occupations in the Standard Occupational Classification system provided by the Bureau of Labor Statistics. Use the associated SOC number to find entry-level and mean wages in that field in Texas from the Texas Workforce Commission (Texas Wages — Wages by Workforce Development Area).
    2. Student support services. Describe specific programs, services, and activities that will support students enrolled in the program. Some examples of academic support services are teaching and resource centers, tutoring, academic advising, counseling, disability services, diversity and inclusion offices, teaching laboratories, career services, testing centers, student life, and information technology.
    3. Describe financial resources available to support the new program, including a budget for the first year of the program; projected revenues, expenditures, and cash flow; amount of resources going to external institutions or organizations contracted to provide support services for the program; the operational, management, and physical resources available for the change.
    4. Provide contingency plans in the event required resources do not materialize.

Approvals

The proposal aligns with institutional policies and processes, and the campus is prepared to support the proposed track or minor as presented.

Wes Crawford (Feb 23, 2026 16:13:35 CST) 02/23/2026

Vice Provost Date

The library has sufficient resources to support the track or minor, or the comments below outline additional acquisitions required and their associated costs.

Mark McCallon 02/23/2026

Associate Dean of the Library Date

Comments, if needed:

This proposal does not require additional review for institutional accreditation purposes, or I have worked with the faculty to gather the information necessary to notify SACSCOC or gain its approval.

Chris Riley 02/23/2026

SACSCOC Liaison Date

When all signatures are complete, attach an Approval Chart for Curriculum Changes, conduct the department faculty vote to approve the new track or minor, and continue the approval process as specified by the approval chart.

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

To Whom It May Concern:

I am writing to express the strong support from the Department of Engineering and Physics for the proposed Statistics and Data Science BS and minor. These new programs will bring new opportunities for students in our programs especially those interested in computational physics. We anticipate to require several of these courses in an updated version of the PHYC Computational Physics track and several of the new courses will become required or elective options within all the Physics tracks.

From my experience talking to industry contacts this program will bring significant value to ACU students and provide the necessary training for students to enter many fields like Data Analytics, Machine Learning, and Artificial Intelligence more easily. It is important to note the impact many of these courses will have on STEM majors as they will be able to add new courses to improve their knowledge in statistics and data science which is becoming ever more important as new technology leads to ever larger data sets that are more complex and can only be tackled using techniques that will be covered in these new courses. This will add to the ability of ACU students to engage in meaningful scientific research while they are still undergraduates at ACU.

We are also committing to ensure that the PHYS 453 course is available for students choosing these new programs.

Sincerely,

Larry Isenhower

Dr. Larry Isenhower
Co-Chair
Department of Engineering and Physics

ABILENE CHRISTIAN UNIVERSITY
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November 11, 2025

Dear Department of Mathematics and University Councils:

This is a memo of support for the proposed Data Science degree, Biosciences Track. This is a much needed degree in the field of biological sciences. We also support the inclusion of all of the BIOL courses listed in the proposal. The Department of Biology currently has a course, BIOL 483 Biostatistics, in the catalog. We have not taught this course in several years due to prior low enrollment. We are interested in cross-listing MATH 486 Biostatistics with BIOL 483 since there is significant overlap between the proposed MATH 486 and BIOL 483.

On behalf of the Department of Biology,

Jennifer Huddleston

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ABILENE CHRISTIAN
College of Business Administration

To: Wes Crawford, Vice Provost
From: Laura Phillips, Associate Dean, College of Business Administration
Brent Reeves, Director, School of Information Technology & Computing
CC: John Ehrke, Department Chair, Mathematics
Date: Nov. 11, 2026
RE: Proposed Major and Minor—Statistics and Data Science

Brent Reeves and I met with John Ehrke to review the proposed BS in Math SDS degree and the proposed minor in Statistics and Data Science. In general, we think it is valuable to contribute to degrees which integrate resources that are available in various locations on campus, and we are happy to partner with the math department to contribute expertise that already exists in COBA, primarily in SITC. We understand that we will need to provide capacity in several courses to accommodate SDS students and we will make the adjustments necessary as enrollment ramps up.

We are also appreciative that John and the rest of the math department crafted the minor in such a way that it is accessible to our business students. I hope that we will be able to effectively promote the minor to students in our various analytics tracks and that the SDS minor will become an attractive add-on for business students who are interested in analytics.

Sincerely,

Laura Phillips
Associate Professor of Management
Associate Dean, College of Business Administration