NOTICE OF INTENT Form No. BAAC-01
Section 1007.33(5)(d), Florida Statutes (F.S.), and Rule 6A-14.095, Florida Administrative Code (F.A.C.), outline the requirements for Florida College System baccalaureate program proposals. The completed Notice of Intent form, incorporated in Rule 6A-14.095, F.A.C., Site Determined Baccalaureate Access, shall be submitted by the college president to the chancellor of the Florida College System at ChancellorFCS@fldoe.org.

CHECKLIST
The notice of intent requires completion of the following components: ☒Program summary ☒Program description ☒Workforce demand, supply, and unmet need ☒Planning process

FLORIDA COLLEGE SYSTEM INSTITUTION INFORMATION	
Institution Name:	Florida State College at Jacksonville
Institution President:	Dr. John Avendano

PROGRAM SUMMARY		
1.1	Program name	Data Science
1.2	Degree type	☐Bachelor of Science ☒Bachelor of Applied Science
1.3	How will the proposed degree program be delivered? (check all that apply)	☐Face-to-face (F2F) (Entire degree program delivered via F2F courses only) ☐Completely online (Entire degree program delivered via online courses only) ☒Combination of face-to-face/online (Entire degree program delivered via a combination of F2F and online courses)
1.4	Degree Classification of Instructional Program (CIP) code (6-Digit)	30.7001
1.5	Anticipated program implementation date	Spring 2025
1.6	What are the primary pathways for admission to the program? Check all that apply.	☒Associate in Arts (AA) ☒Associate in Science (AS) ☐Associate in Applied Science (AAS) If you selected AS/AAS, please specify the program: Data Science Technology (A.S)
1.7	Is the degree program a STEM focus area?	☒Yes ☐No
1.8	List program concentration(s) or track(s) (if applicable)	N/A

PROGRAM DESCRIPTION
2.1 This section is the **executive summary** of this notice of intent. We recommend providing an abbreviated program description including but not limited to: the program demand, current supply, and unmet need in the college's service district; primary pathways to program admission; overview of program curriculum; career path and potential employment opportunities; and average starting salary. We encourage approximately 300 words for a sufficient description.
Florida State College at Jacksonville is proposing a Bachelor of Applied Science in Data Science in response to the increased demand for professionals in the high-growth area of Data Science. In collaboration with FSCJ's Information Technology Business and Industry Leadership Team (formerly advisory committee), the program will be developed to meet the needs of the local workforce by preparing students for high-wage careers in this expanding field. The BAS in Data Science will provide students with both theoretical and practical expertise, to become proficient in the area of big data. Courses will include topics such as data mining, data modeling, data analytics, machine learning, blockchain, and cloud computing. In addition, students will learn approaches to wrangling, mining, and analyzing data and develop skills to design, implement, and evaluate the next generation of data analytics tools. The program will build upon FSCJ's Associate in Science in Data Science Technology, which is designed to educate students in complex data handling, statistical programming, and the comprehension of data visualization, as well as the generation and application of extensive datasets. Differing from programs that focus on analytics, the data science program will provide students with the knowledge and skills to utilize machine learning and software tools to process and organize data to help businesses analyze and visualize their data. Graduates of the program will be equipped students with the knowledge needed to initiate or advance a career within industries that utilize state-of-the-art data collection, manipulation, and analysis tools to achieve business goals. Potential career positions include Applied Data Scientist, Data Analyst, and Big Data Analytics Engineer.

WORKFORCE DEMAND, SUPPLY, AND UNMET NEED
3.1 Describe the workforce demand, supply, and unmet need for graduates of the program that incorporates, at a minimum, the shaded information from Sections 3.1.1 to 3.1.4. For proposed programs without a listed Standard Occupational Classification (SOC) linkage, provide a rationale for the identified SOC code(s). If using a SOC that is not on the CIP to SOC crosswalk, please justify why the SOC aligns with the baccalaureate program.
The development of the Bachelor of Applied Science in Data Science is in response to a request from the Information Technology Business and Industry Leadership Team and has received endorsement from the local business community. Higher-level courses beyond the associate level of study are needed to prepare students to become experts in this field. The proposed program will offer courses designed to equip students with the tools and methods used by data scientists. These courses will also emphasize the best practices for employing tools and techniques during the stages of data collection, refinement, analysis, and presentation. The enrollment for FSCJ's Associate in Science in Data Science Technology is experiencing rapid and significant growth. The AS program provides a seamless pathway for students to transition into the Bachelor of Applied Science in Data Science program. Additionally, individuals holding an Associate of Science degree in alternative fields will have the opportunity to join this bachelor's degree program after fulfilling the requirements of the foundational coursework. The demand for data science professionals continues to increase as Jacksonville continues to experience growth in major sectors including technology, healthcare and finance. While the associate degree provides entry-level opportunities, many job postings in the service region require a bachelor’s degree. Top posted job titles associated with the Data Scientist SOC code, included Data Quality Analysts, Data Stewards, Machine Learning Engineers, and Data Integration Specialists. With the expansion of data utilization and data-driven decision-making across all fields, program graduates are positioned to secure employment in a diverse range of industries, including commercial banking institutions, insurance agencies, hospitals, and IT solution firms.

DEMAND: FLORIDA DEPARTMENT OF ECONOMIC OPPORTUNITY (DEO) EMPLOYMENT PROJECTIONS
3.1.1 The Excel spreadsheet below is set up with predefined formulas. To activate the spreadsheet, right click within the spreadsheet, go to "Worksheet Object", and then "Open". To exit, save any changes and exit out of the spreadsheet. Alternatively, double click anywhere on the table. To exit the spreadsheet, single click anywhere outside of the table.
CLICK HERE FOR INSTRUCTIONS FOR COMPLETING THE DEMAND SECTION

Duval County

Occupation		**Number of Jobs**				**Salary**	**Education Level**	
SOC Code	**Name/Title**	**2022**	**2030**	**% Change**	**Total Job Openings**	**Median Wage**	**FL**	**BLS**
15-1211	Computer System Analysts	2,230	2,429	8.9	1480	38.39	A	B
15-1221	Computer and Information Research Scientists	179	245	36.9	182	-	M+	M
15-2031	Operations Research Analysts	628	771	22.8	508	-	M+	B
15-2041	Statisticians	127	170	33.9	126	-	B	M
15-2098	Data Scientists and Mathematical Science Occupations, All Other	564	761	34.9	569	-	B	B
15-2051*	Data Scientists	No information						
*Primary SOC								

DEMAND: OTHER ENTITY INDEPENDENT OF THE COLLEGE – LIGHTCAST™

3.1.2 The Excel spreadsheet below is set up with predefined formulas. To activate the spreadsheet, right click within the spreadsheet, go to "Worksheet Object", and then "Open". To exit, save any changes and exit out of the spreadsheet. Alternatively, double click anywhere on the table. To exit the spreadsheet, single click anywhere outside of the table.

Duval County

Occupation		**Number of Jobs**				**Salary**	
SOC Code	**Name/Title**	**2022**	**2030**	**% Change**	**Total Unique Postings**	**Median Wage**	**Annual Salary**
15-1211	Computer System Analysts	2370	2582	8.9%	1584	$48.62	$87,443
15-1221	Computer and Information Research Scientists	64	83	29.0%	6	-	$99,545
15-2031	Operations Research Analysts	734	848	15.5%	1210	$27.38	$61,396
15-2051*	Data Scientists	489	658	34.6%	678	$46.89	$99,643
*Primary SOC							

Source: Lightcast™, accessed September 19, 2023. Job postings data collected from Duval and Nassau counties between August 2022 and August 2023.

SUPPLY: NATIONAL CENTER FOR EDUCATION STATISTICS, IPEDS
3.1.3 The Excel spreadsheet below is set up with predefined formulas. To activate the spreadsheet, right click within the spreadsheet, go to "Worksheet Object", and then "Open". To exit, save any changes and exit out of the spreadsheet. Alternatively, double click anywhere on the table. To exit the spreadsheet, single click anywhere outside of the table.
CLICK HERE FOR INSTRUCTIONS FOR COMPLETING THE SUPPLY SECTION: If institutions do not have data available for completers in the service district, please report statewide data. You may note these are statewide figures.

Bachelor of Science in Data Analytics

Program		Number of Degrees Awarded [2]					
Institution Name	CIP Code	2021	2020	2019	2018	2017	5-year average or average of years available if less than 5-years
Miami Dade College	30.7101	No IPEDs data available					

Source: Integrated Postsecondary Education Data System, National Center for Educational Statistics

Bachelor of Science in Computing and Information Sciences

Program		Number of Degrees Awarded [2]					
Institution Name	CIP Code	2021	2020	2019	2018	2017	5-year average or average of years available if less than 5-years
University of North Florida	11.0101	143	149	140	136	132	140

Source: Integrated Postsecondary Education Data System, National Center for Educational Statistics.

Note: Conferred degrees are not disaggregated by concentration.

ESTIMATES OF UNMET NEED
3.1.4 The Excel spreadsheet below is set up with predefined formulas. To activate the spreadsheet, right click within the spreadsheet, go to “Worksheet Object”, and then “Open”. To exit, save any changes and exit out of the spreadsheet. Alternatively, double click anywhere on the table. To exit the spreadsheet, single click anywhere outside of the table.
CLICK HERE FOR INSTRUCTIONS FOR COMPLETING THE ESTIMATES OF UNMET NEED SECTION: If institutions do not have data available for completers in the service district, please report statewide data. You may note these are statewide figures.

SOC: 15-2051 – Data Scientists

	Demand	**Supply**		**Range of Estimated Unmet Need**	
	(A)	(B)	(C)	(A-B)	(A-C)
	Total Job Openings	Most Recent Year	5-year average or average of years available if less than 5 years	Difference (C - B)	Difference (D - B)
DEO Total	569	143	140	426	423
Other Totals	1026	143	140	883	880

3.2 Describe any other evidence of workforce demand and unmet need for graduates as selected by the institution, which may include qualitative or quantitative data and information not reflected in the data presented in Sections 3.1.1 to 3.1.4, such as local economic development initiatives, emerging industries in the area, or evidence of rapid growth.
Northeast Florida is undergoing a notable economic expansion with significant growth in the technology, finance, healthcare, logistics, and manufacturing sectors. Ongoing development is projected to continue, resulting in the emergence of new employment opportunities and an increased need for a diverse set of skills within these industries. As businesses and industries become more reliant on data to gain valuable insights, optimize processes, and make informed decisions, the need arises for highly skilled data science professionals. Furthermore, as data continues to grow in importance, the role of data science in driving innovation and success across all sectors becomes increasingly significant.

3.3 If the education level for the occupation identified by the Florida Department of Economic Opportunity (DEO) or the Bureau of Labor Statistics (BLS) presented in Sections 3.1.1 to 3.1.2 is below or above the level of a baccalaureate degree, provide justification for the inclusion of that occupation in the analysis.
According to the Bureau of Labor Statistics, a minimum of a bachelor's degree is typically required for entry-level positions in data science. While the SOC code for data scientists is not currently listed on the regional economic demand list, it has been recognized as an emerging occupation and has been included in the local WIOA plan as a profession related to a targeted industry.

Minimum Education Requirements listed in Job Postings for Program-related occupations

SOC Code	Name/Title	HS/GED or Vocational Training	Associate degree	Bachelor's degree	Master's degree	Doctoral degree	# Job Postings
15-2051	Data Scientist	8%	3%	55%	4%	0%	792

Source: Lightcast™ Analyst, accessed July 27, 2023. Note: Minimum education reflects the lowest level requested on an individual job posting in Duval County from July 2022-August 2023. The percentage showing is of all postings, so the sum may be less than 100% since not all postings have education requirements.

3.4 Describe the career path and potential employment opportunities for graduates of the program.

The demand for data science professionals spans various industries, including healthcare, finance, government, and technology. Top employers in the region include large financial institutions, such as Bank of America, TIAA, Citigroup, and FIS. Job titles vary from Data Sciences to Data Analysts, Business Intelligence Analysts, Data Stewards and Data Quality Analysts. Lightcast™ Analyst data reveals that in an average month, there are 81 newly posted job postings for Data Scientists, with 29 actually hired. This means there is approximately one hire for every three unique job postings for Data Scientists in the service industry.

Program curriculum will focus on exam preparation for popular industry certifications including CompTIA Data+, Network+ and Security+, Oracle Java OCA SE8, SAS Base Programming, Tableau Desktop Specialist, and Microsoft Certified: Power BI Data Analyst Associate.

PLANNING PROCESS

4.1 Summarize the internal planning process. In timeline format, please describe the steps your institution took in completing the internal review and approval of the baccalaureate program. For example, summarize actions taken by the academic department proposing the degree, any non-academic departments, the college-wide curriculum committee, the college president, the Board of Trustees and any other areas.

In response to the dynamic educational landscape and changing needs of our community, FSCJ initiated an internal review aimed at identifying and addressing potential gaps in the program offerings. This comprehensive assessment was driven by inputs from diverse stakeholders, including members of the local business community, students, and a thorough analysis of regional and national data. The information collected from various sources consistently indicates a rising demand for professionals with expertise in Data Science. This demand is driven by the increasing reliance on data-driven decision-making in both the private and public sectors.

The program development process involved the following sequential steps:
1. Need identified by Business and Industry Leadership Team.
2. Program objectives developed by relevant stakeholders – administrators, faculty, BILT members.
3. Faculty identified for curriculum design.

4.2 Summarize the external planning process with the business and industry community. In timeline format, please describe your institution's interactions and engagements with external stakeholders, including but not limited to industry advisory boards meetings, discussions with advisory committees, briefings from local businesses, consultations with employers, and conducting paper and online surveys.

The proposal to establish a Bachelor of Applied Science degree program in Data Science at Florida State College at Jacksonville has been driven by the enthusiastic support of the department's Business and Industry Leadership Team (BILT), comprised of industry experts and local business leaders, the committee recognizes the program's potential to bridge the skills gap in the data science field, boost economic growth, and enhance career prospects for individuals in our region. FSCJ leadership has engaged with our local Economic Development Agency (JAXUSA) to discuss the increasing need for highly skilled IT professionals as Jacksonville experiences growth in its technology, healthcare, and finance sectors. Private enterprises have been briefed on the program's potential to meet their data analytics workforce needs and foster innovation. These updates have been conveyed through channels such as the Northeast Florida CIO Council and multiple committees where our faculty and leadership actively participate.

4.3 List external engagement activities with public and nonpublic postsecondary institutions. This list shall include meetings and other forms of communication among external postsecondary institutions regarding evidence of need, demand, and economic impact.

4.3.1 Public Universities in College's Service District

Date(s): Monday, April 5, 2021

Institution(s): University of North Florida

Activity Descriptions and Outcomes:
Dr. Litt, Dr. Babi, and Ernie Friend from FSCJ met with Dr. Sherif Elfayoumy and Dr. Klostermeyer from UNF to discuss FSCJ's proposed B.A.S in Data Science. During the meeting, it was determined that there was an opportunity for FSCJ's Bachelor of Applied Science program to align with UNF's Master's program.

4.3.2 Regionally Accredited Institutions in College's Service District

Date(s): Click or tap here to enter text.

Institution(s): Click or tap here to enter text.

Activity Descriptions and Outcomes:
Click or tap here to enter text.

4.3.3 Institutions outside of College's Service District (If applicable)

Date(s): Click or tap here to enter text.

Institution(s): Click or tap here to enter text.

Activity Descriptions and Outcomes:
Click or tap here to enter text.