NOTICE OF INTENT Form No. BAAC-01
Section (s.) 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:	John Avendano

PROGRAM SUMMARY		
1.1	Program name.	Industrial & Systems Engineering Technology
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). CIP code refers to the taxonomic scheme developed by the U.S. Department of Education's National Center for Education Statistics.	14.3051
1.5	Anticipated program implementation date.	Fall 2027
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: Engineering Technology
1.7	Is the degree program a STEM (science, technology, engineering or mathematics) focus area?	☒Yes ☐No
1.8	List program concentration(s) or track(s) (if applicable).	Engineering Management, Operations Management, Quality & Reliability

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.

The Bachelor of Applied Science in Industrial & Systems Engineering Technology (ISET) prepares students to become Industrial and Systems Engineering Technologists who enhance productivity and efficiency within complex industrial and business processes. These professionals are critical to optimizing the integration of people, machines, materials, and energy across diverse industries.

ISET graduates specialize in identifying and implementing the most effective methods for resource utilization and productivity management. As automation, quality management, and time efficiency, artificial intelligence, and work design become increasingly vital for business sustainability, the demand for these skills continues to expand. Once focused primarily on manufacturing, the field now extends into advanced manufacturing, finance, transportation and logistics, healthcare, and information technology through the advancements of Industry 4.0.

Unlike traditional engineering programs centered on theory and design, this degree emphasizes applied, hands-on learning and implementation of technology. The curriculum focuses on applied mathematics—including algebra, trigonometry, and applied calculus—paired with coursework in systems analysis, process improvement, and quality management.

The ISET program combines engineering principles with management science, preparing graduates to design, analyze, and improve systems rather than individual products. Students learn to view processes holistically, evaluate the role of each component, and implement productivity solutions that improve efficiency and competitiveness.

Graduates will be well-positioned to contribute immediately to industry by applying practical, technology-driven solutions that meet workforce demands in today's rapidly evolving economy

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. The Standard Occupational Classification (SOC) system is used to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. For proposed programs without

a listed 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 Bachelor of Applied Science in Industrial Systems Engineering Technology will significantly benefit Duval and Nassau counties by preparing graduates for high-skill, high-wage jobs that are in high demand according to the regional occupation demand list developed by Florida Commerce. These positions, including Industrial Production Managers (11-3051) and Industrial Engineers (17-2112), are critical to the continued economic growth and development of the region. By equipping local talent with the necessary skills and knowledge to advance business productivity management, this program will not only address the current workforce needs but also attract and retain businesses that rely on a highly skilled workforce, thereby boosting the local economy and providing residents with opportunities for career advancement. Leading advanced technology organizations such as Johnson & Johnson Vision, BAE Systems, Medtronic, Randstad, Jinko Solar, Boeing, Otto, Haskell, Miller Electric, Baptist Health Hospital, Mayo Hospital, and Stellar Energy have found success in Jacksonville due to its strategic location, robust infrastructure, and access to a skilled talent pool, including many veterans who settle in the region after military service. The program will directly support these organizations, and many others, by providing a pipeline of highly trained professionals prepared to the maximize the productivity of service and manufacturing processes. The region's comprehensive logistics and transportation infrastructure also ensures graduates of this program are ideally positioned to enhance the efficiency and expansion of service and manufacturing operations. Given Jacksonville's competitive business climate, lower construction costs, and affordable industrial space, this degree will not only meet the immediate needs of area industry/business, but also help attract new companies seeking a well-prepared workforce.

DEMAND: FLORIDA DEPARTMENT OF COMMERCE (FloridaCommerce) 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.

INSTRUCTIONS FOR COMPLETING THE DEMAND SECTION

Occupation			Number of Jobs				Salary		Education Level	
Name/Title	SOC Code	County/ Region	2024	2032	**Level Change	***Total Job Openings	Average Hourly Wage	Annualized Salary	FL	BLS
Industrial Engineers	17-2112	Statewide	13,465	14,236	5.73	6,828	48.08	$ 100,006	B	B
								$ -	B	B
								$ -	A	A
								$ -		
								$ -		
								$ -		
								$ -		
								$ -		
								$ -		
								$ -		
					Total	854	$ 48.08	$ 100,006		

*Please replace the "Base Year" and "Projected Year" headers with the years reflected in the projections portal (e.g., Base Year is 2024, Projected Year is 2032).

**Please note that the "Level Change" column in Table 3.1.1 corresponds to the "Percent Growth" employment projections data produced by FloridaCommerce.

***Please note that the "Total Job Openings" columns is preset to be divided by 8.

FSCJ Note: Data sourced from the *Florida Commerce Employment Projections Report.* Figures represent statewide data, as no other institutions within FSCJ's service area currently offer this specific degree.

DEMAND: OTHER ENTITY INDEPENDENT OF THE COLLEGE – (LIST NAME OF OTHER ENTITY HERE)

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.

Occupation			Number of Jobs				Salary		Education Level	
Name/Title	SOC Code	County/ Region	2024	2032	Level Change	Total Job Openings	Average Hourly Wage	Annualized Salary	FL	BLS
Industrial Engineers	17-2112	Statewide	15,222	17,721	16.42	6,144	49.56	$ 103,085	B	B
								$ -	B	B
								$ -	A	A
								$ -		
								$ -		
								$ -		
								$ -		
								$ -		
								$ -		
								$ -		
					Total	768	$ 49.56	$ 103,085		

*Please replace the "Base Year" and "Projected Year" headers with the corresponding years reported.

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.

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.

Program		Number of Degrees Awarded					
Institution Name	CIP Code	2024	2023	2022	2021	2020	5-year average or average of years available if less than 5-years
Florida Agricultural and Mechanical University	14.3501	9	11	4	6	4	7
Florida State University	14.3501	27	38	33	34	39	34
University of Central Florida	14.3501	110	120	131	138	145	129
University of Florida	14.2701	93	124	123	140	119	120
	Total	239	293	291	318	307	290

*Please replace the "Most Recent Year" through "Prior Year 4" headers with the corresponding years reported.

FSCJ Note: The institutions listed represent the only public institutions in the state of Florida offering bachelor's degrees in Industrial Engineering and Industrial & Systems Engineering.

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.

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.

	Total Job Openings	2024	5-year average or average of years available if less than 5 years	Difference	Difference
FloridaCommerce Total	854	239	290	615	564
Other Totals	768	239	290	529	478

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 currently experiencing a substantial economic expansion, characterized by rapid growth across several key industries, including technology, finance, healthcare, logistics, and manufacturing. This growth is not only driving an increase in overall economic activity but is also creating a demand for highly skilled professionals who can support and sustain this momentum.

As these industries expand, they are undergoing significant transformations that require specialized expertise to optimize operations, improve efficiency, and ensure sustainable growth. In particular, the manufacturing and logistics sectors are becoming more complex and technologically advanced, integrating cutting-edge technologies such as automation, robotics, and data analytics. This evolution necessitates the presence of industrial engineers who can design, manage, and refine processes to enhance productivity, reduce costs, and maintain high standards of quality.

The ongoing development in Northeast Florida is expected to generate a multitude of new employment opportunities, many of which will require a diverse set of skills. Industrial engineering professionals play a critical role in bridging the gap between traditional manufacturing processes and modern technological advancements. They are essential in creating streamlined, cost-effective, and innovative solutions that can adapt to the ever-changing demands of the market.

While the tables above use statewide data to provide an equitable estimate of unmet need based on institutions across Florida, the table below presents demand data for industrial engineers specific to FSCJ's service area.

Occupation			**Number of Jobs**				**Salary**		**Education Level**	
Name/Title	SOC Code	County/ Region	2024	2032	**Level Change	***Total Job Openings	Average Hourly Wage	Annualized Salary	FL	BLS
Industrial Engineers	17-2112	Duval/Nassau	918	975	6.21	471	47.62	$ 99,050	B	B
Industrial Production Managers	11 3051	Duval/Nassau	542	549	1.29	299	55.75	$115,960	B	B

Industrial Engineering Technologists and Technicians	17-3026	Duval/Nassau	225	239	6.22	181	30.57	$ 63,586	A	A

3.3 If the education level for the occupation identified by FloridaCommerce 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.

While comparable Industrial Engineering programs from across the state were used for benchmarking, this proposed degree will be distinct in both focus and design. It is intended to serve a different type of student—one seeking a more technologically focused, applied learning experience rather than a traditional engineering pathway. Emphasizing hands-on, practical application and industry integration, this program will be unique within the state of Florida and among only a few similar degrees nationwide.

The program will develop an industrial and systems engineering–minded workforce that excels in technology-driven problem solving and process optimization, providing the talent needed to support Jacksonville's rapidly expanding manufacturing and logistics sectors.

Among the occupations identified for this program are *Industrial Engineering Technologists and Technicians*. By completing the degree prior to entering the workforce, graduates in these roles will be well-positioned for accelerated advancement into senior- and management-level positions.

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

The ongoing development in Northeast Florida is not only creating new jobs but also reshaping existing roles, making the need for industrial engineers more critical than ever to sustain the region's economic momentum and ensure its long-term competitiveness. (FSCJ) plays a pivotal role in bridging the gap between education and employment for graduates of its Bachelor of Applied Science in Industrial & Systems Engineering Technology (ISET) program. Through strategic partnerships with key players in business and industry, FSCJ has established a robust talent pipeline that aligns educational outcomes with real-world workforce needs.

Top employers regional employers (e.g., BAE Systems, Black & Veatch, Johnson & Johnson Vision and Randstad, Jinko Solar, Boeing, Otto, Haskell, Miller Electric, Baptist Health Hospital, and Mayo Hospital) frequently collaborate with FSCJ to recruit graduates directly from our engineering and

industry programs. These companies recognize the value of FSCJ's training and actively seek its graduates to fill critical roles within their organizations. This direct connection between FSCJ and industry partners creates a seamless transition for students from education to employment.

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.

2018: Program proposed by Dean of Engineering & Industry to Associate Provost; data request sent to Institutional Research; draft curriculum and proposal completed.

2019-2022: Proposal delay due to high-level administrative changes and pandemic; interim plan to develop Engineering Technology Management track in Bachelor of Applied Science in Supervision and Management degree implemented. Degree remained an action item on faculty and Business and Industry Leadership team meeting agendas.

2023: Departmental discussion to revive initial proposal; draft Notice of Intent completed; program information entered into Academic Program Pre-proposal Recognition System.

2024: Submission on hold due to change in leadership.

2025: Notice of Intent updated to reflect emerging technologies and the growth of new industries in the region.

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.

2018: The Dean presented a project plan outlining the proposed degree to the FSCJ Engineering Technology Industry Advisory Board (now BILT), initiating formal discussions with industry partners.

February 2020: The program concept was revisited with business and industry partners, who confirmed the ongoing need for a workforce skilled in applied industrial systems, operations, and process improvement.

August 2021: In response to industry feedback and the timeline for developing the ISET degree, faculty began designing a 21-credit hour concentration in Engineering Technology Management within the existing B.A.S. in Supervision and Management program. This concentration was intended to close the gap and meet immediate workforce needs until the ISET degree could be fully implemented.

November 2022: The Engineering Technology Management concentration was presented and approved by the Curriculum Committee, marking a key milestone in supporting local industry demand for high-level applied engineering skills.

Fall 2023: The Engineering Technology Management concentration officially launched, providing students with a pathway to build technical leadership and problem-solving skills relevant to the manufacturing and logistics sectors.

December 2023: Discussion during the BILT meeting centered on transitioning from the concentration to the full ISET degree, with partners emphasizing the importance of preparing graduates for roles such as Industrial Engineering Technologists and Technicians who can advance into management positions.

April 2024: BILT members continued to express strong support for the proposed ISET degree and its alignment with the needs of Jacksonville's growing industrial and manufacturing base.

November 2024: The team reviewed updated labor market data, reaffirming that the ISET program addresses regional workforce needs, particularly in manufacturing, logistics, and process optimization.

April 2025: Faculty reconvened with industry partners to review the final proposal, incorporating feedback to strengthen the program's technology integration and workforce relevance. Continued strong support from business, industry, and educational partners underscores the program's importance to Northeast Florida's economic and industrial growth.

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

2019: meeting with Dr. Osama, then Director of School of Engineering, Professor of Mechanical Engineering, University of North Florida.

2022: meeting with Dr. William Klostermeyer, Dean, College of Computing, Engineering and Construction Management, University of North Florida.

2023: meeting with Dr. Alan Harris, Director of School of Engineering, University of North Florida.

2025: meeting with Dr. Dr. William Klostermeyer, College of Computing, Engineering and Construction.

Activity Descriptions and Outcomes:

Meetings with personnel from the UNF College of Computing, Engineering, and Construction Management have consistently highlighted the need for a local alternative to the UNF engineering degree, specifically the Industrial & Systems Engineering Technology (ISET) degree (e.g., in conjunction with new advanced manufacturing workforce development).

4.3.2 Institutions in College's Service District that are accredited by an agency recognized by the U.S. Department of Education.

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

Institution(s): Jacksonville University, Edward Waters University

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): 2022-2024

Institution(s): University of Florida, Saint Johns River State College

Activity Descriptions and Outcomes:
Collaboration with UF Transportation Institute regarding pathways for autonomous vehicle industry workforce development, ISET pathway discussed.