UNIVERSITY OF GEORGIA

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University Council

October 14, 2022

UNIVERSITY CURRICULUM COMMITTEE – 2022-2023
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Dear Colleagues:

The attached proposal from the Mary Frances Early College of Education for a new major in Workforce Education (B.S.Ed.) will be an agenda item for the October 21, 2022, Full University Curriculum Committee meeting.

Sincerely,

Susan Sanchez, Chair
University Curriculum Committee

cc: Provost S. Jack Hu
Dr. Marisa Pagnattaro

UNIVERSITY SYSTEM OF GEORGIA

USG Academic Degree Program Application

Released

December 21, 2020

Version Control

Date	*Changes*	*USG Approved date*	*Website update date*
12-18-2020	*Revised question 34 and 61 for clarity; Revised question 47 to include part b with the tuition comparison table for peer or competitive programs; reworded question 49 to include costs and benefits per fee; Revised question 50 related to additional costs to students; Revised question 51 to clarify the question related to indirect costs.*		

NOTE:

Italicization indicates a question or field on the in-take form

^= indicates accreditation related content

USG Routing

- *Program was part of the Annual Academic Forecast*
- *This proposal can be expedited (Nexus, established concentration with strong enrollment)*
- *This proposal requires USG integrated review*

USG ACADEMIC PROGRAM APPLICATION

A. OVERVIEW

To be completed as part of SharePoint Submission

1. *Request ID: (SharePoint Generated unique ID)*

2. *Institution Name:* University of Georgia

3. *USG Sector:* Research University

4. *School/Division/College:* Mary Frances Early College of Education

5. *Academic Department:* Workforce Education and Instructional Technology

6. *Proposed Program Name:* Bachelor of Science in Education with a major in Workforce Education

7. *Major:* Workforce Education

8. *CIP Code (6 digit):* 13.1319 (13131900)

9. *Degree Level:* Bachelors

10. *Anticipated Implementation Semester and Year^:* Fall 2023

11. *Was this program listed in the most recent Academic Forecast?*

    ☐ *Yes*

    ☒ *No (If no, explain why below)*

    This proposal was not included in the University of Georgia's Academic Forecast because it had not been submitted through the faculty governance process.

12. *Program Description (Provide a description of the program to be used in the Board of Regents meeting packet):*

    Workforce Education programs are vibrant learning opportunities for youth in Georgia's middle and high schools. In February 2022, the Georgia Department of Education (GaDOE) released data on the impact of high school career, technical, and agricultural education (CTAE) courses that indicated that high school students who complete a CTAE pathway graduate from high school at a rate of 97%. This figure is 14 points higher than the general Georgia graduation rate. Additionally, there are over 660,000 students enrolled in

CTAE courses annually, with 50,000 seniors completing a career pathway during the 2020-2021 school year. With an aging CTAE teaching workforce and economic impact demands for multiple pathways in which youth can experience post-secondary success through transition to the workforce, technical college, or four-year institutions, there is an urgent need to increase the number of middle and high school teachers to attract and support students to complete CTAE pathways. CTAE pathways not only begin students on a workforce trajectory, such pathways cement the foundation for employability skills that are key to the quality of Georgia's workforce. With 17 unique pathways in Georgia middle and high schools, and only one other USG institution with approved certification at the bachelor's level for workforce education with an area of emphasis in engineering and technology education, it is important to augment opportunities to attract students into a high-quality educator preparation program.

Until U.S. News and World Report ceased rating vocational education programs, the University of Georgia was ranked in the top three programs in the country in this educator preparation area. This major was actively offered at the undergraduate degree level until 2011, when it was recommended for termination given low enrollment. Since that time, CTAE programs in Georgia have been revitalized and Georgia's workforce needs have shifted, necessitating the middle school and high school opportunities to explore workforce options particularly in the area of engineering and technology education. Moye et al. (2020) note the field's concern about a teacher shortage in this important area of workforce education. The GaDOE (Barker, nd) notes that students who pursue study in engineering and technology education in high school are also more likely to pursue these fields in post-secondary settings. Additional data from the GaDOE indicate that in 2019-2020, the Science, Technology, Engineering, and Mathematics pathway was the second most popular pathway in Georgia middle schools (91,289 students across Georgia) but fell to ninth in high school (32,388 students across Georgia). The program specialist with the GaDOE noted that decline is based on the lack of teachers at the high school level with specific training in engineering and technology education (Ivey, personal communication, 2022). Given the attraction of engineering and technology industries to Georgia, education programs that support engaging students in grades 6-12 to pursue this field is necessary. In addition, give the University of Georgia's mission as a land-grant institution, and the Mary Frances Early College of Education's partnership with the College of Engineering, the University of Georgia is uniquely positioned to offer this robust degree in Workforce Education with an area of emphasis in engineering and technology teacher education.

13. Accreditation^: Describe disciplinary accreditation requirements associated with the program (if applicable, otherwise indicate not applicable).

    This proposed program would be approved by the Georgia Professional Standards Commission to certify program completers as teachers in the state of Georgia. Completers of the degree would be granted initial certification to teach and granted a T-4 teaching certificate. The proposed program would be submitted to the Georgia Professional Standards Commission as a substantive change. Because the major already is approved to be offered under the Master of Arts in Teaching (M.A.T.), Master of Education (M.Ed.), Specialist in Education (Ed.S.). Doctor of Education (Ed.D.), and Doctor of Philosophy (Ph.D.) degrees for educator certification, it can be easily added under the Bachelor of Science in Education (B.S.Ed.) as well. The proposed program would also enter a seven-year review cycle from the Georgia Professional Standards Commission along with all other educator preparation programs at the University of Georgia.

14. Specify **SACSCOC** or other accreditation organization requirements^.

    Mark all that apply.

    ☐ Substantive change requiring notification only [1]

    ☐ Substantive change requiring approval prior to implementation [2]

[1] See page 22 (Requiring Notification Only) of SACSCOC Substantive Change Policy and Procedures document.
[2] See page 17 (Requiring Approval Prior to Implementation) of SACSCOC Substantive Change Policy and Procedures document.

☐ Level Change [3]

☒ None

B. STRATEGIC PLAN

15. How does the program align with your institutional mission and function^?
If the program does not align, provide a compelling rationale for the institution to offer the program.

The mission of all University System of Georgia institutions is to produce graduates with the requisite skills and knowledge to ensure Georgia's strong future in the knowledge-based and global economy. The limited number of educator preparation programs within the USG that support engineering and technology education, as well as among private institutions of higher education in Georgia, limit the choices that Georgia middle school and high school students have to explore engineering and technology courses or occupations as they explore their post-secondary options. An educator preparation program at the bachelor's degree level at the state's flagship university would attract highly-qualified students, both in- and out-of-state, and provide a pipeline for future professionals in the field of technology and engineering education. Given the scarcity of teachers, particularly at the high school level, the presence of a strong training program within the state will go a long way in addressing the needs of Georgians and contribute to augmenting the workforce in a critical area for which the state is experiencing growth.

16. How does the program align with your institution's strategic plan and academic program portfolio? Identify the number of existing and new courses to be included in the program.

The 2025 strategic plan for UGA includes three broad areas: 1) Promoting excellence in teaching and learning, 2) Growing research, innovation, and entrepreneurship, and 3) Strengthening partnerships with communities across Georgia and the world. The proposed program in Workforce Education with an area of emphasis in Engineering and Technology Education has the potential to contribute strongly to all three of these goals. Highly qualified middle school and high school teachers can provide educational and training opportunities for students grades 6-12 that not only meet the needs of the students but also build local capacity and economic viability within communities by developing the workforce pipeline. The program will capitalize on strong UGA faculty in the Mary Frances Early College of Education and those within the College of Engineering who are uniquely suited to provide classroom and clinical field-based instruction. Along with thriving research programs, this program will allow for opportunities for partnerships with school districts, business, and industry to build a more viable Georgia workforce.

C. NEED

17. Was this proposal and the design of the curriculum informed by talking with alumni, employers, and community representatives?

☐ *No*

☒ *Yes (If yes, use the space below to explain how their input informed this proposal)*

This proposal was constructed in concert with meetings between the deans and associate deans of the Mary Francis Early College of Education and College of Engineering. The faculty also held discussions with program specialists with the Georgia Department of Education who noted the need for the program and

[3] See page 3 (Level Change Application) of SACSCOC Seeking Accreditation at a Higher or Lower Degree Level document for level change requirements.

assisted with data that is described in item #12 above. Faculty in the College of Education and the Engineering Education Transformations Institute conferred about the proposed program of study. Numerous public school officials have also inquired about the need for the University of Georgia to offer this major at the undergraduate level, most recently from the Newton County School System where the district was in need of six engineering and technology educators to begin to meet the needs associated with the introduction of the Rivian automotive plan outside of metro Atlanta.

18. *Does the program align with any local, regional, or state workforce strategies or plans?*

    ☐ *No*

    ☒ *Yes (If yes, please explain below)*

    Consistent with the State of Georgia's Four-Year Workforce Innovation and Opportunity Act (WIOA) Unified State Plan (March 2020), the state notes that Georgia is consistently ranked as the best state in the nation in which to do business. Because of economic development initiatives, specifically focused on the development of manufacturing jobs, Georgia's business climate will continue to need employees who are educated in secondary and post-secondary programs to meet employment demands. This program will support the professional development of secondary educators to engage Georgia's youth to choose careers in technology and engineering.

19. Provide any additional evidence of regional demand for the program^ (e.g. prospective student interest survey data, community needs, letters of support from employers)

    Data provided by the Georgia Department of Education indicated that the southeast has a void of higher education programs that prepare educators to support youth in middle schools and high schools in their exploration of engineering and technology careers. The Georgia Department of Education also noted that schools make difficult choices about workforce programs and that one challenge for adding more technology and engineering programs is the limited number of teachers that have professional teaching credentials to teach middle school and high school students.

20. *Identify the partners you are working with to create a career pipeline with this program[4].^*

    Mark all that apply

☒ High School CTAE	☒ Employers
☐ High School STEM	☐ Community partnerships
☐ Career academies	☒ Professional associations
☐ TCSG programs	☐ Other (specify below)
☐ Other USG institutions	Click or tap here to enter text.
☐ Other universities	☐ None

[4] Provide letters of support and explain the collaboration and how partners will share or contribute resources. (Consider internal pipeline programs – "off-ramp program" Nursing to integrated health or MOUs for pathways with other USG institutions (pipelines – keep them in state for grad school if we can)

21. *Are there any competing programs at your own institution?*

☒ *No*

☐ *Yes (If yes, provide additional information about the competing program(s) below).*

22. The program service area is used as the basis for labor market supply and demand analysis. What is the program's service area (local, regional, state, national)? If outside of the institution's traditional service area, provide a compelling rationale for the institution to offer the program. If the program's service area is a region within the state, include a map showing the counties in the defined region.

The primary service areas are at the state and regional level. Students will receive classroom instruction and engage in field experiences within the Northeast Georgia and metro-Atlanta service area. Because the only other provider at the bachelor's level within Georgia is Savannah State University, the proposed program can meet the needs of the northern half of the state. Regionally there is one program in Tennessee, one in North Carolina, and one in Florida. Therefore, potential undergraduate students from the southeast might also be drawn to the program.

23. Do any other higher education institutions in close proximity offer a similar program?

☒ *No*

☐ *Yes (If yes, provide a rationale for the institution to offer the program)*

The only other provider at the bachelor's level is Savannah State University, which offers a major in Engineering and Technology Education (B.S.Ed.).

24. Based on the program's study area, what is the employment outlook for occupations related to the program, according to the CIP to SOC crosswalk in the Qlik **IPEDS Application^**. An Excel version of the CIP to SOC crosswalk is also available from NCES. If data for the study area is not available, then use state- or national-level data.

a. Click **here** for US and Georgia occupation projections
b. Click **here** for 2026 Georgia Department of Labor data projections for the State or Georgia Workforce Board Regions in Qlik (link to GDOL Projections); data is also available through the GDOL Labor Market Explore Website
c. For a custom Georgia geography – request a Jobs EQ report from **USG Academic Affairs office.**

Related Occupation	SOC code	Current Employment [Enter Year]	Projected Employment [Enter Year]	# Change	% Change	Average Annual Openings
Education Teachers, Postsecondary	25-1081	1490	1890	400	26.8	180
Middle School Teachers, Except Special and Career/Technical Education	25-2023	24150	28000	3850	15.9	2310

Secondary School Teachers, Except Special and Career/Technical Education	25-2032	27190	31540	4350	16.0	2490

25. Using IPEDS data, list the supply of graduates in the program and related programs in the service area.^

Similar or Related Programs	CIP Code	Supply[1]	Competitor Institutions[2]

[1] Supply = Number of program graduates last year within the study area

[2] Competitors = List other institutions that offer this program or a similar program in the area (see **Question 23**)

26. Based on the data provided in questions **24** and **25**, discuss how this program will help address a need or gap in the labor market?^

Given that only one institution of higher education in Georgia provides a bachelor's degree in Workforce Education with an area of emphasis in Engineering and Technology Education (n = 1), this proposal would double the opportunity to provide educator preparation options for interested students in the state. Currently, the output of program completers does not meet the demand for middle and high school teaching needs in the state.

27. Using data from ***O*-Net,*** identify the average salary for the related occupations identified in question 24. Then list at least three technical skills and three Knowledge, Skills and Abilities (KSAs) associated with the related occupations. This information can be found using at onetonline.org. (Standard Occupation Code = SOC)

SOC Code (6 digit)	Average Salary (O-Net data)	Occupation specific technology skills & KSAs
25-1081; 25-1194; 25-2023; 25-2032	**$57,590**	**Education and Training** — Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
		Instructing — Teaching others how to do something.
		Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.

Notes:

28. *Using **GOSA Earning and Learnings data**, what is the typical salary range 5 years after graduation from the program?*

Average Salary	75th Percentile	50th Percentile	25th Percentile
1 year after graduation	see explanation below		
5 years after graduation			

Provide any additional comments, if needed:

Based on the Georgia State Salary schedule for teachers (https://www.gadoe.org/Finance-and-Business-Operations/Budget-Services/Documents/FY20-TeacherSalaryScheduleReport.pdf), an educator with a T-4 certification credential would make $37,092. After five years of service and remaining at the T-4 certification level, the teacher would make $40,253. Local school systems also often add a supplement to the state's base pay, but those supplements are locally determined. Using only data from graduates of UGA's Bachelor of Science in Education degrees, first year salaries are: $33,144 (25th percentile), $39,799 (50th percentile), and $44,738 (75th percentile). At five years, salaries of UGA's Bachelor of Science in Education degrees are: $37,801 (25th percentile), $45,154 (50th percentile), and $50,524 (75th percentile).

29. *Based on the data compiled and analyzed for this section (see Section C: Need), what is the job outlook for occupations filled by students with this degree?^*

Although not all school systems within the state of Georgia list open positions on TeachGeorgia (https://www.teachgeorgia.org/), as of March 18, 2022, there were 19 unfilled positions within the state. In addition, data from the GaDOE indicate that in 2019-2020, the Science, Technology, Engineering, and Mathematics pathway was the second most popular pathway in Georgia middle schools (91,289 students across Georgia) but fell to ninth in high school (32,388 students across Georgia). There is a clear discrepancy in the number of teachers needed to staff these middle school and high school courses and the number of Engineering and Technology teachers who are being educated in Georgia.

CURRICULUM

30. *Enter the number of credit hours required to graduate^*

120

31. *Are you requesting a credit hour requirement waiver (either below or above traditional credit hour length requirements as prescribed by the University System of Georgia? See section 2.3.5 (Degree Requirements) of the USG Board of Regents Policy Manual **here** for more information).*

☒ *No*

☐ *Yes (*If yes, explain the rationale for the request in the space below*)*

32. Related to SACSCOC accreditation, specify if the program format of the proposed program is a^:

Format (Check 1)		50% or more of the program is delivered online
☐	Combination of on-campus and online	☐ Yes
☐	Combination of off-campus and online	☐ Yes
☐	Hybrid, combination delivery	☐ Yes

33. Is the program synchronous or asynchronous?[5] Mark one of the options below.

☐ *Synchronous*

The majority of courses are offered at scheduled, pre-determined times with students connecting to a virtual room or location and interacting with faculty and fellow students via web/video conferencing platform.

☐ *Asynchronous*

34. For associate's, Nexus, and bachelor's degree proposals, which **High Impact Practices**[6] (HIPs) will faculty embed into the program? Mark all that apply.

☒ First-Year Experiences

☐ Common Intellectual Experiences

☐ Learning Communities

☐ Writing-Intensive Courses

☐ Collaborative Assignments and Projects

☐Undergraduate Research

☒ Diversity/Global Learning

☐ ePortfolios

☒ Service Learning, Community Based Learning

☒ Internships

☐ Capstone Courses and Projects

[5] See SACSCOC Handbook for Institutions Seeking Initial Accreditation **here**.

[6] See Kuh (2008). High-Impact Practices: What They Are, Who Has Access to Them, and Why They Matter. *Association of American Colleges and Universities*, *14*(3), 28-29).

35. Discuss how HIPs will be embedded into the program? Your discussion should provide specific examples and include whether the HIP is required or an optional component. It should also indicate at what point the experience is offered or required.

(i.e. "Students will be required to participate in an externship during their third year of enrollment, in order to develop skills in… etc.").

All undergraduate students at the University of Georgia are required to engage in a First Year Odyssey Seminar during the freshman year. This one-credit course connects small groups of students with a faculty member who engages the learners with the faculty member's research topic, writing, and exposure to the segments of the university. Candidates in this program are also required to complete the university's Cultural Diversity requirement. This requirement is usually completed within the first two years of the program. Within the last two years of the programs and embedded within the program are field-based experiences in middle school and high school classrooms where candidates translate theory into practice. As required by the Georgia Professional Standards Commission, all candidates within this program are required to engage in a semester-long student teaching experience. This experience is the final experience within the program.

36. *Does the program take advantage of any USG initiatives?*

Mark all that apply, and provide a letter of support from applicable initiatives' leadership.

[ ] eCampus *[ ] Georgia Film Academy*

[ ] FinTECH *[ ] Other: Specify Initiative Here*

37. ^For associate's, Nexus, and bachelor's degree proposals, list the specific occupational technical skills, and KSAs identified in question 27 and show how they related to the program learning outcomes. Insert more rows as needed.

Alignment of Occupational KSAs [1]	Student Learning Outcome (s)	Direct Measure (s)	Data Source
Education and Training — Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.	Candidates will plan, design, implement and evaluate student (Grades 6-12) work in Engineering and Technology Education classrooms.	Performance observations, lesson plans, candidate reflections.	Candidate work samples and performances.
Instructing — Teaching others how to do something.	Candidates will instruct students (Grades 6-12) on the standards from the Georgia Department of Education's Engineering and Technology Education pathways.	Performance observations, lesson plans, candidate reflections.	Candidate work samples and performances.
Oral Comprehension — The ability to listen to	Candidates will employ oral comprehension strategies as they instruct students (Grades	Performance observations, supervisor	Candidate work samples and performances.

and understand information and ideas presented through spoken words and sentences.	6-12) on the standards from the Georgia Department of Education's Engineering and Technology Education pathways.	evaluations, candidate reflections.	

Complete this chart for the upper division or major curriculum only.

[1] Direct measures may include assessments, HIPs, exams, etc.

38. For associate's, Nexus, and bachelor's degree proposals, fill in the table below to demonstrate the link between the **learning outcomes** and NACE **career ready competencies**.

Insert more rows as needed.

Career Ready Competencies (NACE)	Student Learning Outcomes	Direct Measure (s)[1]
Critical Thinking/Problem Solving	Candidates will plan, design, implement and evaluate student (Grades 6-12) work in Engineering and Technology Education classrooms.	Performance observations, lesson plans, candidate reflections.
Oral/Written Communications	Candidates will employ oral comprehension strategies as they instruct students (Grades 6-12) on the standards from the Georgia Department of Education's Engineering and Technology Education pathways.	Performance observations, supervisor evaluations, candidate reflections.
Team Work/ Collaboration	Candidates will instruct students (Grades 6-12) on the standards from the Georgia Department of Education's Engineering and Technology Education pathways.	Performance observations, lesson plans, candidate reflections.
Digital Technology	Candidates will plan, design, implement and evaluate student (Grades 6-12) work in Engineering and Technology Education classrooms.	Performance observations, lesson plans, candidate reflections.
Leadership	Candidates will instruct students (Grades 6-12) on the standards from the Georgia Department of Education's	Performance observations, lesson plans, candidate reflections.

	Engineering and Technology Education pathways.	
Professionalism/ Work Ethic	Candidates will plan, design, implement and evaluate student (Grades 6-12) work in Engineering and Technology Education classrooms.	Performance observations, lesson plans, candidate reflections.
Career Management	Candidates will instruct students (Grades 6-12) on the standards from the Georgia Department of Education's Engineering and Technology Education pathways.	Performance observations, lesson plans, candidate reflections.
Global/Intercultural Fluency	Candidates will instruct students (Grades 6-12) on the standards from the Georgia Department of Education's Engineering and Technology Education pathways.	Performance observations, lesson plans, candidate reflections.

[1] Direct measures may include assessments, HIPs, exams, etc.

39. How will learning outcomes for the program be assessed?^ Attach the curriculum map for the upper division or major curriculum.

As with other educator preparation programs, candidates will be assessed with a variety of assessment tools that include five key assessments that are part of the Georgia Professional Standards Commission approval process. These assessments include the InternKeys, GACE content assessment, dispositions rating, and two portfolios. One portfolio is on instructional development and delivery and the second centers on program management.

Year Three

Fall Semester		Hours	Spring Semester		Hours
EDUC(EPSY) 2130	Exploring Learning & Teaching	3	WFED 5550	Students With Special Needs in Programs of Workforce Education	3
STAT 2000	Introductory Statistics	4	WFED 4010/6010	Foundations of Work and Family Life Education	3
WFED 2450	Practicum in Workforce Education I	2	WFED 4350/6350	Curriculum Planning in Workforce Education	3
MCHE 2990	Engineered Systems in Society	3	ETES 4030/6030	Robotics for Teachers	3
WFED 4360/6360	Instructional Strategies in Workforce Education	3	ETES 4040	Introduction to Engineering Analysis	4
Total Credit Hours		15			16

Year Four

Fall Semester		Hours	Spring Semester		Hours

ETES 3050-3050L	Circuit Analysis	3	WFED 5460	Student Teaching in Workforce Education	11
WFED 4343/6343	Transition from College to Work and Adult Life	3	WFED 5470	Student Teaching Seminar	3
WFED 3450	Practicum in Workforce Education II	1			
	Elective	3			
	Elective	3			
Total Credit Hours		13			14

40. How will outcomes for graduates of the program be assessed?

(Outcomes may include employment and placement rates, student or employer surveys, or other assessments of graduate outcomes)

Outcomes for the graduates of the Mary Frances Early College of Education are assessed in several ways. First, the University of Georgia Career Center follows up with all graduates prior to graduation and then one year following graduation. If the completer is hired in a Georgia public school, the Georgia Professional Standards Commission (GaPSC) also documents the completer's location of employment. The department will use those two mechanisms to follow completers. Data are routinely collected from the completers and their principals one year after degree completion. UGA has access to those data for program reflection and continuous improvement. The program will also collect the required data from the GaPSC described in Item #39.

41. List the entire course of study required to complete the academic program.^

Include course: prefixes, numbers, titles, and credit hour requirements

Indicate the word "new" beside new courses

Include a program of study

Prefix	Course Number	Course Title	Credit hours	New Course (Y/N)
MATH	1113	Precalculus	3	N
ENGR	1120	Engineering Graphics and Design	2	N
ENGL	1101	English Composition I	3	N
POLS	1101	American Government	3	N
FYOS	1001*	First-Year Odyssey Seminar	1	N
		Social Science Elective	3	N
MATH	2250	Calculus I for Science and Engineering	4	N
ENGL	1102	English Composition I	3	N
COMM	1110	Introduction to Public Speaking	3	N
HIST	2111	American History to 1865	3	N
		World Language Elective	3-4	N
MATH	2260	Calculus II for Science and Engineering	4	N
PHYS	1211-1211L	Principles of Physics for Scientists and Engineers – Mechanics, Waves, Thermodynamics	4	N
ENGR	1140	Computational Engineering Methods	2	N
		Life Science Elective	3	N

		World Language Elective	3	N
PEDB	1XXX	Basic Physical Education	1	N
MCHE	1940	Mechanical Engineering Design Studio and Professional Practice	3	N
EDUC	2110	Investigating Critical and Contemporary Issues in Education	3	N
EDUC	2120	Exploring Socio-Cultural Perspectives on Diversity	3	N
ETES	2320-2320L	Creative Activities for Teachers Laboratory	3	N
		World Language Elective	3	N
EPSY	2130	Exploring Teaching and Learning	3	N
STAT	2000	Introductory Statistics	4	N
WFED	2450	Practicum in Workforce Education I	2	N
MCHE	2990	Engineered Systems in Society	3	N
WFED	4360	Instructional Strategies in Workforce Education	3	N
WFED	5550	Students With Special Needs in Programs of Workforce Education	3	N
WFED	4010	Foundations of Work and Family Life Education	3	N
WFED	4350	Curriculum Planning in Workforce Education	3	N
ETES	4030	Robotics for Teachers	3	N
ETES	4040	Intro to Engineering Analysis	4	Y
ETES	3500-3500L	Circuit Analysis	3	Y
WFED	4343	Transition from College to Work and Adult Life	3	N
WFED	3450	Practicum in Workforce Education II	3	N
WFED or ENGR		Workforce Education or Engineering Elective	3	N
WFED or ENGR		Workforce Education or Engineering Elective	3	N
WFED	5460	Student Teaching in Workforce Education	11	N
WFED	5470	Student Teaching Seminar	3	N

Bachelor of Workforce Education
Effective Fall 2023
120 Credit Hours (Plus institutionally required FYOS and PEDB 1-credit courses)

YEAR ONE

Fall Courses	**Hrs**		**Spring Courses**	**Hrs**
MATH 1113, Precalculus	3		MATH 2250, Calculus I	4
ENGR 1120, Engineering Graphics and Design	2		ENGL 1102, English Composition II	3
ENGL 1101, English Composition I	3		COMM 1110, Introduction to Public Speaking	3
POLS 1101, American Government	3		HIST 2111, American History to 1865	3
FYOS 1001, First-Year Odyssey Seminar	1		World Language Elective	3
Social Science Elective	3			
Total	**15**		**Total**	**16**

YEAR TWO

Fall Courses	Hrs		Spring Courses	Hrs
MATH 2260, Calculus II	4		MCHE 1940, Mechanical Engineering Design	3
PHYS 1211-1211L, Principles of Physics for Scientists and Engineers-Mechanics, Waves, Thermodynamics	4		EDUC 2110, Investigating Critical and Contemporary	3
ENGR 1140, Computational Engineering Methods	2		EDUC 2120, Issues in Education	3
PEDB 1XXX, Physical Education	1		ETES 2320-2320L, Creative Activities for Teachers Laboratory	3
Life Science Elective	3		World Language Elective	3
World Language Elective	3			
Total	**17**		**Total**	**15**

YEAR THREE

Fall Courses	Hrs		Spring Courses	Hrs
EPSY 2130, Exploring Learning and Teaching	3		WFED 5550, Students with Special Needs in Programs of Workforce Education	3
STAT 2000, Introductory Statistics	4		WFED 4010/6010, Foundations of Work and Family Life Education	3
WFED 2450, Practicum in Workforce Education I	2		WFED 4350/6350, Curriculum Planning in Workforce Education	3
MCHE 2990, Engineered Systems in Society	3		ETES 4030/6030-4030L/6030L, Robotics for Teachers	3
WFED 4360/6360, Instructional Strategies in Workforce Education	3		ETES 4040, Introduction to Engineering Analysis	4
Total	**15**		**Total**	**16**

YEAR FOUR

Fall Courses	Hrs		Spring Courses	Hrs
ETES 3500-3500L, Circuit Analysis	3		WFED 5460, Student Teaching in Workforce Education	11
WFED 4343/6343, Transition from College to Work and Adult Life	3		WFED 5470, Student Teaching Seminar	3
WFED 3450, Practicum in Workforce Education II	1			
Elective	3			
Elective	3			
Total	**13**		**Total**	**14**

D. IMPLEMENTATION

*42. Provide an enrollment projection for the next four academic years^*

	Year 1	Year 2	Year 3	Year 4
Fiscal Year (Fall to Summer)	2023-24	2024-25	2025-26	2026-27
Base enrollment[1]		3	5	23
Lost to Attrition (should be negative)			-2	-2
New to the institution	0	0	20	20
Shifted from Other programs within your institution	3	5	5	5
Total Enrollment	3	8	28	46
Graduates	0	3	5	23
Carry forward base enrollment for next year	3	5	23	23

[1]Total enrollment for year 1 becomes the base enrollment for year 2

a. Discuss the assumptions informing your enrollment estimates (i.e. for example, you may highlight anticipated recruiting targets and markets, if and how program implementation will shift enrollment from other programs at the institution, etc.)

The enrollment projection is based on the size of similar cohorts of science and mathematics candidates at the bachelor's level. The department anticipates an initial cohort of 20 students to be able to provide at least 20 teachers at the end of Year 4 to the workforce and on par with the number of vacancies state-wide in March 2022. Students will be attracted to the program through connections of the faculty with high school pathway completers, engagement with the high school Career, Technical, and Student Organizations that are affiliated with engineering and technology, and through advising engagement at the university as students learn how their interests in engineering and technology could also support careers in teaching.

b. If projections are significantly different than enrollment growth for the institution overall, please explain.

Not applicable.

43. If projected program enrollment is not realized in year two, what actions are you prepared to take?

The university will engage in a marketing campaign and also target transfer students who are interested in completing their degrees at UGA. This will include engagement in career fairs, providing information to UGA admissions officers about how students' interests in engineering and technology could also facilitate a career in teaching in those areas, and engagement with students in Georgia Career, Technical, and Student Organizations.

44. Discuss the marketing and recruitment plan for the program. Include how the program will be marketed to adult learners and underrepresented and special populations of students. What resources have been budgeted for marketing the new program?

The University of Georgia has a highly ranked College of Education and has been extremely successful in marketing graduate degrees in Workforce Education. High school teachers are familiar with UGA's programs, and faculty will reach out to them to encourage high-school students to apply. The department will also engage in displaying information at Career Tech Student Organization Events (e.g., TSA) where high-school students can be made aware of the program. For adult learners, the department would also connect with Technical College programs in Georgia to make students aware of the opportunities. To reach underrepresented and special populations of students, the department will also rely on strong connections with secondary teachers.

45. Provide a brief marketing description for the program that can be used on the Georgia **OnMyLine website**.

Twenty-first century classrooms are dynamic learning spaces requiring educators to establish classroom and school environments that meet an increasingly diverse population of middle and high school students. This program is dives deeply into foundations of teaching and the content of engineering and technology to support today's vibrant classroom contexts and meet the needs of middle school and high school youth.

Across this integrated and interdisciplinary program, you and your peers will draw on your classroom experience and enhance your knowledge and skills by participating as engaged learners to better comprehend and apply principles of teaching within the specific area of concentration of engineering and technology. Connected to your daily practice, this program will provide opportunities for you to engage in field experiences to practice and develop skills with a community of learners to become the engine for change in schools.

As a student in this program, you will be an important part of a collaborative community of educators. As your learning experiences are carefully scaffolded by nationally-recognized faculty, you will contribute to this collaborative community allowing your depth and breadth of knowledge about the theory and practice in the interconnected areas of education, engineering, and technology.

Courses provide many opportunities to create materials, activities, and professional learning experiences that will be immediately beneficial to your future classroom. Instructional and assessment practices will be modeled by faculty in this program with a focus on your individual growth. Enhance your professional skills and abilities to make a difference for your learners and your colleagues by completing your Bachelor of Science in Workforce Education. Come grow with us!

46. If this proposal is for a Doctorate program, provide information below for at least three external and one USG reviewer of aspirational or comparative peer programs

Note: External reviewers must hold the rank of associate professor or higher in addition to other administrative titles.

Reviewer 1 Name	**Reviewer 2 Name**	**Reviewer 3 Name**
Reviewer 1 Title	Reviewer 2 Title	Reviewer 3 Title
Reviewer 1 Institution	Reviewer 2 Institution	Reviewer 3 Institution
Reviewer 1 Email Address	Reviewer 2 Email Address	Reviewer 3 Email Address
Reviewer 1 Phone Number	Reviewer 2 Phone Number	Reviewer 3 Phone Number

USG Reviewer Name
USG Reviewer Title
USG Reviewer Institution
USG Reviewer Email Address
USG Reviewer Phone Number

E. RESOURCES

F1. Finance^: Complete and submit the Excel budget forms and the questions below (Do not cut and paste in the excel budget template into this document, submit the Excel budget templates separately.)

47. Are you requesting a differential tuition rate for this program? (masters, doctoral, and professional programs only)

☒ No (Move to answer question 48)

☐ Yes (If yes, answer questions 47a & 47b)

a. *What is the differential rate being requested? The rate below should reflect the core tuition plus the differential, i.e. the tuition rate being advertised to the student.*
In-State per Semester: $Enter Amount
Out-of-State per Semester: $Enter Amount

b. *Provide tuition and mandatory fee rates assessed by competitive/peer programs per full-time student per semester. Please complete the table below:*

Institution name	Link to institution's tuition & fee website	In-state tuition	Out-of-state tuition	In-state fees	Out-of-state fees

48. If existing funds are being reallocated, describe the impact on existing programs and the plan to mitigate these impacts.
Major courses are already being offered at the graduate level and could easily be adapted to be offered at the undergraduate level.

49. If student fees are being charged (excluding mandatory fees), explain the cost and benefit to students, per fee.
Not applicable.

50. Are there any additional financial costs that students will have to take on as part of this program, but not assessed directly by the institution? (e.g. software licenses, equipment, travel, etc.) If so, please describe these costs and what strategies you have considered to decrease the student's financial burden?

Yes, there are associated costs with testing that is required by the Georgia Professional Standards Commission. These 2022 costs are:

- **GACE Content Assessment** : $193
- **Georgia Educator Ethics Program Entry (350) Assessment** : $30
- **Background checks** (Some school districts may require students to complete a school district background check. It may or may not have a fee associated. In other instances, depending on the placement, students may have to complete a **Field Experience Background Check**): $37.50 or $18.00 for a recheck
- **Mandatory membership in a professional organization during field experience (Tort Liability Insurance)**: $15/year for **SPAGE** OR $18/year for **GAE/NEA.** (Note: Fees for professional organizations are set by each organization and are subject to change.)
- **Professional clothing** for practicum and student teaching
- **Transportation and gas** to placement site (note: students can be placed up to AN HOUR away from campus)

51. How does the institution plan for and fund increased indirect costs associated with the growth in students anticipated in the proposed program? Consider costs such as student advisement, student support services, tutoring, career services, additional library materials, technology, or other infrastructure.

Additional costs would be incurred for student advisement. The college is prepared to add an additional staff member if advising caseloads grow beyond the national standard for per advisors loads. Once students are in the major courses, these activities could decrease substantially given that the program is cohorted and all students would be in the same courses. To date, the college has been able to support cyclical rises and falls in academic advisement. Given that students who are admitted at the undergraduate level are admitted through a centralized admissions process, costs for student advisement, student support services, tutoring, career services, additional library materials, technology, or other infrastructure are already subsumed in the university's calculation for freshmen class admission.

F2. Faculty^ – Explain your faculty and staff plan for the program

52. Discuss how existing courses may be incorporated into this new program:

a. Course Development

# of total courses in the curriculum:	**39**
# of existing courses to be part of the new program	**37**
Net number of new courses to be developed	**2**

b. Comment on the costs and workload related to the new course development.

As part of faculty service time, faculty will develop and prepare the new courses for this proposed major. As a traditional part of faculty teaching load, tenure-stream or tenured faculty teach four courses per academic year. Within these courses are electives which can be switched to the two new

courses required in the program. Faculty also have service time built into their budgeted time and can develop courses with those time resources.

53. Explain how **current faculty and staff** will contribute to the program.^

a. *How many faculty will be re-directed to this program from existing programs?*

0

The program currently has three faculty members with qualifications in this area. These faculty already teach some of the courses that comprise the program of study and have taught the others except for any new courses being proposed or developed. Current faculty will teach the new courses that are part of this major. These courses will be integrated into overall faculty workload.

b. If this program is approved, what will be the new teaching load and distribution of time for the current faculty members? How will existing staff be impacted?

The unit currently possesses considerable capabilities as three faculty hold expertise and experience with both instruction and research in engineering and technology. These faculty are leading the conceptualization and development of curriculum. The teaching loads for current faculty will integrate the new courses included in this proposed program. However, due to ongoing instructional needs and faculty assignments to cover all Workforce Education courses offered, an additional faculty member will be required. The hire of this new faculty member was initiated in 2021-2022 but the search was suspended. The college has approved this search to be completed in 2022-2023 for a fall 2023 start date. Specific courses being taught might be adjusted to meet the needs of this new program, as the workforce education program is currently only offered at the graduate level.

c. List the faculty that will be redirected from their current teaching load assignments to support this new program

Faculty will include the courses in this proposed degree program in their regular rotation of course offerings; therefore, no faculty are being redirected. John Mativo, Andrew Jackson, and Roger Hill comprise the current faculty with expertise in Engineering and Technology Education. Elaine Adams, Jay Rojewski, and In Heok Lee have expertise in professional aspects of workforce education in the proposed undergraduate program.

d. Explain who will be teaching the existing courses that are being released so faculty can teach a new program course. Additionally, please discuss the fiscal implications associated with course releases and redirections of faculty.

Plans are in place to hire a new faculty member to begin in August 2023. The distribution of existing courses as well as courses being used by the proposed program will depend on the expertise of the new faculty member. Currently, the three faculty members identified with expertise in this content area also are able to teach other courses within the Workforce Education program. Most of the faculty are well-versed and knowledgeable about a broad swath of Career and Technical Education courses.

e. What costs are included in your budget for course development? (Consider professional development, course development time buy out, overload pay, and re-training).

No additional costs associated with course development are anticipated or budgeted. As previously mentioned, existing faculty are already competent in this content area.

f. Attach your SACSCOC roster for the proposed program. Include in parentheses the individual with administrative responsibility for the program and whether listed positions are projected new hires and/or currently vacant.

The department head under which the program would be housed is Lloyd Rieber (faculty in Learning, Design, and Technology). The academic program is administered by Joyce Elaine Adams and John Mativo.

NAME	COURSES	ACADEMIC DEGREES & COURSEWORK	OTHER QUALIFICATIONS & COMMENTS
Adams, Joyce Elaine (F)	**WFED 4360** **WFED 5550** **WFED 4010** **WFED 4350** **WFED 5460**	**Doctor of Philosophy** Technical Teacher Education 1996 Virginia Polytechnic Institute & State University - Blacksburg **Master of Science** Technical Teacher Education 1988 Virginia Polytechnic Institute & State University - Blacksburg **Bachelor of Arts** Sales and Marketing Operations/Marketing and	

		Distribution Teacher Education 1983 Radford University	
Hill, Roger Brian (F)	**ETES 2320-2320L** **ETES 4030**	**Doctor of Philosophy** Technology Teacher Education/Industrial Arts Teacher Education 1992 University of Tennessee **Master of Science In Education** Curriculum and Instruction 1979 Northern Illinois University **Bachelor of Science** Technology Teacher Education/Industrial Arts Teacher Education 1974 North Carolina State University	
Jackson, Andrew Michael (F)	**WFED 4343** **WFED 3450** **MCHE 1940**	**Doctor of Philosophy** Technology Teacher Education/Industrial Arts Teacher Education 2018 Purdue University **Master of Science** Teacher Education and Professional Development, Specific Levels and Methods, Other 2015 Purdue University **Bachelor of Science** Teacher Education and Professional Development, Specific Levels and Methods, Other 2013 Brigham Young University	

Lee, In Heok (F)		**Doctor of Philosophy** Trade and Industrial Teacher Education 2010 University of Georgia **Master of Science** Agricultural Teacher Education 2004 Texas A&M University **Bachelor of Science** Agricultural Teacher Education 2002 Sunchon National University	
Mativo, John Mutungi (F)	**ENGR 1120** **ENGR 1140** **MCHE 2990** **ENGR 4040** **ETES 3500_3500L**	**Doctor of Philosophy** Engineering, Mechanical 2020 University of Dayton **Master of Science in Engineering** Mechanical Engineering 2006 University of Dayton **Bachelor of Mechanical Engineering** Mechanical Engineering 1995 Auburn University **Doctor of Education** Technical Teacher Education 1993 University of Georgia **Master of Education** Technical Teacher Education 1990 University of Georgia **Bachelor of Science**	

		Industrial Technology/Technician 1989 Andrews University **Bachelor of Arts** Theology/Theological Studies 1987 Andrews University	
Rojewski, Jay W (F)	**WFED 4360** **WFED 5550** **WFED 4010** **WFED 4350**	**Doctor of Philosophy** Curriculum and Instruction 1990 University of Nebraska **Master of Science In Education** Technical Teacher Education 1987 University of Nebraska - Kearney **Bachelor of Arts** Psychology, General 1981 Doane College	

54. Explain your plan for <u>new</u> faculty and staff for the program:
    g. *How many new faculty will be needed for this program over the next four years? Enter #1*
    h. *Explanation:*

    In 2021-2022, the faculty conducted a search for a faculty member. No acceptable candidate was found and the search will be conducted again in 2022-2023.

55. *How many new staff will be needed for this program over the next four years?*

0

a. Discuss why new or additional staff resources are needed. Consider staff needs, support services (i.e. advisement, faculty support, etc.)

Not applicable. The existing staff in the program can accommodate the program. Undergraduate advisement will be centralized within the Mary Frances Early College of Education Office of Undergraduate Advising.

F3. Facilities – complete the questions below:

56. *Where will the program be offered?^ Mark all that apply*

☒ Main campus

☐ Satellite campus: Specify Here

☐ Other: Specify Here

☐ 100% Online

57. Will new or renovated facilities or space be needed for this program over the next four years?

☒ No

☐ Yes (*If yes, complete the table below, inserting additional rows as needed).*

Capital Costs for Needed Facilities and Space

Facility/Space Name	Gross Square Footage	Start Up Costs	Ongoing Costs	Est. Occupancy Date	Funding Source
New Construction					
Renovations and Infrastructure*					
Purchases: Land, Buildings etc.					
Lease space					
TOTAL Cost		**$0**	**$0**		

*Include the name of the building or location being impacted and what will need to be done. Infrastructure includes new systems such as: water, electrical, IT networks, HVAC etc.

58. Discuss the impact of construction or renovation on existing campus activities and how disruptions will be mitigated. Explain how existing programs benefit from new facilities and/or space(s) and changes to existing space.

Not applicable.

59. Will any existing programs be negatively impacted (e.g. lose classroom or office space) by proposed facility changes? If so, discuss how the impacts of these changes will be mitigated.^

No.

60. Are any of these new facilities or major renovations listed in the table above (**Question 57**) **NOT** included in the institution-level facilities master plan?

Not applicable.

61. Will any of the following types of space be required: instructional, fine arts, meeting, study, or dedicated office?

☒ No (Move to Question 63).

☐ Yes (*If yes, complete question 62. Insert additional rows as needed).*

The program will use existing classrooms on the University of Georgia campus.

62. Complete the table below. Specify if these spaces are existing or new in the table below.^ If new, provide the semester and year of completion.

Space	New Space (ASF)	Use Existing Space (as is) (ASF)	Use Existing Space (Renovated) (ASF)	Semester/ Year of Occupancy
Dry Labs (STEM related)		1,493		
Wet Labs (STEM related)				
Dedicated Offices		1,260		
Fine Arts Spaces[1]				
Classrooms		7,169		
Meeting Rooms				
Student Study Space				
Other (Specify)				

[1]Fine arts spaces can include theatres, recital halls, visual arts studios, performing arts centers, recording studios, design labs, and other performance venues.

Not applicable. No new spaces or facilities are being requested for this proposed major. Courses will be scheduled in existing classrooms on the Athens campus. The department in which this major will exist also coordinates the established Research and Innovation in Learning laboratory in the River's Crossing building.

This facility can support unique engineering and technology design spaces for unique projects or activities within the degree. No additional facilities are requested for this degree.

63. Are there facility needs related to accreditation?^ Are there any accreditation standards or guidelines that will impact facilities/space needs now or in the future? If so, please describe the projected impact.

No.

F4. Technology

64. Identify any major equipment or technology integral to program start-up and operations. List any equipment or assets over $5,000 (cumulative per asset) needed to start-up and run the program (insert rows as needed)

	Technology and Equipment	Start-up Costs	On-going Costs	Est. Start Date of Operations/Use
1				
2				
3				
4				
5				
6				
Total Technology Costs		**0**	**0**	

G. RISKS AND ASSUMPTIONS

65. In the table below, list any risks to the program's implementation over the next four years. For each risk, identify the severity (low, medium, high), probability of occurrence (low, medium, high), and the institution's mitigation strategy for each risk. Insert additional rows as needed. (e.g. Are faculty available for the cost and time frame).

Risk	Severity	Probability	Risk Mitigation Strategy
Low Enrollment - Many teachers who teach in this field are career changers and enter the profession at the master's degree level	Low	Low	A variation of this degree was terminated in 2011. At that time, the areas of study under the degree were not concentrated into one area of specialization. With the changing workforce demands, economic viability in Georgia, and enhancement of the grades 6-12 curriculum in the state, a repeat of low enrollment seems less likely. The department will actively recruit students into the

			programs through connections with high school programs as well as the professional student organizations that support that content in high schools. The college will also support recruitment into the program through its dedicated transfer advisor.

66. List any assumptions being made for this program to launch and be successful (e.g. SACSCOC accreditation request is approved, etc.).

The program would need to be included in a substantive change request with the Georgia Professional Standards Commission.

H. INSTITUTION APPROVAL

Have you completed and submitted the signature page?

Course Descriptions for New Courses

ETES 3500-3500L, Circuit Analysis

An overview of basic circuit elements, circuit models, and techniques for circuit analysis. The course emphasizes the application of ohm's law, Kirchhoff's laws, and power in determining steady state responses for inactive and active circuit elements of first order systems.

ETES 4040, Introduction to Engineering Analysis

An integrated approach to the fundamental scientific principles that contribute to engineering analysis in static and dynamic systems setting. The general study includes conservation of mass, momentum, angular momentum, energy, and incorporating simple physical models. Emphasis is on setting up analysis problems arising in engineering.

WFED 5470, Student Teaching Seminar

Offered concurrently with student teaching in Workforce Education, the seminar examines teaching, learning, and professional practice in field experiences. The course supports development as a reflective practitioner, preparation for first-year teaching, and the completion of teaching portfolios, the capstone assignment in the certification program.

Letters of Support

UNIVERSITY OF GEORGIA
College of Engineering

August 31, 2022

Denise Spangler, Ph.D.
Dean
Mary Frances Early College of Education

RE: College of Engineering Letter of Support

Dear Dean Spangler:

The College of Engineering is pleased to provide a letter of support for the academic degree program entitled Bachelor of Science in Workforce Education. We agree that this degree program is timely and will be of great benefit to the State of Georgia.

The academic leadership of the college has reviewed the proposal and recognizes that the curriculum for the degree includes classes that are taught by faculty in the College of Engineering. I have communicated with Dr. Bjorn Birgisson, School Chair for Environment, Civil, Agricultural, and Mechanical Engineering, who oversees the faculty who teach the courses included in your proposal. He is supportive of the proposal as well with the following conditions:

1. The College of Engineering will have the right and the ability to change our curriculum (including changing the content of any courses listed in this program, or even removing some of these courses in lieu of other courses deemed more appropriate for our students) for the benefit of our engineering students in the future.
2. The College of Engineering will have ability to accommodate any increases in enrollment in the courses that might be affected as a result of this collaboration.

Best wishes for a successful degree program proposal. The College of Engineering looks forward to working with the Mary Frances Early College of Education if the degree program is approved.

Sincerely,

Donald J. Leo
Dean and UGA Foundation Professor

NEWTON COUNTY
INDUSTRIAL DEVELOPMENT AUTHORITY

April 13, 2022

Dr. John Mativo, Professor
University of Georgia
Department of Career and Information Studies
131 River's Crossing, 850 College Station Road
Athens, Georgia 30602

Dear Dr. Mativo,

I am writing in support of this proposal to develop a Bachelor of Science degree in Workforce Education program with an area of emphasis in Technology and Engineering Education. As our local workforce and industry partners continue to grow and become more technically efficient, a more well-prepared entry level workforce will be necessary.

Newton County is experiencing a tremendous growth in highly technical and specialized manufacturing companies choosing our region to establish a new plant location. Our land, location, local government supports, and school system, we have been able to attract and retain a high-quality manufacturing base. To maintain and responsibly grow our local manufacturing companies, our Newton County middle and high schools need highly qualified Technology and Engineering teachers. With the addition of the undergraduate program to prepare and graduate these teachers, our graduating students focused on directly entering the workforce will be better prepared. Our local manufacturers need entry level workers with a basic understanding of engineering and manufacturing processes. Without these teachers, our region and manufacturing prowess may stagnate and slow the overall economic growth of our great state.

Thank you for this opportunity to submit this support letter to meet our local instructional and workforce needs. I appreciate your willingness to consider and support the development of a Bachelor of Science in Workforce Education program with an area of emphasis in Technology and Engineering Education at the University of Georgia.

If you need additional information, please contact me at adozier@selectnewton.com

Sincerely,

Asher Dozier
Vice President, Economic Development
Newton County Industrial Development Authority
2105 Lee Street SW, Covington GA 30014

DACULA HIGH SCHOOL

123 Broad Street, Dacula Ga, 30019
770-963-6664

To Whom It May Concern: March 24, 2022

Dacula High School, along with virtually every school in Gwinnett County Public Schools, is offering the Engineering pathway as part of our Career and Technical Education program. This is one of the fastest growing pathways across Georgia.

In addition, at Dacula High School, we have added a Mechatronics Pathway as well. After visiting area businesses across Gwinnett County, we discovered a huge need for mechatronics and industrial maintenance employees. These are high wage, high skill positions that have to be filled with employees from out of state because insufficient candidates are available. Therefore, we added a program at Dacula High School to provide increased opportunities for our students and to supply a need for our community. Because of overlap between engineering and mechatronics, strong candidates with engineering background would likely have success in either program.

The challenge for both of these pathways is finding strong teachers to support these programs. College graduates with degrees in both engineering and mechatronics often earn significantly more salary than do teachers, and there are far too few graduates with knowledge in these areas. However, these courses are an outstanding gateway for exposing high school students to these exciting areas of learning and employment.

I would very much support any program that would help to provide more applicants for engineering/mechatronics programs at the secondary school level.

Feel free to call me if you have any questions.

Sincerely,

Dr. Bryan Long

Dr. Bryan Long
Principal
Dacula High School
770-338-4664

Georgia Department of Education

Educating Georgia's Future

April 10, 2022

To Whom It May Concern:

The Georgia Department of Education whole-heartedly supports the re-establishment of the undergraduate program in engineering and technology education at the University of Georgia. This is a major need for our state. We currently have over 20 openings for engineering and technology education teachers in our school systems across Georgia and I constantly hear from systems that they need engineering and technology education teachers and where can they get them. If they are unable to find a quality teacher, they simply close the program.

We currently have over 400 engineering and technology education programs in Georgia and would have many more if there was a pipeline of quality candidates to fill future programs. However, many systems decide not to offer the engineering and technology education program because of the difficulties in finding quality teachers. We all know that the teacher makes the program successful and by having the re-establishing the program at the University of Georgia this will close the gap we have in Georgia providing teachers to our systems.

Thank you very much,

Roger Ivey

Roger Ivey

Program Manager, CTAE Program Delivery

Georgia Department of Education

Georgia Department of Education

Educating Georgia's Future

To Whom It May Concern: April 7, 2022

The Georgia Department of Education (GaDOE) enthusiastically supports the efforts of the University of Georgia in re-starting its undergraduate teacher preparatory program for Engineering and Technology Education. In Georgia, over 400 teachers are teaching within one of the many pathways in the Engineering and Technology disciplines. Though Georgia has seen growth in the number of programs, school districts continue to struggle to find qualified, well-trained teachers. The number one reason quoted by school districts for not starting or closing their current Engineering and Technology programs is a lack of qualified teacher applicants. The "large" metro districts of Cobb, Fulton, Gwinnett, and DeKalb report a need for over 20 teachers in the 2023 school year alone. CTAE Directors throughout the remaining parts of the state say there is a lack of applicants to fill over 20 positions they currently have in FY23. There is no doubt Georgia requires a teacher preparatory program to keep pace with the local school district's need for hiring Engineering and Technology Educators.

Georgia once had three engineering and technology teacher preparatory programs, The University of Georgia, Georgia Southern University, and Berry College. With three quality teacher preparatory programs, Georgia had a well-trained pool of applicants for schools in Georgia and other states in the southeastern region. Since closing all teacher preparatory programs, Georgia has seen a steady decline in teacher applicants in both number and quality. Having been the former CTAE director for DeKalb County Schools, there are over 60 Engineering and Technology Education teachers in the district, less than 20 were trained in a traditional teacher preparatory program, all of which are nearing retirement age. Teachers now come from industry, alternative certification programs, or other disciplines like Math and Science. Districts throughout the state utilize the same hiring practices as DeKalb; to find a quality, motivated person with a related engineering background and provide the support and training necessary to enhance their knowledge and skills enough to teach Engineering and Technology Education. With a quality undergraduate program at the University of Georgia, districts will have the opportunity to hire appropriately trained teachers to be successful classroom teachers.

Though the teacher shortage has been a barrier, it has not stopped the growth in Engineering and Technology Education programs throughout the state. One could cite the emphasis on STEM over the last decade and the overwhelming industry needs within the engineering, electrical, manufacturing, and energy sectors as reasons for the engineering and technology program's resurgence. Schools throughout Georgia are beginning to re-open programs and add multiple pathways with two or more teachers. Colleges like Purdue, NC State, and many other universities have seen their undergraduate programs enrollment grow in recent years. For these reasons, the Georgia Department of Education firmly supports an Engineering and Technology undergraduate program to fill the overwhelming need we have state-wide for high-quality, well-trained teachers.

Sincerely,

Mr. Paul Camick

Mr. Paul Camick
Program Specialist, Engineering and Technology Education (start date – 4-18-2022)
Georgia Department of Education

Twin Towers East • 205 Jesse Hill Jr. Drive • Atlanta, GA 30334 • www.gadoe.org

International Technology and Engineering Educators Association
1908 Association Drive, Suite C
Reston, VA 20191

April 11, 2022

To Whom it May Concern:

The International Technology and Engineering Educators Association (ITEEA) is proud to be the organization representing educators worldwide in advancing technological and engineering capabilities for all people. We are writing to express our overwhelming support for the University of Georgia (UGA) Mary Frances Early College of Education's consideration of a bachelor's level teacher preparation program to certify Technology and Engineering teachers.

As you likely know, reports reveal that the United States will have 3.5 million open STEM jobs to fill by 2025. Exposing students to STEM education in PreK through Grade 12 is essential to addressing this shortage. Technology and Engineering Education programs, such as the master's level program at UGA and the bachelor's program being considered, are critical to ensuring we have teachers trained in introducing STEM concepts and educating students on prospective STEM careers, all of which require the use of technological products, systems, and processes. These students are our future, and our society needs them to be able to address existing and minimize future challenges created by technology and appropriately consider social, ethical, economic, environmental, and technical factors in decision making.

Unfortunately, with a critical nationwide shortage of teachers across the board that is even more apparent in STEM subjects, we need more programs available to those who wish to teach Technology and Engineering. Such programs are critical to developing highly trained and capable teachers who can introduce students to STEM fields and aid them in exploring relevant career pathways. We urge you to support this new program to avoid exacerbating the existing shortages in STEM educators and, ultimately, STEM jobs. We are hopeful that UGA will take advantage of this opportunity to be part of the solution!

Feel free to contact either of us personally should you have any questions or wish to discuss this issue further.

Respectfully,

Debra Shapiro
ITEEA 2022-2023 President

Kelly Dooley
ITEEA Executive Director

Georgia Technology Student Association
P.O. Box 2304 Acworth, GA 30102 Office: 678-551-0840 Email: sprice@gatsa.org

April 2, 2022

To Whom It May Concern,

We have a years-long ongoing problem that reflects a severe need to be addressed that has been a "dog chasing its tail" issue in Georgia and has created a severe problem in filling teacher positions for years. Documenting the need of loosing a teacher, has been hard to show on a report when the school closes the program after finding out there's not a highly qualified teacher available to fill it. Students from Georgia have been forced to leave the state to be trained in places like Purdue University in Indiana. The sad thing is, those students are offered contracts and are signed to teach elsewhere before they even get to their junior year.

I find it extremely hard to believe that the state of Georgia has allowed this to happen, even while Georgia's STEM, Technology and Engineering Pathway Programs have been exemplary national leaders, with our teachers training and presenting to other states for years. The programs are not being closed due to a lack of enrollment. There is a demand for these programs statewide, instead, they are closed for the lack of a replacement when a teacher retires or moves on. The STEM/Engineering Classrooms (and most likely other areas) throughout the state have a serious critical need situation regarding filling vacant skilled teaching positions with degreed/certified educators in that field.

In the early 1980s when I first began my career, GA had four colleges at that point producing certified teachers for Industrial Education, Technology Education and Engineering & STEM Pathway programs in middle and High Schools.

It dropped to two (UGA and GA Southern) then one and now no teacher ed programs at all in GA. UGA was instrumental in the development of our State Program certification. An effort to recruit and incentivize Georgia students to choose to earn a degree to teach in Georgia Engineering and STEM program classrooms is critical. Even though we have had a serious need of new teachers, we were never placed on the "critical needs" list that would incentivize a potential teacher to attend a GA College to earn a degree and stay to fill one of the classrooms in Georgia schools to teach, by forgiving their tuition debt based on their teaching that subject for a specified number of years after earning the degree. The reasoning was we never showed the percentage of vacancies in classrooms that qualified. The reason for that is, systems would close a program due to not being able to find a certified (Highly Qualified) teacher to take the job, so that school would not show an opening, which gave the incorrect data that did not truly reflect the dire need for teachers.

Our own students are being forced to travel out of state as far as Indiana, Pennsylvania, North Carolina, even Utah, to gain a degree to teach the subject. Georgia programs were recognized as the best. Why are we delegating the creation of the new generation of teachers to places outside our state? That has caused a never-ending downward spiral that has forced schools and school systems to "create" teachers to fill these classrooms. They have been placing recycled Math and Science teachers in place of degreed subject matter teachers to keep the program alive after a current teacher leaves or retires.

If someone doesn't do something soon, we're going to see the death of these programs. What a loss to Georgia Students who fill these classes.

It's possible and realistic to return opportunity for teacher prep inside GA to recruit and train teachers for Georgia classrooms. I'd like to see the University of Georgia back in business of generating outstanding Technology, STEM and

Engineering Educators coming from a University of Georgia Bachelor of Science degree program. With the shortage of choices of undergraduate degree programs in the southeast, UGA would draw from the entire southeast and beyond.

From my viewpoint as a 32-year Technology/Engineering Educator and over that last 10 years as the Executive Director of the Georgia Technology Student Association, I've seen so many of our teaching leaders, retire or leave education with no effort to replace them by the state. We hold our annual State TSA Leadership Conference right there in Athens. 3000 participants attend from the largest delegation in the nation with 230 schools affiliated (on a "comeback year" from COVID). An undergraduate program at UGA has full access to the best, most motivated engineering students to recruit from.

Respectfully,

R. Steven Price, M.Ed., D.T.E.
Executive Director, Georgia Technology Student Association
Past President, International Technology & Engineering Educators Association
National TSA Competitive Regulations Committee

April 12, 2022

To Whom It May Concern:

I am writing to express my support in re-establishing the undergraduate program in Engineering & Technology at the University of Georgia. Engineering is a growing field in our state and region, and it is necessary that school systems have the instructional leaders in place to adequately prepare and train students for careers in the field of engineering and technology. In Oconee County Schools, Engineering & Technology is a very popular pathway and student requests continue to grow. As the number of student requests for these classes increase, we cannot find certified teachers to fill these rolls.

As a CTAE Director, my goal is to provide our students with an education that will prepare them for the future workforce. Providing programs that meet students' career interests and goals is essential in CTAE. In order to do so, we must have teachers in the classroom who are both skilled and knowledgeable in the content area, but also have the instructional pedagogy and training necessary. Without teacher education programs that prepare teachers in the field of Engineering, we cannot find individuals who meet both criteria to make sure our programs and schools are successful.

Sincerely,

Beth Parks

Beth Parks
CTAE Director
Oconee County Schools
Bparks@oconeeschools.org

Johns Creek High School

Chris Shearer
Principal

Assistant Principals
Garrett Abelkop
Carlton Harris
Patrick Martin
Becca Myers

April 26, 2022

To Whom it May Concern:

Johns Creek High School and most of the high schools in Fulton County, offer Engineering and Computer Science pathways as part of our Career and Technical Education programs. At Johns Creek, these pathways are in such demand, that we typically have waiting lists for students, even at our introductory level classes. Our embedded coding class has increased student signups every year since inception.

Both the engineering and computer science fields are exploding in industry. The growth of embedded systems is driving programmer shortages nationally, and the engineering field is continuously expanding as well. We suffer from educator shortages in both engineering and computer science. This is most notably because industry pays a premium over what educational systems can pay employees. More talent is needed on both fronts.

Since both fields are experiencing shortages, it is critical that we begin to offer courses that are current and better aligned with industry. An undergraduate program in engineering that can also involve the embedded programming aspects of today' advanced systems could readily draw more students into these fields. It is incumbent on those in education to consistently align our efforts towards what industry needs. Electric car manufacturing alone is a prime example of why the need is so clear.

We strongly support any majors, minors, or other programs to help draw students into both secondary and post-secondary programs in engineering and computer science. Computer science is becoming a full-on engineering discipline altogether, and so the needs of both these fields are co-related and ever pressing.

Please do not hesitate to contact me if you have any questions.

Dr. Raymond T. Schenk, Cmdr. US Navy (ret)
AP Computer Science Teacher
Pathway Consultant/Curriculum Architect
Fulton County Schools
Schenkr@fultonschools.org/770.262.6419

References

Barker, R. (nd). Teaching engineering and technology education in Georgia's middle and high schools. Atlanta, GA: Georgia Department of Education.

Moye, J.J., Reed, P.A., Wu-Rorrer, R., & Lecorchick, D. (2020). Current and future trends and issues facing technology and engineering education in the United States. *Journal of Technology and Education, 32*(1), 35-49. https://doi.org/10.21061/jte.v32i1.a.3.

Documentation of Approval and Notification

Proposal: Major in Workforce Education (B.S.Ed.)

College: Mary Frances Early College of Education

Department: Workforce Education and Instructional Technology

Proposed Effective Term: Fall 2023

Approvals:

- Workforce Education and Instructional Technology Department Head, Dr. Lloyd Rieber, 10/17/22
- College of Education Associate Dean, Dr. Stacey Neuharth-Pritchett, 9/22/22

Letters of Support:

- College of Engineering Dean, Dr. Don Leo, 8/31/22
- Dacula High School Principal, Dr. Bryan Long, 3/24/22
- Johns Creek High School AP Computer Science Teacher, Dr. Raymond Schenk, 4/26/22
- Oconee Country Schools CTAE Director, Beth Parks, 4/12/22
- Georgia Technology Student Association Executive Director, R. Steven Price, 4/2/22
- Georgia Department of Education CTAE Program Delivery Program Manager, Roger Ivey, 4/10/22
- Georgia Department of Education Engineering and Technology Education Program Specialist, Paul Camick, 4/7/22
- Newton County Industrial Development Authority Vice President of Economic Development, Asher Dozier, 4/13/22
- International Technology and Engineering Educators Association President, Debra Shapiro, 4/11/22
- International Technology and Engineering Educators Association Executive Director, Kelly Dooley, 4/11/22