WIP: Navigating Scale and Scope: Designing a Preeminent First-Year Experience in Engineering—A Case Study in Curricular Overhaul, Collaborative Implementation, and Entrepreneurial-Minded Learning

Mr. Kevin Lindsay, University of North Carolina at Charlotte

My name is Kevin Lindsay, and I am an Associate Professor of Practice and Director for the Lee College of Engineering's Maximizing Academic and Professional Success (MAPS) Program. I have been working in the Lee College of Engineering since 2014, and I came to UNC Charlotte after 10 years at the Space Telescope Science Institute (STScI) in Baltimore, Maryland. My time at STScI culminated in my final duties as a Senior Research and Instrument Analyst, working on astrophysics research, astronomical data analysis, and space-based instrumentation characterization and calibration.

Dr. Yi Cao, UNC Charlotte

CAO Yi is a teaching assistant professor at William States Lee College of Engineering at the University of North Carolina at Charlotte. She earned her PhD from the Department of Engineering Education at Virginia Tech. She also worked as a research associate at the International Center for Higher Education Innovation(ICHEI), a UNESCO Category 2 Center for two years.

Lisa Glymph Lattimore MBA, MS, University of North Carolina at Charlotte

I am an Associate Professor of Practice for the Office of Student Success and Development within William States Lee College of Engineering at the University of North Carolina at Charlotte. I am currently a doctoral student in Curriculum and Instruction focusing on STEM Education. I hold a Master of Business Administration from The College of William & Mary of Williamsburg VA and a Master of Science in food engineering from Cornell University of Ithaca NY. I graduated with a Bachelor of Science in chemical engineering from Syracuse University of Syracuse NY. Prior to my role at the University of North Carolina at Charlotte, I was employed within the food and beverage, cosmetics, medical device and pharmaceutical industries for thirty years focusing on product/process development and quality compliance and management systems.

Mr. Sherman Mumford, University of North Carolina at Charlotte

Sherman Mumford is a Senior Lecturer in the Lee College of Engineering at the University of North Carolina at Charlotte. He serves as Director of Engage ME!, a mentoring and support program for broadening participation in Engineering, Engineering Technology and Construction Management. A graduate of UNC Charlotte and Eastern Michigan University, he previously held engineering and manufacturing leadership roles in Fortune 500 companies across the commercial vehicle, aerospace, defense, and diagnostic imaging sectors. His work in continuous improvement, ergonomics, automation, and robotics earned multiple quality achievement awards. Additionally he has earned professional certifications, including Six Sigma Green Belt, CMfgE, and ASQ-CQE. Mr. Mumford is an active member of ASEE, NSBE, and SME, and serves on several STEM education advisory boards. His teaching and service focus on student success, inclusive excellence, and strengthening STEM identity and belonging.

Dr. Rachael B. Ohu, University of North Carolina at Charlotte

Dr. Rachael Ohu is a Lecturer and serves as the Director of the WE Engage! (Women Engineers Engaging the World) program in the Office of Student Development and Success in the William States Lee College of Engineering at UNC Charlotte. Dr. Ohu's teaching centers on first-year student engagement and foundational skills, including teaching Engineering Visualization and Graphical Communication (ENGR 1303), Engineering Pathways (ENGR 1100), and Engineering Practices and Principles (ENGR 1201). She also previously taught first-year engineering courses at Montana State University, Billings. She is dedicated to the holistic development of early-career students, guiding them in exploring engineering career paths, and providing focused support for female engineering students. Dr. Ohu earned her M.Sc.

and Ph.D. degrees in Structural Engineering from Universiti Putra Malaysia and her BSc. Eng. degree in Civil and Water Resources Engineering from the University of Maiduguri in Nigeria. Her professional background includes industry experience as a structural engineering consultant in Abuja, Nigeria, specializing in multi-story structures and reinforced concrete design. Her academic expertise in Structural Engineering—including her research specialization in the structural strengthening and rehabilitation of reinforced concrete structures—informs her instruction, allowing her to connect core engineering principles to real-world infrastructure challenges.

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Abstract:

This Work in Progress paper details the historical process of designing and implementing a new Common First-Year (CFY) program for the William States Lee College of Engineering at UNC Charlotte. Spanning a nearly three-year period, this initiative aimed to develop a new first-year course structure based on modern pedagogies, current technologies, and a holistic multi-disciplinary approach, with the goal of creating a preeminent first-year experience for our students. The program was designed to provide students with a strong foundation in core skills, allowing them to explore various disciplines before declaring a major.

A unique aspect of this initiative has been the intentional inclusion of a cross-collaboration model involving faculty and staff from different departments within the College, and with campus partners. The curriculum design was heavily influenced by the Kern Entrepreneurial Engineering Network (KEEN) framework, which embeds Entrepreneurial-Minded Learning (EML) concepts such as curiosity, connections, and value creation into each new course. The initiative also required addressing new College-based policies related to admissions, which has allowed for a larger and more diverse enrollment. Additionally, a new University-based approach to classroom assignment policies made it necessary to leverage existing active learning classroom spaces, while doubling or tripling first-year engineering class sizes.

With an expected enrollment increase of approximately 45%, the largest in the program's history, the College hired five new faculty members to support first-year instruction and curriculum development and recruited three additional discipline-specific faculty from partner departments to contribute to the initiative. We are currently in the first-semester implementation of this program and have not formally assessed or measured outcomes for any of the four new courses. Our early observations suggest high levels of student engagement and positive feedback from both students and instructors regarding the new CFY courses.

Although formal assessment and long-term learning outcome measures are still in progress, the success of the curriculum redesign will be evaluated using metrics related to academic performance, student retention, engagement, and self-efficacy, as well as faculty perceptions of interdisciplinary and cross-department collaboration. It is our expectation that students who successfully complete all needed CFY courses will transition from their first-to-second years having developed a broader set of necessary fundamental skills, while cultivating a deeper level of foundational understanding of the College of Engineering degree programs and associated careers, allowing them to accurately chart their path forward. This Work in Progress paper outlines the challenges and successes of this multifaceted collaboration model and provides a detailed timeline of the curriculum development process, offering a case study for other institutions pursuing similar curricular overhauls.

Keywords: Common First-Year; Curriculum Development; Multidisciplinary; KEEN; Active Learning; Holistic

1. Introduction and Motivation

1.1. Context and Institutional Setting

Within the William States Lee College of Engineering (LCOE) at UNC Charlotte, the primary goals of the first-year student-focused Office of Student Development and Success (OSDS) are to improve retention and graduation rates, while increasing enrollment by successfully guiding new students through their first-year experience. OSDS works to immerse first-year students into the LCOE, and UNC Charlotte as a whole, by serving as the home of the Common First-Year (CFY) design, development, and instruction.

Drawing on 25 years of cumulative faculty experience within the LCOE's first year–focused department, CFY committee suggests that the first year is an important period of academic adjustment and growth. As such, it offers a strategic point for introducing and evaluating new curricular developments.

The vision of our CFY program further developed from an improved understanding of innovative Engineering Education-based initiatives. These initiatives align with the LCOE goals to enhance foundational knowledge, expand exploration of majors, and provide flexibility to new students in choosing their major. Steps were taken toward this goal as the CFY Task Force Committee formed in April 2023, led by the LCOE Faculty Organization (CEFO). This committee, comprised of LCOE faculty council representatives, were initially guided by three primary themes:

- Student Preparedness: Adapt to the trend of a student's broadening capabilities by providing and/or confirming a fundamental level of mathematics understanding.
- Student Engagement: Provide a showcase experience for first-year students that instills intrinsic motivation and enthusiasm, while increasing hands-on engagement in an active learning environment where students are able to demonstrate both technical and soft skills.
- Academic Opportunities: Increase exposure to, and understanding of, available professional disciplines and associated career paths, while allowing flexibility in the timing for students to choose their academic path.

Another theme relates to the specific topics and concepts being taught in the first-year, and the subgroups of students who would engage with them. Before the CFY program, all engineering first-time-in-college students were forced to choose between specific engineering or engineering technology degree programs before the start of their first semester. The urgency of these decisions was the result of having multiple discipline-specific courses that students were required to take in their first and/or second semester. If a student completed one or more of the discipline-specific courses and then changed their major, they would likely have to take a different course or set of courses, and those previously completed would result in wasted time and financial resources [1].

This approach also left students with inadequate skill development and a lack of exposure to tools that they could or would use in their upper-level courses. As such, the committee was tasked with developing a revised curricular framework that would provide early exposure to a broad range of tools, concepts, and processes, establishing a holistic educational experience with

a significantly deeper understanding of potential academic and professional pathways. Inherent to this framework was the committee's goal to provide opportunities for students to solve problems individually, in teams, and in a flexible learning environment with increased agency, ingenuity, and opportunities for critical thinking.

1.2. The Vision: Defining a "Preeminent" First-Year Experience (FYE)

It was the mission of the CFY Task Force Committee to develop a CFY curriculum that would provide an experience to engage, inspire, and motivate new LCOE students. Through a series of creative brainstorming sessions, the committee examined a wide range of first-year initiatives, comparing different curriculum design approaches. These discussions considered factors such as the balance of engineering-specific courses within the broader set of first-year requirements, various first- and second-semester pathways, innovative and contemporary teaching methods, and the organization and content of individual courses. The committee also explored opportunities for collaboration with other academic departments and campus partners, alignment with upper-level courses, relevant university policies, first-year student characteristics, and appropriate class sizes and spaces.

In comparing the first-year experience to the curricula in upper-level courses, focus was placed on the content, information, and knowledge that our students must have to succeed in each of the respective degree programs. In some cases, this strategy led to the discovery of what may have been viewed as unnecessary upper-level subject matter instruction. Another key goal for CFY development was to help students graduate in a timely manner by ensuring they could make an informed decision in their selection of degree programs, removing the potential for program regression. As such, it was necessary to carefully evaluate the needs of each degree program to determine if they could all be included, addressing the process for designing an engaging curriculum to meet the needs of all students.

At the institutional level, the LCOE has been integrating hands-on, project-based learning experiences across its degree programs since 1992. This pedagogical approach was first implemented by the Mechanical Engineering department, expanding to other disciplines in the early 2000s. This educational philosophy has remained a defining feature of the overall LCOE curriculum, continuing through the development of the four CFY courses. The CFY courses were designed to adopt a holistic, multidisciplinary, and real-world approach, exposing students to a broad range of perspectives, strategies, and analytical techniques. To expand student engagement and learning opportunities further, the CFY committee worked with educational researchers to implement a wide range of pedagogies. In addition to project-based learning, experiential learning and flipped classroom activities have become integral to the first-year experience.

In May 2024, the development of the four CFY courses began in earnest with the kick-off of a two-day multi-departmental workshop. This workshop highlighted Entrepreneurial Minded Learning (EML) [2], which became a key element of CFY curriculum development as our College worked toward becoming a member of the KEEN network. As curriculum development progressed from May 2024 through summer 2025, all four CFY courses pursued opportunities to incorporate EML based on the KEEN Framework's 3 C's: 1) Curiosity, 2) Connections, and 3)

Creating Value, and the wide array of resources provided through the Engineering Unleashed website.

1.3. Paper Scope and Contribution

This paper documents the historical development, collaborative model, and preliminary challenges associated with the three-year design and implementation process, positioning the initiative as a case study for institutions facing similar issues related to scaling, cross-unit collaboration, and curricular scope. The following sections describe the processes and challenges associated with increased course enrollment (50–60%), growth in incoming first-year enrollment (45%), pedagogical adaptations, expanded collaborations with inner-College and campus partners, and adjustments to updated College admissions and university classroom scheduling policies.

In addition, toward this effort of redesigning the CFY curriculum, stakeholders from each COE degree program contributed to both the conceptual design and material development of the four new CFY courses. The Center for Teaching and Learning (CTL) served as an integral partner, supporting course development and curricular innovation through instructional design consultation and faculty development. College leadership further facilitated implementation by coordinating planning, aligning resources, and supporting cross-unit collaboration throughout the process.

2. Curricular Scope: Design and Pedagogical Framework

2.1. Old vs. New Course Structure

The CFY engineering curricular structure evolved from the prior first-year engineering course framework. Development came in the form of doubling class sizes from 24 to 40 and 70+ students, transitioning from a lecture-based learning environment to an active learning environment and the establishment of working in teams across the entirety of the curriculum. In one first-year class the transition from lecture-based learning, including lectures, classwork and exams to active learning including lectures, classwork, homework, quizzes, exams and team projects. The goal for integrating more of an active learning environment across all first-year classes is to provide students with an opportunity to explore the topics in greater detail and to increase and improve Instructor-to-student interactions.

Teamwork was previously introduced to the first-year students; however, with the CFY engineering program, teamwork is mandatory for successful completion of the CFY courses. With increased opportunities to work in teams across the CFY classes, students can not only establish a broader network of peer-to-peer connections but can also begin to fully develop essential team-based skills necessary for future academic and professional success. The team projects range from a week-long to semester-long across the four (4) diverse CFY courses, engage students through varying approaches, and cover widely different topics.

The breadth of these team experiences provides students with opportunities to learn to accelerate innovation, problem-solving, and decision-making through engagement with diverse perspectives, skills, and ideas. Their hands-on immersion into simultaneous, but diverse

problem-solving scenarios leads to more creative solution development, avoiding groupthink, and better tackling complex challenges through just-in-time critical thinking development [2], [3]. This diversity fosters a richer knowledge base, enhances adaptability, and improves overall entrepreneurial thinking and performance by providing broader insights into topic and concept connectivity. The shift in curriculum structure from pre-CFY to post-CFY can be seen in Table 1 in Appendix A.

2.2. Integrating Entrepreneurial-Minded Learning (EML)

As the foundational framework of the KEEN Network, EML was integrated into all of the CFY engineering courses in multiple ways. The framework highlights the importance of curiosity, connection and creating value. Each course identifies ways to integrate these values into the course. In the course entitled 'First-Year Math and Science', EML is demonstrated by providing a weekly feature called Two-Minute Stories. Each week, a short engaging story related to the week's topic was shared, highlighting notable discoveries or advancements in math, science and engineering. The stories emphasized the innovators' curiosity, their ability to make meaningful connections and the value their work created.

In the CFY course entitled 'First-Year Visualization', EML is prominently demonstrated through the Team Digital Fabrication Project and subsequent video pitch competition, which required students to shift from being passive learners to active innovators seeking to create value.

The Team Digital Fabrication Project directly applied the three core tenets of EML: (1) Curiosity: Teams were required to consider and investigate user needs and market opportunities (e.g., acoustic performance, aesthetics, added utility) [4] to determine which custom modifications would best increase their product's appeal and value proposition, (2) Connections: Students had to connect their foundational knowledge of modeling and fabrication with the non-technical discipline of persuasive communication and marketing to articulate the technical advantages of their design to a non-technical audience (their peers/the client), and (3) Creating Value: The goal of the pitch was not simply to show a successful model, but to demonstrate how their custom changes added superior functional or aesthetic value to the original product, thereby positioning their team to win the simulated contract award.

2.3. Holistic, Multi-disciplinary Approach

In the prior first-year engineering curriculum, students were expected to have identified their engineering major on the first day of enrollment. Now, first-year students can wait until they have completed the four (4) CFY engineering courses before committing to a defined four-year path. Relative to the level of work that students now do to engage with their potential future academic and professional prospects, pre-CFY first-year courses spent minimal time exploring the different engineering-related degree programs and associated professional pathways. In particular, the new CFY course entitled, 'First-Year Exploring Engineering', provides an in-depth exploration of the engineering disciplines, careers, and professions. This allows students to develop a holistic level of academic and professional understanding to make a truly informed decision about their future commitment.

3. Implementation and Scale Strategy

3.1. The Collaborative Model (Internal College Collaboration & External Campus Partners)

OSDS, as a unit, primarily focuses on the teaching and advising of all First Time In College (FTIC) first-year students in the COE. This group of faculty and staff are intimately aware of the unique mindset of first-year students, which centers around several transition areas as they move from the structured environment of home and high school to the autonomy of campus life at a major university, while simultaneously navigating identity formation, academic rigor, and social integration [5]-[8]. The OSDS team strategically supports their needs. Based on the experience in OSDS, these transition challenges often manifest in several ways:

- The Independence Paradox: While students crave freedom, the sudden loss of external "guardrails" (like parental reminders or high school schedules) frequently leads to a spike in anxiety and a sense of being overwhelmed.
- The Fragility of Belonging: Early challenges, such as homesickness or a poor grade, can feel like an indictment of their "fit" at the university, making resilience and peer support critical for retention.
- The Pressure of New Stakes: Balancing the desire for social acceptance with the escalating demands of College-level work often pushes students into a cycle of chronic stress, making proactive campus involvement and mental health resources essential for a successful adjustment.

Limited informal faculty engagement with first-year students often obscures the socio-psychological transition points critical to student success. To mitigate this, the CFY program utilized a cross-departmental collaborative model, integrating faculty into curriculum design, resource development, and instruction. This multi-disciplinary approach ensured that course content remained pedagogically sound and grounded in departmental relevance through continuous faculty feedback and direct classroom involvement.

In addition to departmental faculty, the collaboration of external campus partners such as the Registrar's Office, CTL, the Super Fab Lab, the Library, University IT support, the University Center for Academic Excellence (UCAE), and the Career Center were very instrumental to the successful launch and continued success of the CFY courses. More than mere support staff, these external campus partners serve as collaborative architects for the first-year experience. The seamless integration of University IT support, the Office of the Registrar, and the library creates the structural stability necessary for large-scale curricular success, while specialized hubs like the Super Fab Lab, the Career Center, the UCAE, and CTL inject innovation and real-world relevance into the student journey.

3.2. Managing Enrollment and Policy Challenges (Scale)

To address state-level workforce demands and expand the engineering pipeline, the COE revised its admissions criteria to improve access. The traditional model, reliant on standardized test scores (SAT-M $\geq$ 570/ACT-M $\geq$ 23) and specific secondary prerequisites, was augmented with a test-optional pathway for students maintaining a minimum 2.8 weighted GPA and a qualitative assessment via essay. As a result, enrollment for FTIC students increased from 695 in fall 2024, to 1016 in fall 2025 just as we were launching the new CFY curriculum. With this jump in enrollment, section sizes for first semester introductory engineering courses increased from approximately 24 students to between 40 and 70 students. This shift expanded the academic diversity of the incoming cohort, necessitating a differentiated, tiered instructional model

supported by intentional student tracking through the CFY curriculum. Concurrently with rising enrollment, the program adopted an active learning pedagogy, supported by a comprehensive audit of campus facilities and the subsequent development of dedicated active learning classrooms designed to optimize student engagement.

3.3. Faculty and Personnel Integration

To support the four newly developed CFY courses, five faculty with Engineering Education degrees and/or related experience were hired to complement the five existing faculty members with pre-academic backgrounds working in industry. This core team is further bolstered by three discipline-specific faculty recruited from the Departments of Electrical and Computer Engineering, Electromechanical Engineering Technology, and Civil and Environmental Engineering to support CFY course instruction needs for the fall 2025 incoming first-year class. To complement the new faculty, the department hired three student success specialists: two assistant-director-level professional advisors and one academic advisor. These additions bring significant expertise in student development and retention.

4. Integrated Timeline and Summary of the CFY Curriculum Initiative (2023–Present)

The CFY initiative represents a multi-year, college-wide effort to redesign the first-year engineering experience at a large public research university. The initiative aims to improve student retention, enhance disciplinary exploration, strengthen foundational competencies, and align the curriculum with national best practices in engineering education.

The timeline provided in Appendix B synthesizes key developments from January 2023 through March 2024, corresponding to Phase 1 (Planning and Vision), Phase 2 (Design and Policy Approval), and Phase 3 (Pilot and Initial Implementation). The timeline and summary documents the evolution of the CFY vision, the governance processes guiding its development, and the emerging structures supporting its implementation. This work-in-progress reflects the complexity of large-scale curricular change and the collaborative effort required across departments, committees, and administrative units, summarized as follows:

- Course Development Teams and Deadlines: Over the phases of development and implementation, each CFY course was developed by a team that included representatives from each department. All curriculum proposals, including new CFY courses and modifications to existing curricula were submitted before CFY represented meetings.
- Faculty Recruitment and Innovation Initiatives: A college-wide recruitment effort was launched to appoint faculty to four development and implementation committees. Additionally, a two-day “Brains on Fire” workshop was scheduled for May 2024 to promote creativity and integrate themes such as entrepreneurship and hands-on culture into the CFY curriculum for each course.
- Integrated Summary and Work-in-Progress Assessment: Across Phases 1–3 in Appendix B, the CFY initiative evolved from conceptual exploration to structured implementation. Early discussion focused on the need for a unified first-year experience, improved retention, and clearer pathways for undeclared students. Subsequent phases addressed governance, faculty engagement, and the development of a flexible curriculum responsive to diverse student preparation levels. Key challenges identified include:
    - Ensuring alignment with transfer pathways and statewide articulation agreements

- Addressing declining math readiness and coordinating foundational STEM courses
- Balancing credit-hour constraints with disciplinary needs
- Maintaining transparency and faculty trust in governance processes

The establishment of multi-layered committees, cross-disciplinary coordination teams, and faculty development workshops reflects a collaboratively maturing implementation infrastructure for the College. As of March 2025, the CFY initiative was positioned to transition into detailed curriculum development and pilot testing, with full implementation targeted for Fall 2025 as seen on the Expected Timeline graphic in Appendix C.

5. Preliminary Challenges and Next Steps

5.1. Challenges of First-semester Implementation

The implementation of the redesigned CFY curriculum in fall 2025 faced a set of structural, logistical, and pedagogical challenges typical of large-scale curricular transformations in engineering education. As enrollments increased from 695 students in fall 2024 to 1,016 students in fall 2025, and section sizes expanded from approximately 24 students to between 40 and 70 students, sustaining these interactions became increasingly difficult for every CFY course instructor and advisor. Faculty workload and instructional preparation represented additional challenges. Transitioning from lecture-based instruction to project-oriented, student-centered pedagogies required significant investment in curriculum development and coordination among instructors. Physical space and institutional policies further constrained course implementation. The inclusion of new faculty hires and increased collaboration with discipline-specific departmental faculty, strengthened disciplinary integration, but also introduced variation in teaching approaches and classroom dynamics.

Second, ensuring instructional consistency across multiple sections also emerged as another central challenge. The foundational design and computing courses required alignment in course pacing, assessment structures, grading practices, and instructional quality across a large instructional team. To support coherence, the program implemented regular coordination meetings, shared instructional resources, and common assessment frameworks. While effective in promoting consistency, these mechanisms required substantial faculty time and coordination, increasing overall instructional workload.

Finally, supporting and assessing students' metacognitive development, self-awareness, and sense of belonging within the engineering community remains a complex challenge [9], [10]. Although these outcomes are increasingly recognized as critical to student persistence and success [10], they are difficult to measure within early-course contexts [11]. Addressing these *dimensions at scale will require continued attention to instructional design, faculty and TA support structures, and institutional coordination.*

5.2. Early Successes/Observations

Despite these challenges, early evidence points to positive outcomes in both student learning and faculty engagement. Faculty participating in the redesign reported renewed enthusiasm for teaching and stronger collegial connections across departments, reflecting a growing instructional community anchored in shared pedagogical goals. Informal observations and midterm evaluations suggest that student engagement has notably improved in courses that integrate multidisciplinary team-based projects and EML-based activities, consistent with prior studies linking EML approaches to enhanced intrinsic motivation and persistence in engineering programs.

Quantitative findings from a midterm evaluation survey further illuminate positive feedback from CFY curriculum students. Students reported high levels of agreement that the course fostered key professional and collaborative skills. Students also reported generally positive perceptions of the redesigned course organization and learning support from CFY courses. Comments highlighted strong enthusiasm for project-based teamwork ("This is a fun class!"; "I like how the projects are organized and how we get to work in teams") alongside constructive criticism regarding the need for greater coherence and transparency across course components.

What's more, students also expressed particularly strong support for the collaborative learning environment based on their feedback on the CFY curriculum. A majority agreed that team activities effectively reinforced course concepts, and they reported high comfort levels in seeking help from instructors or peers. Collectively, this feedback points to a supportive and team-based learning culture that can better promote approachability, belonging, and peer collaboration, factors closely associated with early persistence in CFY curriculum.

6. Conclusion

As this paper documents the initial implementation of the redesigned CFY curriculum, many of the challenges identified reflect first-time execution rather than limitations in curricular intent or learning objectives. Following the successful resolution of logistical issues, our future work will transition from implementation-based observations to an evidence-based assessment of student achievement throughout the CFY sequence.

Our future work will incorporate multiple sources of evidence, including student surveys, course-level assessment artifacts, instructor and teaching assistant reflections, and qualitative classroom observations, to examine how the redesigned curriculum supports foundational engineering competencies, metacognitive development, and students' sense of belonging in engineering. As this new curriculum was first implemented during the fall 2025 semester, assessment results are very limited. With that said, initial work completed is covered in greater detail in the accepted 2026 ASEE CFY paper titled, "Supporting Informed Major Selection Through Curriculum-Embedded Modules and Departmental Engagement".

Comparative analyses across course sections and semesters will be used to assess consistency in learning outcomes as instructional practices and logistical structures stabilize. The final version of this paper will report preliminary findings from these assessments and describe how assessment results are being used to inform iterative curriculum refinement, instructional support, and resource allocation. By foregrounding evidence-based evaluation of student learning, this work aims to contribute practical insights for institutions seeking to, develop, assess and sustain large-scale first-year engineering curriculum reform.

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Appendix A

Table 1: General changes made to the first-year curriculum for engineering degree programs.

*Before Redesign	After Redesign
First semester	**First semester**
Introduction to Engineering I	Exploring Engineering & Technology with Success
Calculus 1	**MATH #1
Discipline Specific Engineering or Science Course	Foundations of Math & Science for Engineering
Discipline Specific Science Elective	Gen Ed Theme Course
Gen Ed Theme Course	Gen Ed Theme Course
Second Semester	**Second Semester**
Discipline Specific Introduction to Engineering II	Logic and Computational Problem Solving
Gen Ed Theme Course	Engineering Visualization & Graphical Communication
Calculus 2	**MATH #2
Physics for Science and Engineering I	Physics for Science and Engineering I
Physics for Science and Engineering I Laboratory	Physics for Science and Engineering I Laboratory
Writing and Iquiry Course	Writing and Inquiry Course
Discipline Specific Math Course (For specific majors)	**Opened the pipeline for starting math course

*Based only on Engineering degree programs, not Engineering Technology (ET), as each ET program previously maintained a unique first-year curriculum.

Appendix B

Phase 1: Planning and Vision (January–November 2023)

January 17, 2023 — Initial Visioning: The College of Engineering Faculty Organization (CEFO) initiated discussions on modernizing foundational engineering courses, including Freshman Experience, Professional Development, and Capstone. CEFO Leadership introduced the concept of a Common First Year and scheduled multiple brainstorming sessions to gather faculty input.

March 7, 2023 — Engineering Track to Success (FEGR) Proposal: The Office of Student Development and Success proposed reinstating the FEGR designation to support students not meeting engineering admission requirements. CEFO leadership acknowledged the program's potential but noted procedural concerns. Progression and continuation requirements were outlined, emphasizing academic performance, advising engagement, and timely course completion.

May 9, 2023 — Admission Requirements and Common First-Year (CFY) Framework: CEFO voted to transition from fixed admission criteria to a competitive admissions model, aligning with statewide trends. The CFY task force presented a preliminary curriculum framework incorporating engineering, mathematics, science, and general education components. Faculty raised concerns regarding credit-hour constraints, alignment with Engineering Technology pathways, transfer student compatibility, and the feasibility of multiple math pathways. A motion passed to continue CFY development and return with revisions in August.

August 29, 2023 — Data-Driven Justification and Motion Amendments: Updated institutional data indicated low internal migration among engineering majors (5%) and a notable loss of students to other colleges (15%). These findings strengthened the rationale for a unified first-year experience. Faculty amended the CFY motion to require a maximum of 124 credit hours for degree programs, reflecting concerns about curricular compression. Additional issues surfaced regarding ET student pathways, transfer alignment, and the need for flexibility for students struggling in calculus.

October 31, 2023 — Math Preparedness and Structural Considerations: Faculty discussions focused on declining math readiness among incoming students and the need for revised placement strategies. Proposed changes included a flexible math sequence, a combined algebra–precalculus course, and a co-requisite model linking calculus and physics. Three academic tracks—Engineering, Math & Science, and General Education—were proposed to structure the CFY curriculum.

November 28, 2023 — Math and Physics Coordination: The Dean of Sciences and departmental chairs expressed openness to revising Calculus I and II to better support engineering students. Consideration was given to requiring standardized test scores for placement. CFY discussions were postponed pending further coordination between math and physics faculty.

Phase 2: Design and Policy Approval (January–February 2024)

January 23, 2024 — CFY Design Updates and Faculty Dialogue: A detailed implementation timeline targeting Fall 2025 was presented. The CFY curriculum was described as flexible, student-centered, and adaptable to varied math backgrounds. Faculty raised questions regarding major declaration, participation of non-calculus-based majors (Construction Management and Fire Safety), transfer student pathways, and departmental readiness. CEFO president clarified that departments would not need to finalize downstream curriculum changes until Fall 2026.

February 20, 2024 — CFY Motion and Voting Procedures: The CFY committee advanced a motion for a college-wide vote. Due to concerns about fairness and anonymity, CEFO approved an electronic Qualtrics-based voting process. Faculty debated the participation of non-CFY departments, the status of course content, and the implications of a "yes" or "no" vote. It was clarified that the vote concerned the CFY framework rather than final course specifications, which would be refined by future committees.

Monday, July 15, 2024 — CFY Stakeholder and Progress Meeting Stakeholder Involvement CFY - What's Been Done

Monday, October 28, 2024 — CFY Canvas Template Discussion with the Center for Teaching and Learning (CTL)

Phase 3: Pilot and Initial Implementation

March 26, 2024 — Organizational Structure for Implementation: The organizational framework for CFY implementation, emphasizing distributed leadership and cross-departmental collaboration was presented. Three major structures were established:

1. Logistics and Resources Group
   Responsible for classroom needs, team-teaching logistics, and resource coordination.
2. Revised Former CFY Committee
   Now composed solely of Undergraduate Program Directors, with some original committee members retained for continuity.
3. Subject Coordination Teams
   - Math–Physics Coordination Team
   - Civil Engineering–Chemistry Coordination Team

Friday, February 28, 2025 — Center for Teaching and Learning Professional Development Workshop: Active Learning for CFY

Monday, May 12, 2025 — KEEN in the Carolinas inaugural Co-creation and Networking Event The first KEEN in the Carolinas day will be held in Charlotte, North Carolina, bringing together Carolina KEEN partner institutions and Charlotte faculty for a regional engagement and professional development event.

Appendix C

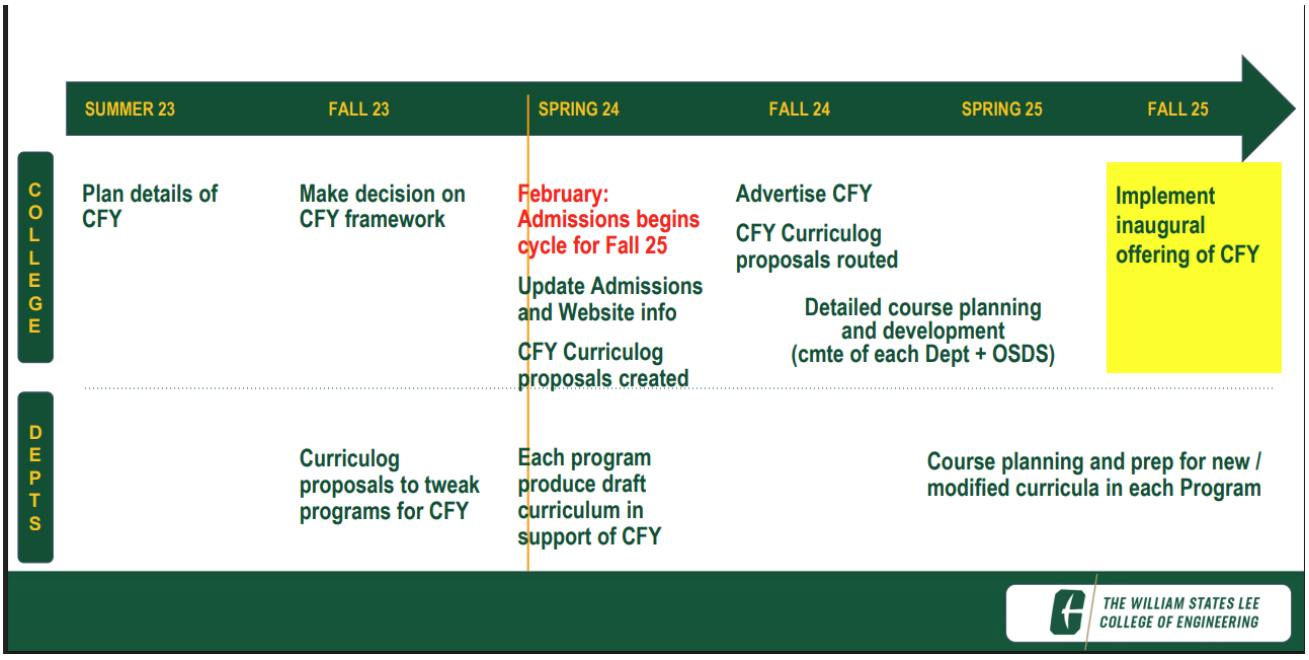

Figure 1. Expected Timeline for Fall 2025 CFY Implementation.

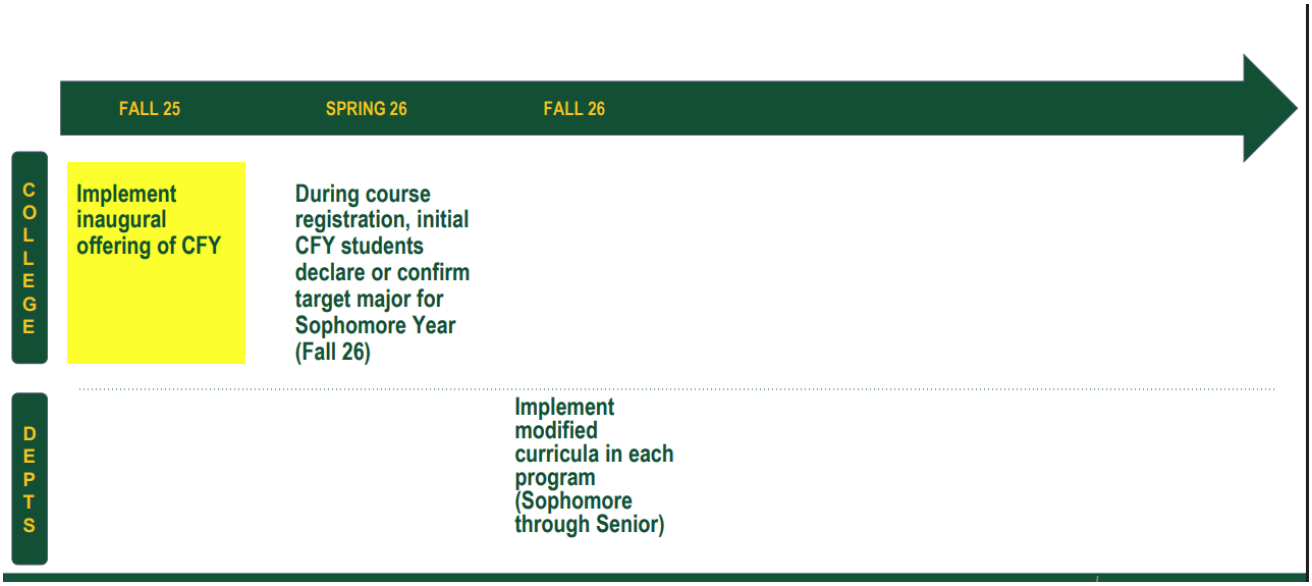

Figure 2. Expected Timeline for Fall 2025 CFY Implementation (continued).