The following individuals signed the attendance sheet:

Yawo Amengonu, Yamilka Baez-Rivera, Anthony Bombik, Nan BouSaba, Valentina Cecchi, Youxing Chen, Harish Cherukuri, Jim Conrad, Mahmoud Dinar, Abasifreke Ebong, Ahmed El-Ghannam, Terence Fagan, Kosta Falaggis, Wei Fan, Wei Gao, John Hall, Meg Harkins, Mohamad-Ali Hasan, Tao Hong, Simon Hsiang, Olya Keen, Rob Keynton, Christoph Kossack, Churlzu Lim, Kevin Lindsay, Dipankar Maity, Glenn Moglen, Edward Morse, Brigid Mullany, Sherman Mumford, Asis Nasipuri, Dave Naylor, John Nettles, David Newell, Tobi Ogunro, Jaewon Oh, Jose Outeiro, Srinivas Pulugurtha, Jeff Raquet, Ron Sass, Sam Shue, Stuart Smith, Lingguang Song, Tyler Stover, Regina Vrikkis, Ke Wang, Kimberly Warren, Qiuming Wei, Matthew Whelan, Jay Wu, Linda Xie, Terry Xu, HaiTao Zhang, Tiefu Zhao, Nigel Zheng, Lei Zhu

(56 Attendees)

AGENDA:

1. Welcome from CEFO President Jim Conrad

Jim Conrad called the meeting to order at 11:38 AM and introduced the agenda. One assembly member asked to add proxy voting to the agenda. Jim Conrad proposed discussing this item during the next CEFO meeting. The faculty member expressed his concern that we do not have a voting mechanism in place and proposes to have something before we start voting on things. It was agreed to make some time for a quick straw poll in order to gauge the support for proxy voting. The agenda was amended and the assembly voted on it.

2. Minutes from the last CEFO meeting (September 26, 2023)

CEFO Secretary Kosta Falaggis presented the minutes from the last CEFO meeting. He asked the assembly whether any changes needed to be made or comments needed to be documented. Nobody in the assembly raised a concern. A motion passed to accept those minutes. There were no objections to accepting the minutes from the last meeting, and the meeting moved forward.

3. Short remarks from CEFO President Jim Conrad

Jim Conrad gave some remarks on CEFO faculty governance and why the assembly is meeting. He mentioned we would meet two to four times a semester every Tuesday between 11:30 AM and 12:45 PM in G 287. Jim Conrad also gave an example of faculty governance (e-mail about the Chancellor appointing the new Provost without a search). Other possible discussion topics were presented (AI-generated content, computing environment, revisiting entrance criteria).

4. Common First-Year updates presented by the CFY committee chair Aidan Browne

Aidan Browne gave an update on the common-first year. He welcomed attendees and expressed gratitude for their participation in the brown bag meeting.

- Committee Efforts and Academic Framework Discussion
  - Aidan described the extensive efforts over several months to balance the diverse constraints and requests from executive and faculty councils.
  - He emphasized the consistent focus on a four-year, 120-credit academic framework.
  - Aidan referenced a recent Faculty Council meeting where Claire Kirby highlighted the emerging trend of students seeking flexibility in changing majors during their freshman year.
  - He mentioned an ongoing committee effort to explore options allowing freshmen to change majors without academic setbacks.
  - Aidan reminded the audience of the target for Fall 2025 implementation, underscoring the need for a longer planning period than initially planned.
  - He stressed the importance of February as a pivotal month for commencing the admissions cycle for the following academic year.
- Curriculum Development and Implementation Strategy
  - Aidan emphasized the need for immediate decision-making to enable detailed planning for the Fall 2025 curriculum implementation.
  - He discussed the concept of first-year students beginning with engineering and declaring their major in the second semester.
  - Aidan also brought up the varying GPA requirements for different majors and the structuring of first-semester courses.
- Addressing Mathematics Education Challenges
  - Aidan acknowledged a general decline in students' math preparedness.
  - He presented an analysis of math grades from Fall '22 and Spring '23, purposefully excluding engineering students, to assess major-specific performance.
  - Aidan highlighted the significant failure rates in math courses, particularly among first-year students.
  - He detailed the methodologies for math placement, including SAT/ACT scores, Alex test results, and AP Calculus performance.
- Proposals for Revising Math Course Structure
  - Aidan suggested a new flexible math sequence for freshman-year students.
  - He proposed developing a combined algebra and precalculus course for students with advanced skills.
  - Aidan discussed the issues with Physics I prerequisites and the potential need to reshape the curriculum to align with new math structures.
- Collaborative Initiatives with the Physics Department
  - Aidan discussed the physics department's initiative to teach engineering and physics majors differently.
  - He proposed the idea of teaching calculus and physics as co-requisites, streamlining the academic pathway for engineering students.
  - Aidan mentioned the positive response from the physics department regarding the proposed curriculum restructuring.
- Outline of Comprehensive Curriculum Tracks
  - Aidan elaborated on the development of three distinct academic tracks: engineering, math and science, and general education.
  - He considered the possibility of altering the timing of the Alex test to May to capitalize on students' current engagement in math.

- ➢ Aidan discussed strategies for curriculum support for new students, including teaching approaches for calculus and physics.
  - ➢ He also emphasized that NC state would like to increase the number of students by 4000, and we have to accept the realities that the 600 new students we are receiving will not be better prepared than the students we already have.
- Plans for Future Discussions and Sessions
  - ➢ Aidan announced two upcoming brown bag sessions focusing on specific challenges:
  - ➢ The October 7 session will address the math proficiency issue.
  - ➢ The November 14 session aims to refine the syllabus for four key engineering courses.
  - ➢ He acknowledged the challenges of increasing engineering student intake and its impact on math proficiency standards.

5. Presentation from CoE Dean Robert Keynton

- Dean Robert Keynton opened his address by thanking the attendees and emphasizing the importance of understanding the administrative perspective on recent changes.
  - ➢ He expressed a desire to provide deeper insights into the challenges and decisions at his level, aiming to foster a better understanding among faculty.
  - ➢ Highlighting the Importance of Communication
  - ➢ Dean Keynton stressed the significance of effective communication between different academic levels.
  - ➢ He acknowledged the existing information gap and expressed his commitment to bridging it through clearer communication of his challenges.
- Outlining the College's Strengths
  - ➢ Robert Keynton detailed the college's strengths, including:
  - ➢ A robust state and regional reputation for excellence.
  - ➢ A proven track record in producing practice-ready engineers.
  - ➢ Strong and dynamic public-private partnerships.
  - ➢ Nationally recognized graduate and undergraduate programs.
  - ➢ International and national acclaim for faculty and academic programs.
- Addressing Weaknesses and Student Dynamics (Demographics and Parental Involvement)
  - ➢ Dean Keynton discussed the significant changes in student demographics and behaviors, contrasting them with past trends.
  - ➢ He highlighted the growing trend of helicopter parenting, exemplified by increased parental intervention in student affairs (multiple e-mails from parents to the Dean, the Provost, and the Chancellor).
  - ➢ Robert Keynton mentioned the emergence of businesses providing concierge services to college students, illustrating the evolving student needs.
  - ➢ We need to understand who our customers are, maintain a high-quality program, and produce students that companies want to hire.
- Curriculum and Faculty Engagement Issues
  - ➢ He noted that the college's curriculum had not substantially changed in 20-30 years.
  - ➢ Robert Keynton discussed declining enrollments and pandemic-related impacts on student preparedness, echoing Aidan Browne's earlier points.
  - ➢ He raised concerns about the level of faculty engagement and its effect on student learning and satisfaction.

- ➢ Metaphorical example given (Ford T-model). Emphasis on change is needed.
- Comprehensive Feedback from Student Departure Survey
  - ➢ Dean Keynton shared detailed results from a survey of students who had left the College of Engineering (31 responses, equivalent 13%).
  - ➢ Responses highlighted issues such as decreased math interest, course material challenges, and a general lack of fulfillment in the engineering major.
  - ➢ He conveyed student criticisms regarding teaching quality, advising effectiveness, and overall support from faculty and staff (see slides for all student comments).
- Reflecting on Engineering Career Opportunities
  - ➢ Robert Keynton emphasized the broad spectrum of career opportunities available to engineering graduates.
  - ➢ He underscored the importance of communicating these diverse career paths, including medicine, law, and business opportunities, to prospective and current engineering students.
  - ➢ A faculty member questioned how much high-school preparation causes this problem (lack of math, physics, and sciences), and the Dean agreed that lack of preparedness is rooted in high-school education.
- Financial Resources and Strategic Investments
  - ➢ Dean Keynton elaborated on recent financial investments in the college, including details on state funding and infrastructure improvements.
  - ➢ He outlined the specific allocation of these funds and stressed the need for increased enrollment to ensure continued financial support.
- Opportunities and Funding
  - ➢ We just finished our ABET accreditation review.
  - ➢ Technology & industry has changed & need our graduates/students.
  - ➢ The number of students is rising through 2026.
  - ➢ The state has provided real resources,
    - o $30M Capital & $10M Program – Engineering, $0.6M - AI, Data Analytics, Cybersecurity – CCI & SDS
    - o Engineering NC Futures $5M Recurring Funding
    - o $1.2M from the 2021 $10M Program funding we were told was recurring funding from university general funds
    - o $200k taken from Engineering and given to CCI on the condition that COE would get it back when new money came in
    - o Balance $3.8 left from the $5M
    - o We put in the following request for the $3.8M
    - o Enrollment/Recruitment
    - o Transforming Students' Lives through Educational Opportunity and Excellence
    - o Department of Bioengineering
    - o Super Fab Lab, Burson Operating Support
    - o Experiential Learning & Community Engagement
- Funding Model and Performance Metrics Explanation by Robert Keynton
  - ➢ Robert Keynton expressed optimism about potential funding and moved to explain the college's funding model based on performance metrics.
  - ➢ He detailed the metrics set by the State, including the four-year graduation rate, undergraduate degree efficiency, average graduation time, education-related expenses per degree, and the institutional goal of increasing the number of Hispanic graduates.

- ➢ Keynton presented data showing the college's four-year graduation rate over the past five years, ranging from 39% to 43%, which he noted as low compared to national averages for engineering programs.
- Analysis of Performance Metrics and Stretch Goals
  - ➢ He explained how the college sets 'stretch goals' for each metric and the weighting system for evaluating performance.
  - ➢ Keynton detailed the calculation of a raw score based on these metrics and how this score is adjusted to a maximum of 100%.
  - ➢ He mentioned that the final percentage achieved is multiplied by 3% to determine the overall performance score, highlighting the college's recent performance metrics result of 2.11%.
- Emphasis on Curriculum Review for Student Graduation
  - ➢ Robert Keynton underscored the importance of revising the curriculum to ensure students can graduate within a four-year window.
  - ➢ He emphasized that meeting these metrics is both in line with the Chancellor's and state's expectations and beneficial for students.
- Competitive and Demographic Challenges
  - ➢ Dean Keynton touched on internal competition, particularly mentioning how the CCI (College of Computing and Informatics) inclusion of SDS (Software and Data Systems) numbers affected funding.
  - ➢ He discussed potential external challenges, such as adding an engineering school at UNC Chapel Hill and significant investments in Western Carolina's engineering program.
  - ➢ Keynton pointed out the changing demographic trends, noting a decrease in students seeking college education and the implications for college.
- Strategies to Enhance College's Value Proposition
  - ➢ He proposed increasing the college's value proposition by highlighting graduates' success, including average salaries and career achievements.
  - ➢ Keynton suggested using this data in outreach to prospective students and their parents, emphasizing the influence of parents on student's college decisions.
- Call to Action for Adaptation and Discussion
  - ➢ Robert Keynton concluded by questioning whether to maintain the status quo or to innovate, drawing a parallel with Ford's initial reluctance to change the Model T.
  - ➢ He opened the floor to discuss improving first-year experiences and strategies to increase student enrollment and ensure their graduation within four years.

6. Questions and Discussion that followed the Dean's presentation.

The discussion following Dean Keynton's presentation involved several speakers addressing various aspects of educational challenges and strategies:

- Community College and Economic Status Discussion
  - One faculty member raised concerns about the economic feasibility for families in low-income rural areas to send their children to the university instead of a local community college.
  - They highlighted the need for improved infrastructure and economic conditions in rural areas to enable more families to consider university education for their children.
  - Dean Keynton acknowledged the need to reach out to community colleges.
  - He mentioned budget proposals for hiring two recruiters, one for in-state and another for community colleges, to strengthen relationships and attract students to UNC Charlotte and the College of Engineering.
- Incorporating Innovation and Mindset in Courses
  - One faculty member discussed an exploratory meeting with the Keene Foundation about innovation, mindset learning, and incorporating these into courses.
  - The faculty member mentioned that the foundation provides resources for faculty development and examples to integrate into existing courses, enhancing value and motivating students.
- Inquiry about First Year Curriculum and Physics
  - One faculty member asked about possibly allowing Calculus II as a co-requisite for Physics I for students following track one.
  - Another faculty member responded, highlighting a dream of teaching an algebra/precalculus pressure course to help students reach Calculus I faster.
  - Another faculty member inquired whether precalculus would count toward the 120 credit hours, leading to a discussion about credit allocation.
- ABET Evaluation and Elective Spaces
  - Jim Conrad shared insights from an ABET evaluation, noting that mathematics for ABET starts at Calculus I and some universities use free elective spaces for courses like precalculus.
- Funding Model and Performance Metrics
  - One faculty member discussed the university's performance in certain metrics, like reducing expenses, which exceeded the target by 140%.
  - The conversation touched on how exceeding targets in some areas, like tuition increment, impacts the overall score.
- Four-Year Graduation Rate and Quality of Graduates
  - One faculty member expressed concerns about the drive for a four-year graduation rate, emphasizing the need to balance pushing students through quickly and maintaining high-quality graduates.
  - Dean Keynton agreed, noting the goal to increase the four-year graduation rate while acknowledging that not all students can meet this timeframe.
  - Dean Keynton suggested the potential for more online or evening courses during the summer to help students who work full-time jobs complete their degrees.

- Transfer Students and Degree Efficiency
  - ➢ One faculty member questioned how transfer students fit into the four-year graduation rate metric. Dean Keynton believes they enter in year two, but he must verify that.
  - ➢ One faculty member asked what undergraduate degree efficiency means.
  - ➢ Dean Keynton explained degree efficiency as sticking to the curriculum and taking sufficient credits each semester.
- Curriculum Flexibility and Student Diversity
  - ➢ One faculty member advocated for more flexible curriculum structures to cater to a diverse student population, using the example of varied student preparedness in a C++ course.
- Engagement with Math and Physics Departments
  - ➢ Dean Keynton emphasized the importance of collaboration with the Math and Physics departments to achieve shared goals, noting ongoing discussions and openness from these departments.

7. Closing

The chair, Jim Conrad, concluded the faculty assembly meeting at 12:48 pm. It was noted that not all items on the agenda were covered in this session. The meeting adjourned.