College of Engineering Faculty Organization (CEFO)

October 31, 2023

UNIVERSITY OF NORTH CAROLINA CHARLOTTE | THE WILLIAM STATES LEE COLLEGE OF ENGINEERING

Agenda 10/31/2023

1. Call to Order
2. Approve Agenda
3. Approve Minutes (see email from Dr. Falaggis for link)
4. Chairs Remarks
5. Common First Year Program updates
6. College Strategic Discussion - Dean Keynton
7. Straw poll
8. Adjourn

Minutes

Approval of minutes from the September 26, 2023 meeting

President’s remarks

President's Remarks - Faculty rights in governance

CONSTITUTION OF THE FACULTY: Article III, Section 2. Justification for Faculty Authority

The Faculty accepts the major portion of accountability for the quality of instruction and scholarship at this university. Therefore, it is fitting and proper that responsibility and authority, both primary and shared, for certain functions within the University be assigned and delegated to the Faculty and that the process for the discharge of these responsibilities and the exercise of this authority be defined.

Our Constitution says:

The Faculty shall exercise such authority as is granted to Faculty by "Constitution Of The Faculty The University Of North Carolina At Charlotte", Policies of the University and the Laws of the State of North Carolina.

President's Remarks - CEFO

So CEFO is our body to practice these rights.

- CEFO meets 2-4 times a semester (more lately since we have a lot to decide)
- CEFO will always meet on Tuesdays, 11:30 am to 12:45pm in a TBD room (EPIC G287 this semester)
- Courses SHOULD NOT be scheduled at this time
- We ask for you to not schedule competing meetings/presentations.
- You all should have been sent meeting invites for this semester. We use your positive response (6 days before the meeting) to the invite to order food. Please do not grab a lunch box if you did not accept the meeting invite.
- The start and stop times will be strictly adhered to (we will end at 12:45pm or earlier)
- Make sure to sign one of the attendance sheets.

President's Remarks - CEFO

- A recent email was sent to the Faculty Executive Council by a past Faculty President pointing out that the Chancellor appointed a Provost and a Vice Chancellor without a "proper search". He said this points out that there is a perception that faculty are not sharing university governance. ***Lesson: Stay involved!!!!***
- Feel free to request that faculty discuss governance/curricular concerns at these meetings:
  - Request to establish a policy on AI-generated content (next meeting)
  - Request to address our changing computing environment, as well as website content (refer to committee?)
  - Request to revisit out entrance criteria (UG committee, then vote)

Status - Common First Year Curriculum

UNIVERSITY OF NORTH CAROLINA CHARLOTTE | THE WILLIAM STATES LEE COLLEGE OF ENGINEERING

Recent activity

Committee reworked framework (multiple times) to balance the multitude of criteria

Message from leadership is clear - all majors should be able to deliver curricula that graduate students in 4 years with 120 credits

Claire Kirby (Associate Provost) presented at last week's Faculty Council

- Enrollment continues to be a priority and a challenge
- UNC Charlotte is finding that students are looking for flexibility
- A committee is looking at what we need to do to allow students to change majors during their freshman year, University-wide, without putting them behind

Expected Timeline for Fall 25 Implementation

	SUMMER 23	FALL 23	SPRING 24	FALL 24	SPRING 25	FALL 25
COLLEGE	Plan details of CFY	Make decision on CFY framework	February: Admissions begins cycle for Fall 25 Update Admissions and Website info CFY Curriculog proposals created	Advertise CFY CFY Curriculog proposals routed Detailed course planning and development (cmte of each Dept + OSDS)		Implement inaugural offering of CFY
DEPTS		Curriculog proposals to tweak programs for CFY	Each program produce draft curriculum in support of CFY		Course planning and prep for new / modified curricula in each Program	

Expected Timeline for Fall 25 Implementation - cont'd

	FALL 25	SPRING 26	FALL 26
COLLEGE	Implement inaugural offering of CFY	During course registration, initial CFY students declare intended majors for Sophomore Year (Fall 26)	
DEPTS			Implement modified curricula in each program (Sophomore through Senior)

Some working constraints

- Every first-time-in-college student will take a common curriculum (CFY) upon entering the LCoE;
  - when admitted they will have a major of FEGR
  - admission process may allow them to state a preferred major
  - students will declare their major during the registration process for their 3rd semester
    - Specific entrance criteria for a major will be determined by each program.
- Students must take the prescribed first semester courses during their first semester
  - controlled by QEP
- Students need to take 30 credits in the freshman year

Engineering students in Math

- Math progression is the biggest challenge
  - students are not as well prepared as in the past
  - many faculty say things like “when they get to my junior level course they still can’t do basic algebra”

Engineering students in Math - F22 & S23

Fall 22 + Spring 23 LCoE	A	B	C	D	F	QD	QF	Total	ABC Rate	%A	%B	%C	%D	%F
MATH 1100 - College Algebra														
Engineering Majors	13	7	3	1	0	0	0	24	96%	54.2	29.2	12.5	4.2	0.0
Engineering Tech & Const Mgmt	6	3	2	0	1	0	0	12	92%	50.0	25.0	16.7	0.0	8.3
MATH 1101 - College Algebra with Workshop														
Engineering Majors	2	6	5	0	2	0	1	16	81%	12.5	37.5	31.3	0.0	18.8
Engineering Tech & Const Mgmt	4	4	2	0	1	0	0	11	91%	36.4	36.4	18.2	0.0	9.1
MATH 1103 - Precalculus Mathematics for Science and Engineering														
Engineering Majors	37	37	10	3	5	1	4	97	87%	38.1	38.1	10.3	4.1	9.3
Engineering Tech & Const Mgmt	22	11	14	2	4	1	1	55	85%	40.0	20.0	25.5	5.5	9.1
MATH 1121 - Calculus for Engineering Technology														
Engineering Tech & Const Mgmt	11	10	10	1	0	0	0	32	97%	34.4	31.3	31.3	3.1	0.0
MATH 1241 - Calculus I														
Engineering Majors	62	78	67	14	21	8	22	272	76%	22.8	28.7	24.6	8.1	15.8
Engineering Tech & Const Mgmt	3	6	9	4	4	1	1	28	64%	10.7	21.4	32.1	17.9	17.9
MATH 1242 - Calculus II														
Engineering Majors	79	96	75	14	7	8	10	289	87%	27.3	33.2	26.0	7.6	5.9
Engineering Tech & Const Mgmt	1	5	5	3	2	0	0	16	69%	6.3	31.3	31.3	18.8	12.5
MATH 2164 - Matrices and Linear Algebra														
Engineering Majors	77	52	25	2	5	1	5	167	92%	46.1	31.1	15.0	1.8	6.0
Engineering Tech & Const Mgmt	1	4	3	0	1	0	0	9	89%	11.1	44.4	33.3	0.0	11.1
MATH 2171 - Differential Equations														
Engineering Majors	159	145	98	12	12	6	5	437	92%	36.4	33.2	22.4	4.1	3.9
Engineering Tech & Const Mgmt	155	162	86	13	16	4	5	441	100%	35.1	36.7	19.5	3.9	4.8
MATH 2241 - Calculus III														
Engineering Majors	132	135	75	12	14	4	5	377	91%	35.0	35.8	19.9	4.2	5.0
Engineering Tech & Const Mgmt	1	1	0	0	1	0	0	3	67%	33.3	33.3	0.0	0.0	33.3

College of Engineering has a MATH progression issue

- MATH progression issue
  - >33% of entering Engineering majors test into Algebra or Pre-calc
  - a significant number of ENGR students are currently not able to progress on a 4-year / 120-hour plan
    - 19% of Engineering majors are not successful in College Algebra *with* Workshop
    - 13% of Engineering majors are not successful in Precalculus
    - 24% of Engineering majors are not successful in Calc I
    - 13% of Engineering majors are not successful in Calc II
  - **WHY?**
  - How are the Math Placement decisions being made and is it working?
    - Does Engineering need to have their own placement criteria? (e.g. adjusted and/or req'd ALEKS scores)
    - Should students take it while they are still in school as opposed to during the summer?
  - of note - a lower level class, but Calc nonetheless… 97% of ET majors pass Calc I for ET
    - Hypothesis: This is because they took Precalc at UNC Charlotte before taking Calc

- Committee decided that we need a plan that will allow flexibility for progression, independent of Math placement

Flexible math sequence

Math Sequence (possible tracks, individualized to each student)	
First Sem (MATH #1)	**Second Sem (MATH #2)**
Algebra / Precalc	Calc I
Precalc	Calc I
Calc I	Calc II
Calc II	Calc III or Diff Eq
Calc III or ...	Calc IV or Diff Eq or ...

- Note: allowing Calc I in second semester would currently push Physics I

Calc I / Physics I

- Many schools teach Calc I and Physics I as co-requisites (some examples… Purdue, Clarkson, UT Austin, Clemson)
  - Some (e.g. UT Austin, teach Calc I and Phys I second semester)
- Proposal to teach customized Calc I for Engineering and Phys I for Engineering
  - If MATH, PHYS and ENGR work together to coordinate, might make a more powerful solution than the “it is what it is” approach we have today
  - If ENGR taught classes simultaneously support concepts in Calc and Phys, even better
- Discussion with the Physics Department
  - Break out Physics I for Engineering
  - Teach concurrently with Calc I (i.e. co-requisite instead of pre-requisite)
  - Coordinate with Math department
  - Program Director sees no reason this is not doable
    - already breaking Physics majors into separate Physics I next semester
    - bringing to his curriculum committee this week

Currently proposed framework

- The CFY will consist of three tracks that students need to complete: the Engineering track (orange), the Math/Science track (blue) and the General Education track (green).
- ALEKS test required to be taken by May
  - students may score more representative of their capability
  - allows some students to catch up (e.g. with community college precalc) if they choose to
- The MATH sequence that each individual takes (MATH #1 / MATH #2) is matched to their individual placement in MATH
- The framework relies on Calc I and Physics I being taught simultaneously

Current proposed framework

Course #	Course name	SCH
First semester		
ENGR-1306	Exploring Engineering & Technology w/ Success	2
	MATH #1	3
ENGR-1307	Foundations of Math & Science for Engineering	3
XXXX-15xx + WRDS	Gen Ed Theme Course	3
XXXX-15xx	Gen Ed Theme Course	3
	Total:	**14**
Second Semester		
ENGR-1302	Logic and Computational Problem Solving	3
ENGR-1303	Engr Visualization & Graphical Communication	3
	MATH #2	3
PHYS-2101	Physics for Science and Engineering I	3
PHYS-2101L	Physics for Science and Engineering I Laboratory	1
WRDS-1103	Writing and Inquiry in Academic Contexts I and II	3
	Total:	**16**

Math Sequence (possible tracks, individualized to each student)	
First Sem (MATH #1)	**Second Sem (MATH #2)**
Algebra / Precalc	Calc I
Precalc	Calc I
Calc I	Calc II
Calc II	Calc III or Diff Eq
Calc III or ...	Calc IV or Diff Eq or ...

Status - Common First Year Curriculum

Brown Bag Brainstorming Sessions (open to all CEFO faculty)

EPIC G287, 11:30am – 12:45pm

November 7 - Math Challenges - how to adapt

November 14 - ENGR 1306/1307/1302/1303 Content

College Strategic Discussion

Dean Keynton

UNIVERSITY OF NORTH CAROLINA CHARLOTTE | THE WILLIAM STATES LEE COLLEGE OF ENGINEERING

CEFO Fall 2023
COE Strategic Analysis

October 31, 2023

Robert S. Keynton, Ph.D.
Dean, William States Lee College of Engineering

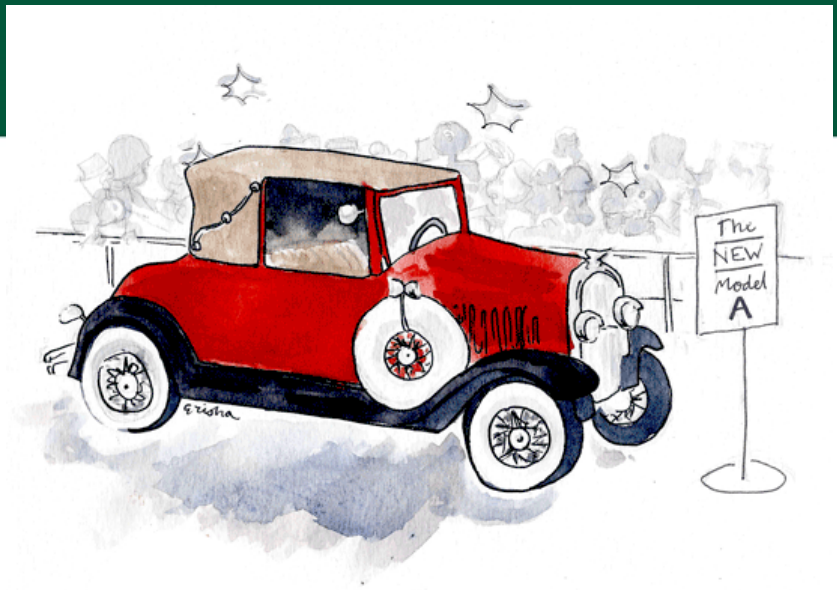
UNIVERSITY OF NORTH CAROLINA CHARLOTTE | THE WILLIAM STATES LEE COLLEGE OF ENGINEERING

Strengths

- Outstanding state & regional reputation for producing reduction to practice engineers
- Excellent public-private/industry partnerships
- Nationally ranked graduate & undergraduate programs
- Access school with high quality students
- Nationally- & Internationally-recognized faculty and programs

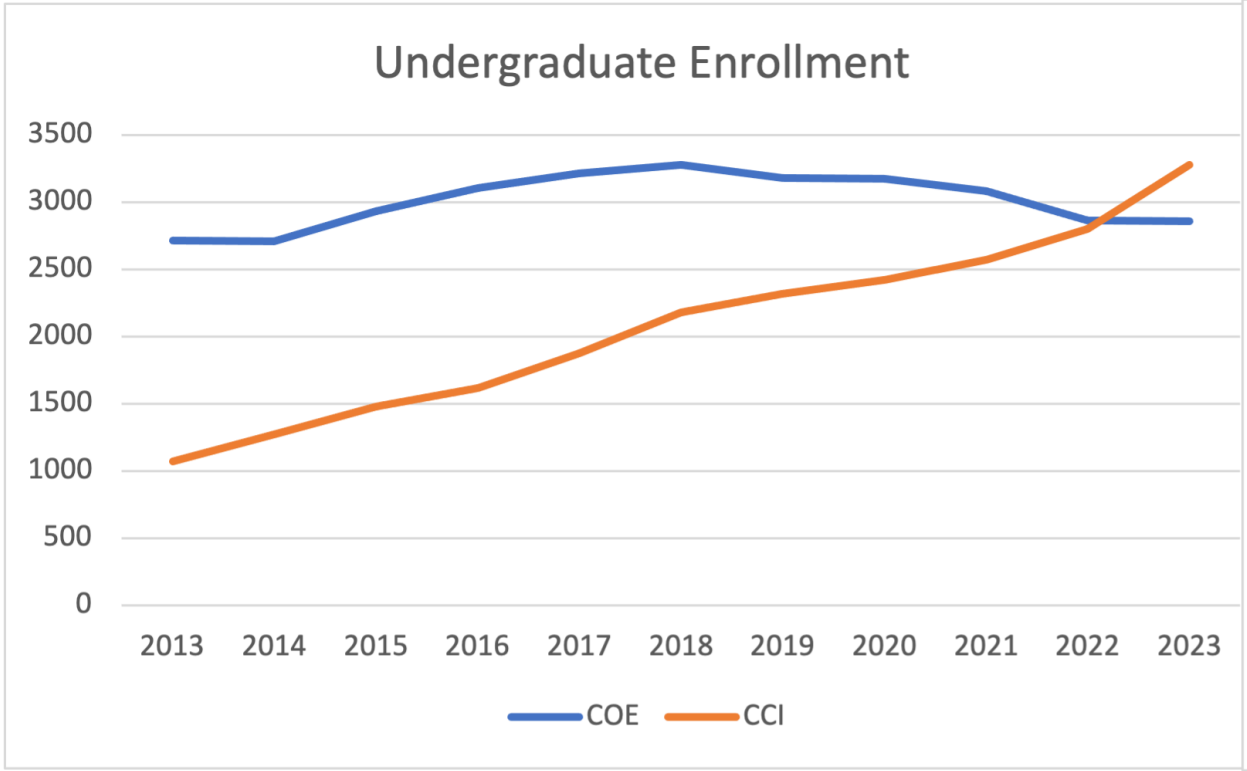
Weaknesses

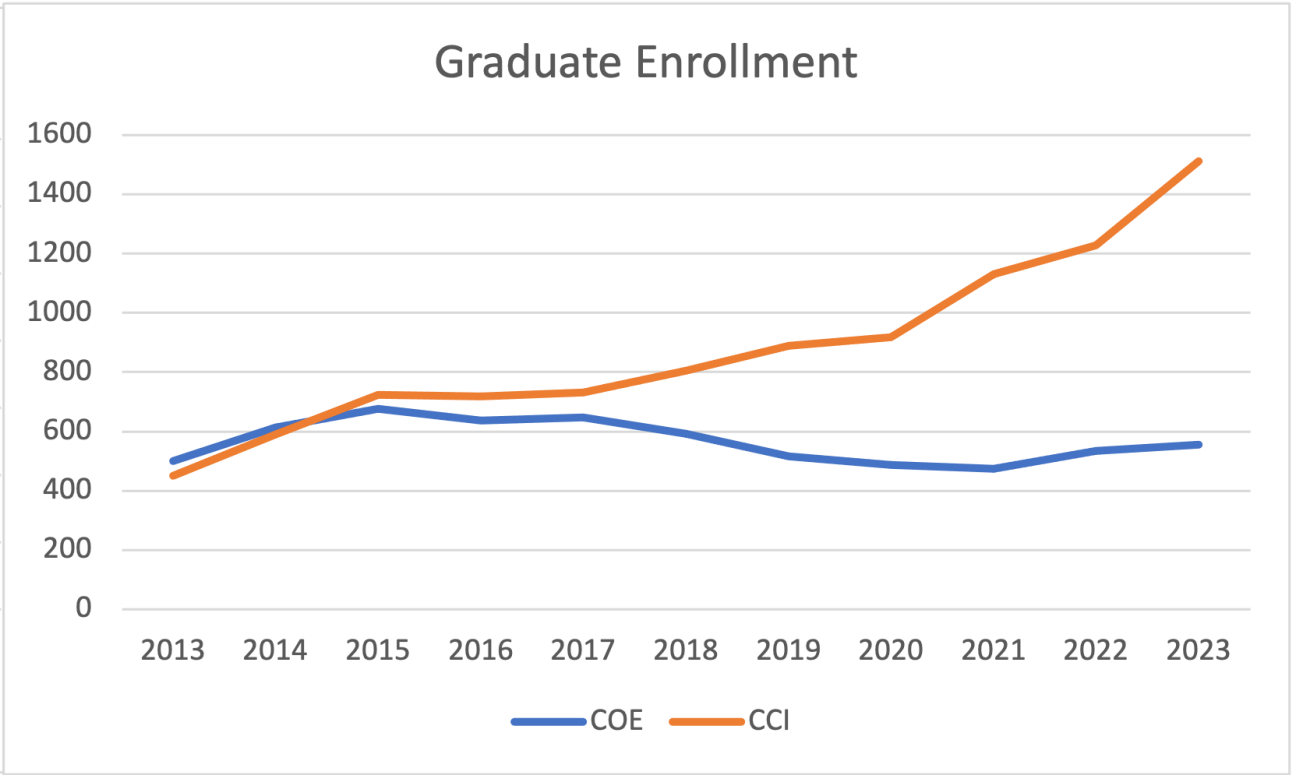
- Students have changed significantly
- Our curriculum has not changed in “20-30 years”
- Decreasing enrollments
- Students not properly prepared for engineering
- Is our curriculum connecting with students?
- Questions regarding engagement of faculty



- Henry Ford was well known for his devotion to the Model T. It was his baby.
- In 1912, his leading engineers and managers had a deep desire to “advance” the design and thought Mr. Ford would be excited to broaden the product line. So they designed and built a prototype, a proposed successor to the Model T. It had four doors, was longer with more stylish lines, and was painted red.
- Henry Ford hated it and literally destroyed the car.
- Because of Ford’s reaction, the engineers knew that the Model T would define the Ford Motor Company forevermore.
- Well, not exactly. By the mid-1920s the Model T’s appeal to the American public was waning and everyone in the industry knew it. Everyone that is, except the titular head of said industry.

Enrollment Data





Math Preparedness

Here is the complete set of data for all Math courses through Calc III taken by students in LCoE for the same two semesters (F22, S23):

MATH 1100 - College Algebra

	A	B	C	D	F	QD	QF	Total	ABC Rate	%A	%B	%C	%D	%F
Engineering Majors									**96%**					
CEGR	2	1						3	100%	67%	33%	0%	0%	0%
ENGR	1	1						2	100%	50%	50%	0%	0%	0%
CPGR	2	2						4	100%	50%	50%	0%	0%	0%
EEGR	1							1	100%	100%	0%	0%	0%	0%
MEGR	7	3	3	1				14	93%	50%	21%	21%	7%	0%
SEGR														
Engineering Tech & Const Mgmt									**92%**					
CIET	1							1	100%	100%	0%	0%	0%	0%
ELET			1					1	100%	0%	0%	100%	0%	0%
ETGR					1			1	0%	0%	0%	0%	0%	100%
MEET	5	3	1					9	100%	56%	33%	11%	0%	0%

MATH 1101 - College Algebra with Workshop

	A	B	C	D	F	QD	QF	Total	ABC Rate	%A	%B	%C	%D	%F
Engineering Majors									**81%**					
CEGR		2	2					4	100%	0%	50%	50%	0%	0%
ENGR	1							1	100%	100%	0%	0%	0%	0%
CPGR	1		1					2	100%	50%	0%	50%	0%	0%
EEGR														
MEGR		3	2		2		1	8	63%	0%	38%	25%	0%	38%
SEGR		1						1						
Engineering Tech & Const Mgmt									**91%**					
CIET			1					1	100%	0%	0%	100%	0%	0%
ELET		1			1			2	50%	0%	50%	0%	0%	50%
ETGR	1							1	100%	100%	0%	0%	0%	0%
MEET	3	3	1					7	100%	43%	43%	14%	0%	0%

Math Preparedness

MATH 1103 - Precalculus Mathematics for Science and Engineering

	A	B	C	D	F	QD	QF	Total	ABC Rate	%A	%B	%C	%D	%F
Engineering Majors									**87%**					
CEGR	7	7			1			15	93%	47%	47%	0%	0%	7%
ENGR	3	2		1				7	83%	50%	33%	0%	17%	0%
CPGR	5	7	1		1		2	16	81%	31%	44%	6%	0%	19%
EEGR	3	2				1		6	83%	50%	33%	0%	17%	0%
MEGR	19	18	9	2	3		2	55	87%	36%	34%	17%	4%	9%
SEGR		1						1						
Engineering Tech & Const Mgmt									**85%**					
CIET	4	1	2					7	100%	57%	14%	29%	0%	0%
ELET	5		3		1			9	89%	56%	0%	33%	0%	11%
ETGR	1	1						2	100%	50%	50%	0%	0%	0%
MEET	12	9	9	2	3	1	1	38	81%	32%	24%	24%	8%	11%

Math Preparedness

MATH 1241 - Calculus I

	A	B	C	D	F	QD	QF	Total	ABC Rate	%A	%B	%C	%D	%F
Engineering Majors									**76%**					
CEGR	10	10	16	4	1	3	2	47	78%	22%	22%	35%	15%	7%
ENGR	3	2	2		3		1	11	64%	27%	18%	18%	0%	36%
CPGR	12	13	8	3	2		4	45	79%	29%	31%	19%	7%	14%
EEGR	6	6	4		3			19	84%	32%	32%	21%	0%	16%
MEGR	31	47	35	7	12	5	15	156	74%	20%	31%	23%	8%	18%
SEGR			2					2						
Engineering Tech & Const Mgmt									**64%**					
CIET		2						2	100%	0%	100%	0%	0%	0%
ELET		2	2	1	2	1		9	50%	0%	25%	25%	25%	25%
ETGR	2							2	100%	100%	0%	0%	0%	0%
MEET	1	2	7	3	2		1	18	63%	6%	13%	44%	19%	19%

MATH 1242 - Calculus II

	A	B	C	D	F	QD	QF	Total	ABC Rate	%A	%B	%C	%D	%F
Engineering Majors									**87%**					
CEGR	13	16	12	3	1	1	2	52	85%	27%	33%	25%	8%	6%
ENGR	1	1						3	100%	50%	50%	0%	0%	0%
CPGR	12	17	14	1	1	1	2	49	90%	25%	35%	29%	4%	6%
EEGR	12	12	4		1	1		33	93%	40%	40%	13%	3%	3%
MEGR	41	48	41	10	4	5	6	164	84%	26%	31%	26%	10%	6%
SEGR		2	4					7						
Engineering Tech & Const Mgmt									**69%**					
CIET			2	2				4	50%	0%	0%	50%	50%	0%
ELET	1	1			1			5	67%	33%	33%	0%	0%	33%
ETGR		2						2	100%	0%	100%	0%	0%	0%
MEET		2	3	1	1			8	71%	0%	29%	43%	14%	14%

Survey – Student Connection/Engagement

240 Surveyed

31 Responses

I realized that I did not care for math as much as I thought I did when I was in highschool.
I was having issues keeping up with material and having a solid way of reaching out for help. I was unable to find helpy
I was taking courses for this degree. I realized I hated this. I was taking a programming course, and I loved it. So I dropped my engineering courses
Many professors were not very good teachers and made it too difficult to learn and understand the material
Many reasons. I was not having a good time with it anymore and the professors seemed like they were only there for their own work.
Multiple poor professors along with many flipped classrooms with no in class explanation of complex topics
The advisors pushed me to take more than a full load of classes and it burnt me out.
I did not find the work I was doing rewarding or fulfilling at all and the difficulty of the major shed light on that fact.
A future career in engineering wasn't for me.
Advising and professors
Broken lab equipment, unskilled TAs, profs lack expertise & can't speak English, advisors unhelpful, need > 150 characters
classes were very difficult with professors that did not care about teaching us
Failed classes, did not feel any sense of belonging
Felt like my career would be more fulfilling if I pursued another degree, didn't enjoy classes even if I was doing well in them.

Survey – Student Connection/Engagement

I did not enjoy it like I thought I would and also want to change majors to something that is more versatile and create more job opportunities.

I did not like it

I failed calculus 2

I felt that engineering was not engaging enough to warrant my pursuing a career in it.

Way too much workload for my first semester and it really demotivated me.

You guys don't listen to struggling students are saying. Professors for the most part are souliess bastards stuck to do research, not teach.

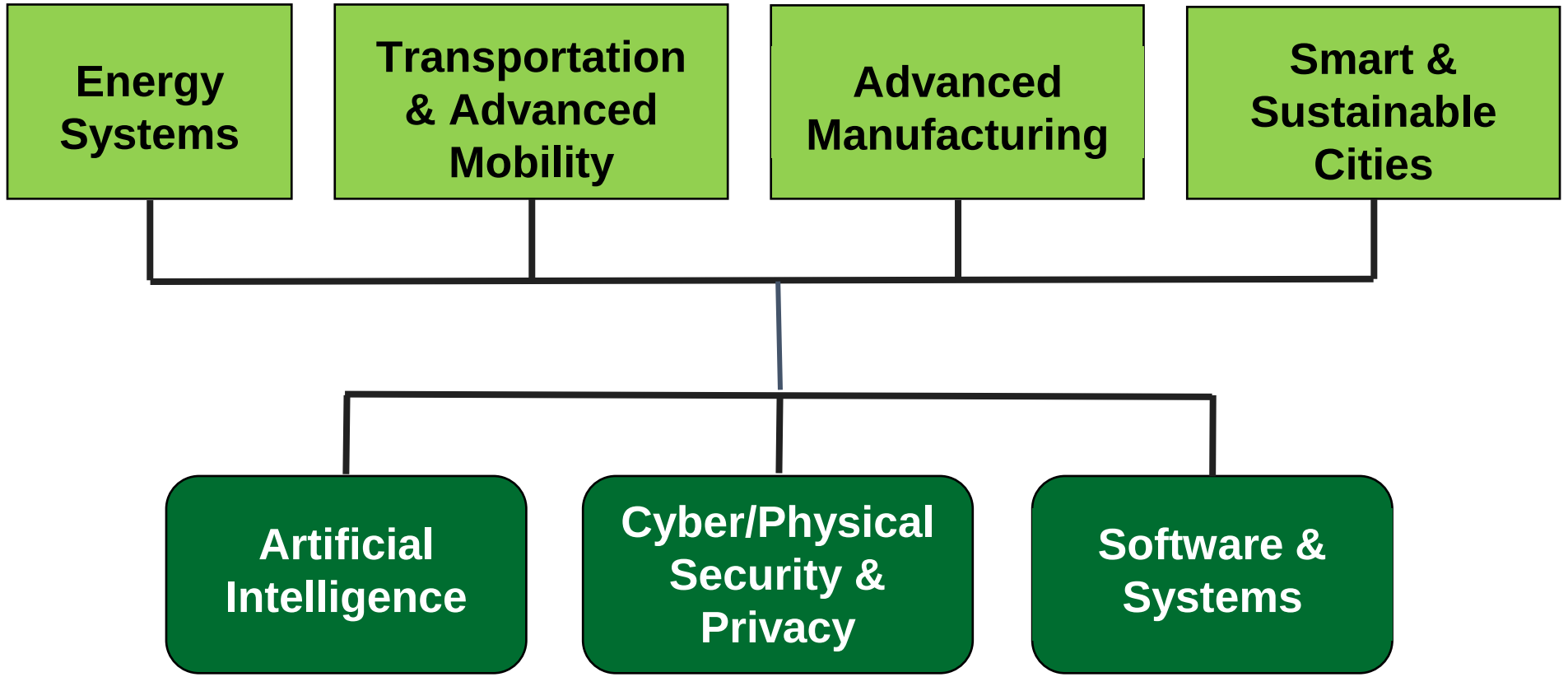
The professors suck, none of them speak english, the classes are near 100% tests and there is absolutley no way to recover if you mess up one ebcause the test is 25% of your grade alone. The student learning center options for engineers is abysmal and the proifessors are all condesedign adn put in no effor tot help. Dan Iatta might be the only professor there who has a head on his shoulders in all, and i mean ALL, honesty.

Opportunities

- Just finished our ABET accreditation review
- State has provided real resources
- Technology & industry has changed & needs our graduates/students
- # students are rising through 2026

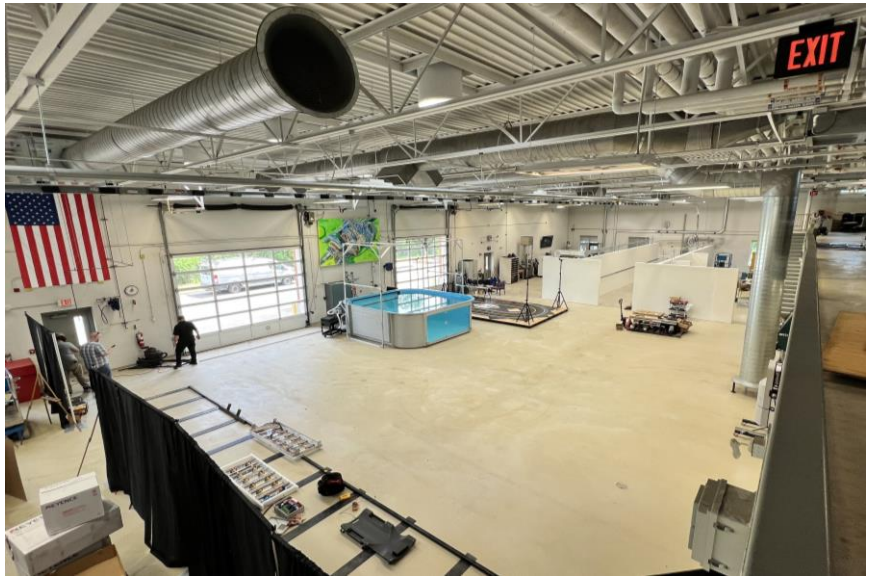
Engineering a Smart & Secure Future for North Carolina

State Investment:
$30M Capital & $10M Program - Engineering
$0.6M - AI, Data Analytics, Cybersecurity – CCI & SDS

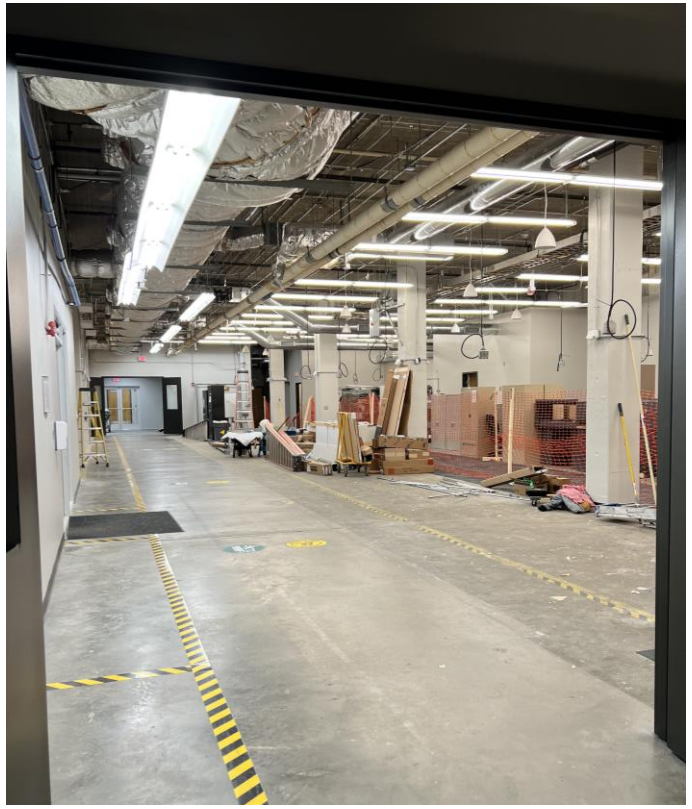


Engineering a Smart & Secure Future for North Carolina

NC MARC to NC BATT CAVE (Spring ‘23)



Industrial Solutions Lab: CAB to Cameron High Bay (Fall ‘23)



Engineering NC Futures $5M Recurring Funding

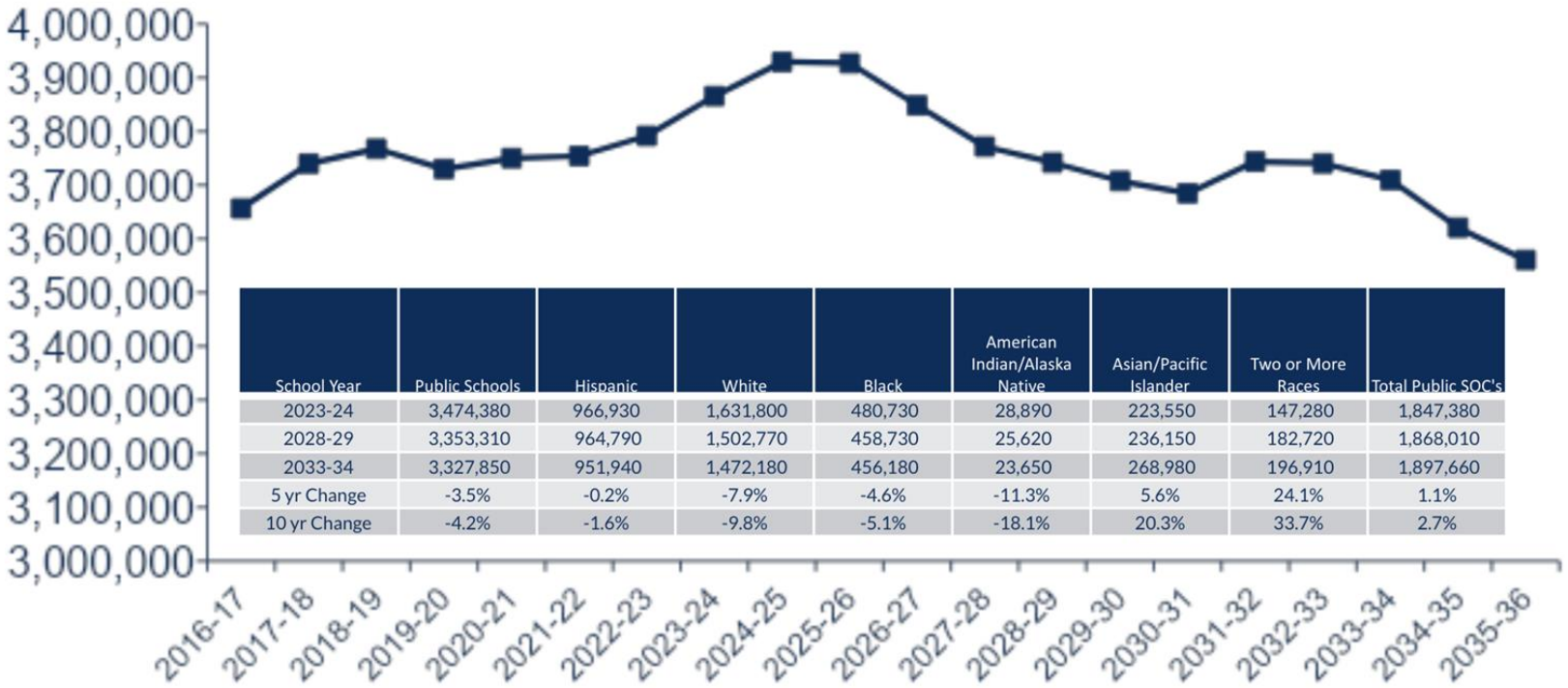
- $1.2M from the 2021 $10M Program funding we were told was recurring funding from university general funds
- $200k taken from Engineering and given to CCI on the condition that COE would get it back when new money came in
- Balance $3.8 left from the $5M
- We put in the following request for the $3.8M

Engineering NC Futures $5M Recurring Funding

- Enrollment/Recruitment
- Transforming Students' Lives through Educational Opportunity and Excellence
- Department of Bioengineering
- Super Fab Lab, Burson Operating Support
- Experiential Learning & Community Engagement

HIGHER EDUCATION ENROLLMENT LANDSCAPE

Projected change in high school graduates, United States 2017-2036

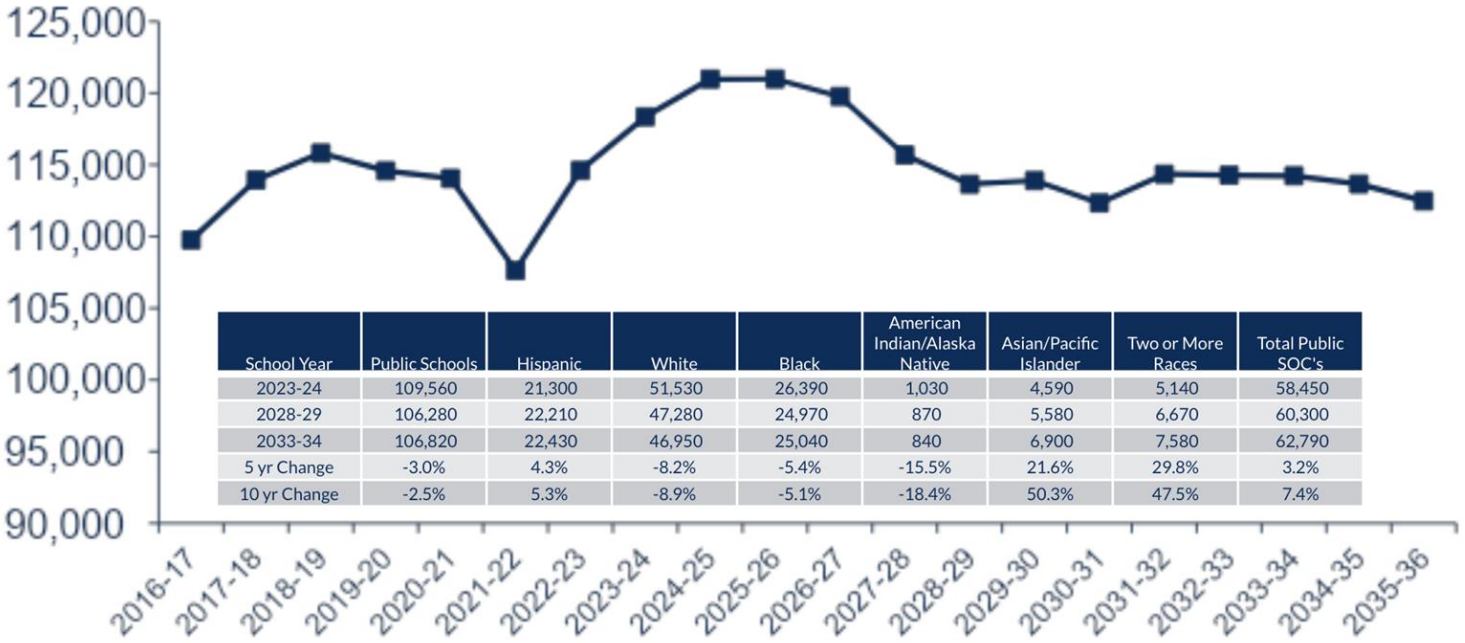


School Year	Public Schools	Hispanic	White	Black	American Indian/Alaska Native	Asian/Pacific Islander	Two or More Races	Total Public SOC's
2023-24	3,474,380	966,930	1,631,800	480,730	28,890	223,550	147,280	1,847,380
2028-29	3,353,310	964,790	1,502,770	458,730	25,620	236,150	182,720	1,868,010
2033-34	3,327,850	951,940	1,472,180	456,180	23,650	268,980	196,910	1,897,660
5 yr Change	-3.5%	-0.2%	-7.9%	-4.6%	-11.3%	5.6%	24.1%	1.1%
10 yr Change	-4.2%	-1.6%	-9.8%	-5.1%	-18.1%	20.3%	33.7%	2.7%

-12% Decline in number of 18-year olds, 2025-2030

HIGHER EDUCATION ENROLLMENT LANDSCAPE

Projected change in high school graduates, North Carolina 2017-2036



School Year	Public Schools	Hispanic	White	Black	American Indian/Alaska Native	Asian/Pacific Islander	Two or More Races	Total Public SOC's
2023-24	109,560	21,300	51,530	26,390	1,030	4,590	5,140	58,450
2028-29	106,280	22,210	47,280	24,970	870	5,580	6,670	60,300
2033-34	106,820	22,430	46,950	25,040	840	6,900	7,580	62,790
5 yr Change	-3.0%	4.3%	-8.2%	-5.4%	-15.5%	21.6%	29.8%	3.2%
10 yr Change	-2.5%	5.3%	-8.9%	-5.1%	-18.4%	50.3%	47.5%	7.4%

Source: Western Interstate Commission for Higher Education, *Knocking at the College Door: Projections of High School Graduates, 2020, www.knocking.wiche.edu*

-2% Decline in number of HS graduates, 2023-2037

Threats

- New UNC System funding model
- Not meeting our commitments to the state
- Competition with other programs at UNC Charlotte
  - $1M of new funds for the Engr NC Future – 100% due to enrollment
- Competition with other institutions in the state & region
- Demographic cliff
- Demand cliff

Performance Metrics

- Four-year graduation rate
- Undergraduate degree efficiency
- Average debt at graduation
- Education and related expenses per degree
- Institutional choice (Four-Year Graduation Rate: Hispanic)

Year	4-yr graduation (%)
2015	39%
2016	35%
2017	36%
2018	45%
2019	43%

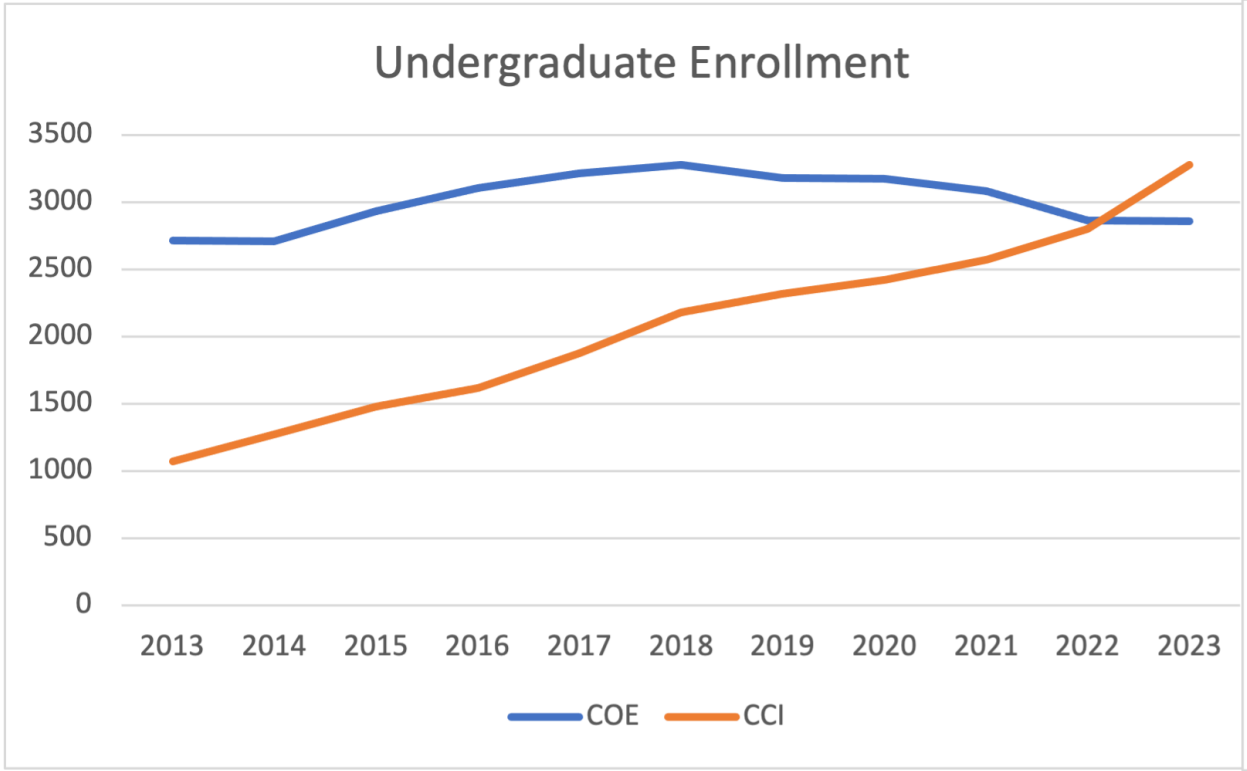
UNC Charlotte 2023-24 Performance

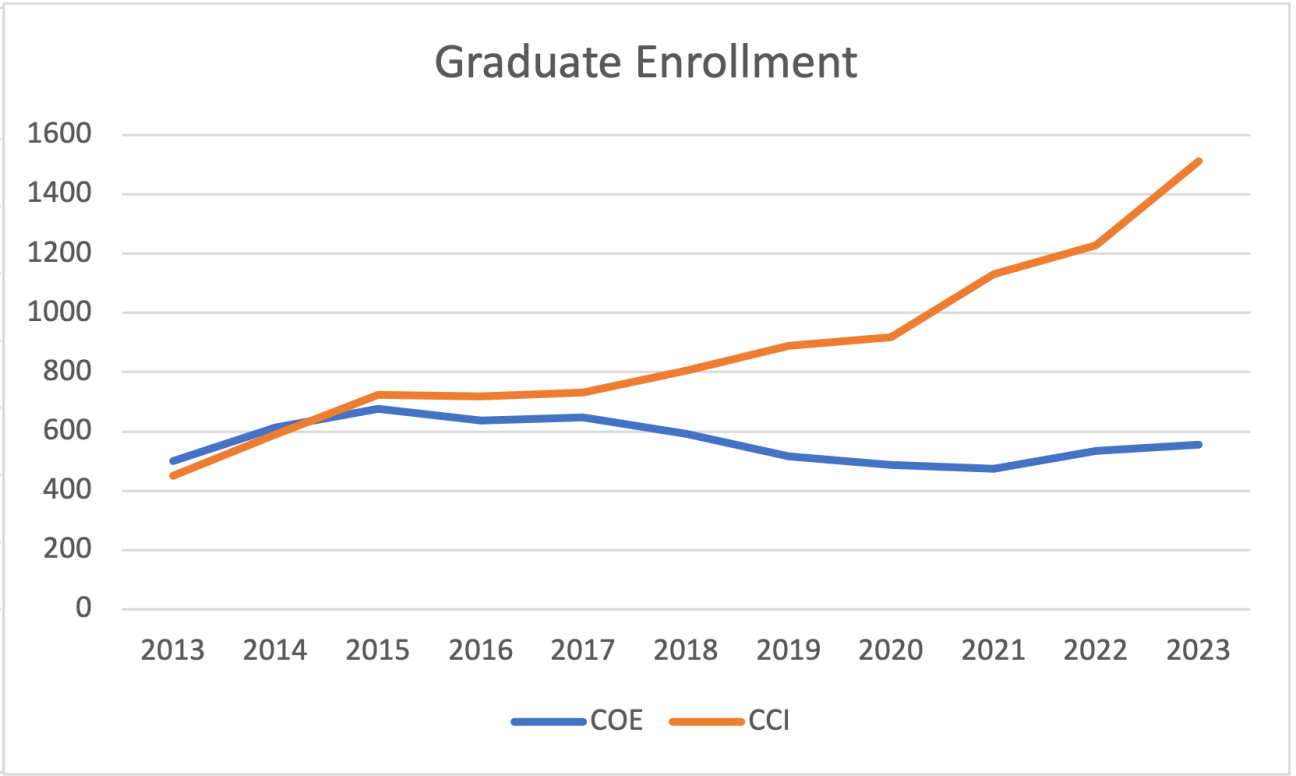
Performance Goals UNC Charlotte	2020 Baseline	2023 Goals Stretch	Weighting (Year 1)	2021 Actual Performance	Raw Score	Score (-1 to 1)
Four-Year Graduation Rate	52.1	57.74	16.67%	54.06	34.8%	34.8%
Undergraduate Degree Efficiency	26.500	27.84	16.67%	28.35	138.1%	100.0%
First Time Student Debt at Graduation	$13,752	$12,927	21.67%	$13,622	15.8%	15.8%
Transfer Student Debt at Graduation	$13,088	$12,303	11.67%	$12,338	95.5%	95.5%
Education and Related Expenses per Degree	$51,110	-12.01%	33.33%	-16.9%	140.5%	100.0%
				Weighted	90.2%	70.4%
				Scale to 3%		2.11%

Engineering a Smart & Secure Future for North Carolina

Enrollment and Degree Projections

	Current Enrollment	Projected 2026	Degrees 2021	Projected Degrees 2026
Engineering B	3,080	3,730	725	1,050
Engineering M	259	459	139	239
Engineering D	213	253	39	49
CCI B	2,486	3,086	628	828
CCI M	639	999	359	539
CCI D	121	151	20	30
SDS B	84	200		50
SDS M	204	300	99	150
Total	**7,086**	**9,178**	**2,009**	**2,935**


Undergraduate Enrollment
3500
3000
2500
2000
1500
1000
500
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
COE
CCI


Graduate Enrollment
1600
1400
1200
1000
800
600
400
200
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
COE
CCI

Competition w/in NC

NORTH CAROLINA TRIBUNE

Moore kicks tires on adding an engineering school

House Speaker **Tim Moore** thinks it's high time to have a discussion about adding an engineering school to UNC Chapel Hill.

Smoky Mountain news

WCU receives state funding for new engineering building, program expansion

"This investment in expansion of WCU's engineering programs …," said Randy Collins, dean of WCU's College of Engineering and Technology. WCU received $95.3 million in funding for the replacement of the current engineering building and $3.5 M in recurring funding in 2023-2024 to support programming in robotics, energy, controls and automation.

Demographic & Demand Cliffs

HIGHER EDUCATION ENROLLMENT LANDSCAPE

RECAP OF THE MACRO FORCES IMPACTING ENROLLMENT

- The demographic cliff - shifts and declines in traditional direct from HS enrollment
- The enrollment “demand cliff*” - college-going rate declining, value proposition, higher entry-level wages creating competition
  - Gen Z statistic from 2022 ECMC Group survey: 51% of Gen Z students are considering a four-year degree - a 20-pt drop since May 2020
  - Non-consumers are similar to college-bound peers in family income, racial/ethnic/gender diversity
- Market share and competition
  - NC market share has increased significantly for FTIC, but declined for transfer students
  - Competition is intensifying for all student types - first-year, transfer, adults, graduate students

Source: “Managing the Demand Cliff”, Inside Higher Ed, October 16, 2023

Next Steps:

So what do we do?

Where do we go from here?

Do we stay status quo and follow Ford's path?

Engineering NC Futures $5M Recurring Funding

- Requested return of the $200k
- Requested $341,138 for Enrollment/Recruitment

Title	Pos Type	Salary	Benefits	Total
Community College Recruiter	SHRA	$ 47,000	$ 22,508	$ 69,508
In-State Recruiter	SHRA	$ 47,000	$ 22,508	$ 69,508
Out-of-State Recruiter	SHRA	$ 47,000	$ 22,508	$ 69,508
Recruitment Operating Budget	Base Budget	$ 45,000		$ 45,000
Digital /Ambassador Coordinator	SHRA	$ 38,000	$ 19,614	$ 57,614
Ambassador Program Budget	Base Budget	$ 30,000		$ 30,000
Enrollment/Recruitment SUB-TOTAL		$ 254,000	$ 87,138	$ 341,138

Engineering NC Futures $5M Recurring Funding

- Requested $527,921 for Transforming Students' Lives through Educational Opportunity and Excellence

Title	Pos Type	Salary	Benefits	Total
Advisor Tier 2	EHRA-NF	$ 58,000	$ 19,855	$ 77,855
Advisor Tier 2	EHRA-NF	$ 58,000	$ 19,855	$ 77,855
Advisor Tier 2	EHRA-NF	$ 58,000	$ 19,855	$ 77,855
Assistant Teaching Prof - Engr Education	EHRA	$ 87,000	$ 26,085	$ 113,085
Assistant Teaching Prof - Math	EHRA	$ 87,000	$ 26,085	$ 113,085
Admin Support Specialist	SHRA	$ 46,000	$ 22,186	$ 68,186
Opportunity and Excellence SUB-TOTAL		$ 394,000	$ 133,921	$ 527,921

Engineering NC Futures $5M Recurring Funding

- Requested $1,135,727 for Department of Bioengineering

Title	Pos Type	Salary	Benefits	Total
3 TT Faculty (Keynton Start Up)	EHRA	$360,000	$84,725	$444,725
Business Services Coordinator	SHRA	$52,000	$24,115	$76,115
Admin Support Specialist	SHRA	$46,000	$22,186	$68,186
Advisor Tier 2	EHRA-NF	$58,000	$19,855	$77,855
Operations Manager	SHRA	$79,000	$32,796	$111,796
UNA, Perm Unallocated Faculty	EHRA	$120,000	$33,173	$153,173
GRA, Perm Grad Funding (5 lines)	GRA	$100,000	$28,877	$128,877
Operating Funds	Base Budget	$75,000		$75,000
Bioengineering Dept SUB-TOTAL		$890,000	$245,727	$1,135,727

Engineering NC Futures $5M Recurring Funding

- Requested $400,940 for Super Fab Lab, Burson Operating Support

Title	Pos Type	Salary	Benefits	Total
Director	EHRA	$100,000	$28,887	$128,877
Operations Manager	EHRA	$100,000	$28,877	$128,877
Admin Support Specialist	SHRA	$46,000	$22,186	$68,186
Lab Operating Budget	Base Budget	$75,000		$75,000
Super Fab Lab SUB-TOTAL		$321,000	$79,940	$400,940

Engineering NC Futures $5M Recurring Funding

- Requested $456,269 for Experiential Learning & Community Engagement

Title	Pos Type	Salary	Benefits	Total
Promote Dir of Prof Development, Pos 4384	EHRA-NF	$12,000	$2,578	$14,578
Promote Admin to Univ Program, Pos 1895	SHRA	$12,845	$4,130	$16,975
Experiential Learning Coordinator	EHRA-NF	$57,000	$19,641	$76,641
Experiential Learning Coordinator	EHRA-NF	$57,000	$19,641	$76,641
Experiential Learning Coordinator	EHRA-NF	$57,000	$19,641	$76,641
Experiential Learning Operating Budget	Base Budget	$25,000		$25,000
Associate Director of Community Engagement	EHRA-NF	$60,000	$20,285	$80,285
Admin Coord for Engage, MAPS, and Bridge	SHRA	$47,000	$22,508	$69,508
Outreach Operating Budget	Base Budget	$20,000		$20,000
Experiential / Community SUB-TOTAL		$347,845	$108,424	$456,269

Closing


UNIVERSITY OF NORTH CAROLINA
CHARLOTTE
THE WILLIAM STATES LEE
COLLEGE OF ENGINEERING

Closing

CEFO meeting schedule:

All meetings in EPIC G287, from 11:30 am to 12:45 pm

~~August 29~~	January TBD
~~September 26~~	March TBD
~~October 31~~	April TBD
November 28	

Thank you for attending