

School of MECSGD-Engineering Technology

Advisory Meeting-March 28, 2025

Committee Members: Wyatt Helms, Patrick McSwain, Amber Norori, Paula Mora

College Staff: Ashlee Johnson | Christian Somoza

Note taker: Christian Somoza

1. Welcome and Introductions

2. Call for additional agenda items to be added to the agenda.

3. Annual Recap

- a. Over 18,000 in enrollment at NC
 - i. Just under 19% are considered Full Time Students
- b. Gradually building in Degrees and Certificates post-COVID
- c. Ethnicity breakdown
 - i. HIS (~59%)
 - ii. Gap in equity for Black and African American and Hispanic in Retention and Success
 - 1. Distribution of success looks vastly different from the enrollment demographics
- d. The past 5 years, NC has been trying to fulfill their Guided Pathways
 - i. Clarifying the path
 - 1. Curriculum updates
 - 2. Offering programs
 - 3. Duplicating programs that are confusing for students
 - ii. Get students on the path
 - iii. Stay on the path
 - iv. Ensure learning
- e. Change in department structures to Schools

4. Comprehensive ENE program review

a. Discussing the trends

i. Student success (passing classes)

1. Growing consistently to pre-COVID rates

a. 72.7% ENE success rate in 22-23

ii. Retention

1. Increasing since COVID

a. 87.7% ENE retention rate in 22-23

iii. Program of Study

1. Total ENE enrollment

a. 448 in 22-23

2. Since the pre-engineering program is here at NC

a. Can only claim students who choose NC as the home campus

b. RCCD and MVC college students taking engineering courses are not included in this data

i. We serve more than we claim

iv. Awards (McSwain asked to review this)

1. 22-23 only had 37 students awarded

a. Many students do also transfer before obtaining an award at NC

2. NC Pre-Engineering associate does not always add value to their career

a. Byron Curry

i. Industry fluctuates and this instability effects students' decisions on obtaining an associate or just transferring

v. Success and Retention for Disaggregated student populations

vi. Action plan has been to grow in this area.

1. Policy changes that have affected this student population

a. AB 705 and 1705

- i. Cannot offer remedial courses
 - 1. Been phasing out support courses
 - 2. A lot of students need these
 - 3. Losing students due to this
 - 2. New methods to help students who need the foundational math classes
 - a. Bootcamps
 - b. Supplemental courses
- b. Strong pre-engineering programming
 - i. Recognizing the gaps and intentionally seeking solutions
- c. Areas of growth
 - i. Engineering technology
 - 1. While separating the schools did a benefit to Pre-Engineering, Engineering Tech lost its identity
 - a. What programs can be developed to fit the needs of industry?

5. LMI Data Update

6. Instruction and Curriculum changes

a. Workplace trends

- i. Response from Wyatt Helms
 - 1. Lots of drafters are being phased out and instead fresh graduates are put into drafting jobs
 - a. This is an issue, because they never learned this in college
 - i. Engineering Tech provides students the background in drafting
 - 2. The current curriculum in ENE does not add value
 - a. These are courses they will take at the 4-year
 - i. He states the foundational engineering tech courses were more beneficial to him
 - 3. Knows people who got a Mech Engineering degree, but

could not find a job

- a. Went back to NC to take Manufacturing courses and he found a job because he learned a skill that others did not have

b. Current skill expectations

- i. Recommendations from Committee Member-Wyatt Helms on importance of micro-certifications.
 - a. Engineering graphics
 - b. Drafting
 - c. Manufacturing
 - d. As a hiring manager, a bachelor's degree without experience does not make them a competitive applicant
- 2. Professor Ashlee Johnson-transfer heavy prerequisite courses make CTE micro-certification courses secondary but need to be stackable.
 - a. Need to be very specific in the type of industry the micro certificate focuses on
 - i. Lots of types of blueprints to read
 - 1. Needs to be industry specific
- 3. In her experience the project management and communication skills can be very valuable
 - a. Dealing with customers, residents, and community
 - i. Cannot only be using technical terms
 - 1. Bridging the gaps in communication
- ii. Feedback from Patrick McSwain on 2d modeling and blue print reading. Experience in the specific environment is important.
 - a. He can train someone the same way if they have a certificate or a bachelor's degree
 - i. He has seen the competency of college grads

going down

2. Project Management

- a. Companies have specific management requirements to meet deadlines and timelines

c. New Policies or Initiatives

i. Discussing the idea of micro certificates

- 1. Impossible to be able to include ENE tech cert with the pre-engineering pathway
- 2. Can offer shorter term certs that can work for students to learn these skills
 - a. Can build employable skills together
 - i. What topics should be focused on

ii. How do we manage students getting a job with just a certificate?

- 1. How do certificates become more valuable, so students are not only trying to get a transfer degree

iii. Micro certificate can benefit these students to learn smaller skills that they can implement in their current work

- 1. These certificates need to be very applicable and beneficial

d. Future Trends in the Industry

7. Equipment Needs

8. Engagement

a. Students

b. Advisory Council members

9. Other

10. Review actions and next steps

a. Ashlee

- i. Why did the advisory members come here today?
- ii. What can she do to support them?

1. Programs we should focus on

- a. Blueprint interpretation
- b. Project management/leadership
- c. Design/Drawing

11. Software Competencies needed and Norco College offers micro-certificates in :

- a. AutoCAD
- b. SolidWorks
- c. Inventor
- d. Fusion 360

b. Patrick McSwain provided feedback on micro-certification.

- i. He hires interns and many become full time
- ii. Feels micro certificates will be great
 - 1. Wants to hire folks from NC
- iii. Employment Placement Coordinators/Job Developers are CTE funded positions at Norco College, RCC, and MVC and are a great resource for employers to advertise job needs on new platform, Handshake.

c. Comments-Professor-Ashlee Johnson

- i. This is an area we need to improve. Connecting NC students to jobs in the engineering field in this community
- ii. Will reach out to Farshid to see what he does in allowing various projects and how he keeps the standards for each one.
- iii. Will connect with each of them about making sure students are involved in internships.

12. Adjournment.