

Hennepin Technical College

Engineering CAD Advisory Meeting

DATE: October 7, 2020

10am Via Zoom

FY21 GOALS

1. Increase engagement with community and industry partners
2. Provide integrated service support, consultation, and solutions to advance the institution
3. Advance institutional capacity and effectiveness through technology
4. Increase retention of protected class group employees
5. Implement a targeted plan for students to persist
6. Redesign and implement the strategic enrollment management (SEM) plan
7. Create opportunities to secure new funding

MISSION:

To provide excellence in career and technical education for employment and advancement in an ever-changing global environment.

VISION:

To be the leader of innovative career and technical education that leads to success for all students.

VALUES:

Excellence: We pursue the highest standards in academic achievement and organizational performance.

Attendees: Peg, Rick Montzka, Crosby King, Melissa McGarry, Jason Bruns, Maddie Smith, Kim Urahn, Susan Markes, Dustin Tychy, Justin Donegan, Bruce Birr, Ken Bauman, Joyce Clark, Carl Goldenbusky, John Waldorf, Jesse Roitenberg, Alison Leintz

Students: N/A

Topic	Discussion/Outcome <i>Indicate any Motions presented and Voting Outcomes</i>	Action	Follow-up
		Meeting started at 10:10, introductions were made	
Approval of Minutes	Review of minutes Motion to approve Bruce, 2 nd by Ken Bauman, carried.		
Call for additional agenda items	Peg asked if anyone had additional agenda items. Ken mentioned about scheduling these meetings ahead of time.	This will be addressed later in the meeting.	
Follow up Agenda Items	n/a		

Industry Trends and Needs

Rick and Peg shared their document on screen of questions for discussion.



Fall 2020 Ideas addl
doc for ENGC adv age

Ken B: some things he has seen for interns to shine is to learn to be able to learn, be able to take feedback and learn from it. See themselves as teachers as well to the industry partners.

-Some top people hired in the past have the robotics engagement. they have to be able to present, scout and problem-solve. Need to find a way to encapsulate that for students. Stressing on driven dimensions – like that. Would be nice to have CREO and additive mfg design, etc.

*NOTE! Can we record the event?
Everyone agreed so Peg started record.

Product life cycle mgt – last meeting we talked about it. Discussion about has anything bubbled to the top as the standard for taking your docs and checking them out and checking them in.? Is there a potential for us to do more with that. How do we translate having separate vaults in the educational environment to keep students from messing up each others' work into what What has industry seen/done?

Currently migrating to Windchill as a vault, moving PCB Design into Windchill through 3rd party
John – currently using Windchill and working across the world with our partners in Austria and have discovered

Being very intentional in teaching soft skills. Commonly heard from businesses. Peg commented that they do have that incorporate quite a bit into the classes everyday, for problem solving and that type of thing. Rick - we do rely on gen-ed partners to develop those skills as well.

Rick – nature of a student who works with CAD at work, at school, at home, could impact how they work with windchill.

	<p>a little bit of technical difficulties, to use US products into European truck. The more students know about these various vaults the better as they move into industry. People need to get more savvy in how these things work and integrate. Bigger sections on this within classes.</p> <p>Bruce – need to have some sort of introduction to the PDM systems, Team center is another major one, to understand checking out and checking in so that they interact correctly with others on team.</p> <p>Ken- need to have students who are strongly disciplined and have an understanding of the some kind of training on files systems It would be good to have a student able to share better ideas that they have learned.</p> <p>Dustin – Is there a specific one in the industry now? No. Windchill, Seimens team center seem to be most common. Would recommend from his personall experience to set up Windchill out of the box – would be best to teach it that way. Teach folder structures, assign part numbers etc.for check in check out, modify workspace are the big things</p>		
ASME Y14.41 (Paperless)	<p>Are we headed that way? Or are we doing a side, b side</p> <p>Bruce – still drawings, people talk about going paperless, but most sill want paper.</p> <p>Model-based definition. When people actually go to it, it will be amazing. Currently at Graco, drawings still rule.</p>		
Industry Practices (con't from document discussion)	<p>-How fluid are workspaces today?</p> <p>Carl – we do have instances of specific design groups want to work physically together, using fluid locations/cubes.</p>		

	<p>-What are Best practices in design for manufacturing?</p> <p>Teaching anything with LEAN, process flow and design of component. Common components and common tools</p> <p>-Are engineering notebooks still paper? Discussed thoughts and concepts – Jesse says they use the engineering notebooks (skillsusa) for grading Industry 4.0? Rick's impression is digitizing of everything. no discussion What's new id technology? Additive mfg Discussion of what is most commonly used. Has anything settled to the top that needs more emphasis. Based on industry partnerships. Bruce – production side has been using 3D printer side quite a bit. Carl – 3d printing of printed circuit boards is coming up on industry, Rick said that hasn't been on their radar. Asked about companies who might be using that. John W. – prints everything to pdf and stored on drives so all available to everyone. Carl – agrees with that thought The days of printing and getting actual sign-offs seem to be going by the wayside. Checkoffs etc are mostly electronic for the workflow. Talked about sourcing printing circuit boards. A couple of recommendations for software discussed.</p>		
MACH1056 / ENGC1011			
Electronics Drafting Award			

Engineering "Flipped" AS Award	<p>Pre-engineering certificate? Would we do a lot with the gen-eds, to lead that into a 4 year degree. Asked for thoughts.</p> <p>Discussion: The key is getting the partner universities to agree to it, might drive more students to the program. Would be interesting to do the research to find out how those colleges are filling their programs, discussion of how we could position ourselves into the tech portion. Would be a completed AS degree, Can this be mech eng tech degree? This would allow the students who don't want to move on to a 4 year college at St. Cloud, Mankato for example, to still be able to get a job. what are chances of national credentialing so that they could go on to other universities?</p>		
Dean Updates:			
Faculty:			
	<p>___ Informational ___ Discussion ___ Vote ___#___ For ___#___ Opposed</p>		
<p>Program/Department Work Plan</p> <p>METS1000 / ENGC1060</p>	<p>Peg said that for Program advancement we are in year 2 of a 3 year cycle. We are updating our curriculum as it stands now.</p> <p>ENGC Associate in Applied Science: Rick talked about Computers in Manufacturing (METS1000) which is currently a requirement in the program. When introduced it was relevant, but times have changed and it is rare to find anyone without computer experience.</p> <p>Would propose to remove Computers in MFG (METS1000) and put in - Design for Additive Manufacturing</p>	<p>*Need a discussion about the credits that are outlined in Rick's document. Susan said they will look at it later.</p>	

(ENGC1060). It is currently part of our Certificate in Additive Manufacturing.

Rick explained more about Additive Manufacturing class vs Design for Additive Manufacturing class.

Proposing changes that AS mirror diploma.

*Question about the credits from Susan) Adding Mechanical Design (ENGC2000) as an “or” course. Engineering CAD Technology Diploma side – wanted to let everyone know that the General Education courses are going through renumbering. Just wanted to let everyone know about the 1000 level courses – not getting rid of them. Maybe for spring meeting the picture will be clearer as HTC works through the process.

To make the diploma and degree a little closer together, added 2 courses from the Additive Manufacturing Certificate to the diploma: ENGC1060 & ENGC1070 as electives. And eliminating the ENGC2050 AutoCad Upgrade Training.

No proposed changes to Manufacturing Engineering Tech AAS

Changes to curriculum:

ENGC2075 – discussed current goals and introduced proposed new goals. When originally created, made sense but now the intent is related to what is the engineering department, what are the thought processes, etc. Which are proposed new goals.

-Trying to make it similar to be a better fit for a transfer to St Cloud, Mankato, U of M.

	<p>Proposed Electronic Drafter certificate – needs more work as does the proposed Pre-engineering AS</p> <p>Any discussion to the proposed change? Jason Bruns asked if students seem to gravitate to more individual work (entrepreneurial wise)? If so, would it make sense to offer an entrepreneurial course to address that for Additive Manufacturing course? Possible separate certificate?</p> <p>Ken really likes the design for additive mfg.</p> <p>Motion to proposed program changes for Engineering design project to goals and to look further into developing Electronic Drafter certificate and Pre-engineering AS Motion to move program changes forward? Justin motioned. Seconded - Jesse Motion carried.</p>		
Budget and Equipment Planning	<p>Ken asked if program is doing any scanning now. We are using 3d systems. Doing what we can with what school can afford, gets the point across. With everything being digital, we should be able to do that. Discussion of some options etc.</p>		
Students:	<p>___ Informational ___ Discussion ___ Vote _#_ For _#_ Opposed</p>		
Scheduling at increments	<p>Looking at spring semester. what times/days etc. most are flexible. this time works. will get date times updated.</p>		
Enrollment Services updates			
Student Success Rates(A-C, P)	<p>2018-82% 2019-78% 2020-77%</p>		

Program Stop-out/Drop-out Rates(FN, FW, W, D (letter grade))	2018-18% 2019-22% 2020-23%		
Curriculum:	___ Informational ___ Discussion ___ Vote _#_ For _#_ Opposed		
Programmatic Accreditation (if applicable)			
Review 25% of the outcomes in the program courses			
Curriculum Recommendations			
Industry Partner Updates	___ Informational ___ Discussion ___ Vote _#_ For _#_ Opposed		
Add as required			
Program Assessment Outcome Results:	___ Informational ___ Discussion ___ Vote _#_ For _#_ Opposed		
Program Awards Conferred(Duplicated)	AAS 2018-19 2019-19 2020-19	DIP 2018-67 2019-63 2020-61	
Retention Rates	2018-48% 2019-64% 2020-38%		
Enrollment	2018-288 2019-301 2020-250		
	Motion to end meeting Ken @ 11:36, 2 nd . John Waldorf.	Thank you! We went through a lot today.	