

Admin Council Meeting Minutes

December 6, 2021, 4:00-5:00 PM

Agenda

- Dean Search Update from Provost Moore and Search Committee
- College Updates and Requests
- E+ Name Change
- Spring Planning Discussion
- Open Discussion

Acting Dean Keith Molenaar began the meeting at 4:00 p.m.

Dean Search Update from Provost Moore and Search Committee

Dean Scott Adler, Chair of the Search Committee, shared an update on the CEAS dean search with the council. The search is going well so far; the committee has had several meetings, has established goals and timelines, attended required trainings, and has officially posted the position. The job ad was posted broadly, and they have solicited and received many nominations. The committee is planning to start reviewing files right after the new year, with the goal of starting Zoom interviews mid-February and having finalist interviews starting at the end of March. There were questions about the candidates and the timeline of the search. Provost Moore shared that while we cannot see the candidates yet, the nominations are sizable, and the timeline is comparable to previous dean searches.

College Updates and Requests

Inclusive Culture Council: Terri Wright provided a brief update on the Inclusive Culture Council and their success kicking off activities this semester. The ICC is celebrating the end of the semester on Friday, and Terri had the Admin Council sign cards for the members. Keith also reminded everyone to check their unit's IDEA Plans on their dashboards.

College Meeting and Holiday Party: The CEAS fall College Meeting will be held on Wednesday, December 15 at 3:00 pm in ATLAS 100. At this meeting, Keith will be giving a state of the college address and announcing college awards. The CEAS Holiday Party is also happening on December 15 at 5:00 pm at the Boulder Theater. Keith asked for volunteers to welcome people at the event and reminded everyone that they need to bring their vaccination cards or proof of a negative test to attend. More details will be sent out prior to the event.

Engineering Residential Community: Keith provided an update to the Engineering Residential Community plans. An official announcement should be coming out this week. The big change to previous discussions is that we are moving to a Fall 2023 launch to help with student recruiting, construction, and Student Affairs timelines.

EPEWA: An announcement will be coming from campus regarding final decisions on the Equal Pay Equal Work Act (EPEWA). Formal letters will also be sent to faculty and staff on changes that will take effect on their January paychecks. Department chairs will be receiving a spreadsheet with faculty that will be impacted by the changes. Staff changes will be handled directly by HR.

E+ Name Change

A proposal (attached) to change the "Engineering Plus" program and B.S. degree name to "Integrated Design Engineering" was submitted in November and has been approved by the University Executive

Committee. The proposal now requires Dean approval and support from department chairs before it goes to the Regents. Keith asked for volunteers to write letters of support.

Spring Planning Discussion

Keith gave a brief overview of the current CEAS Strategic Vision and ongoing updates. As we prepare for the dean candidate interviews, we want to convey what we have accomplished and where we have fallen short. Keith had the council do an activity relating to the Strategic Vision Update. He asked each member to write down one accomplishment from their unit and make one declaration that they will accomplish this spring. Small group and then a larger group discussion followed. Keith will incorporate these items into the update.

Meeting adjourned at 4:59



Proposal to Change “Engineering Plus” program and B.S. degree name to “Integrated Design Engineering” program and degree

November 17, 2021

The Engineering Plus program in the College of Engineering & Applied Science (CEAS) at CU Boulder offers a B.S. degree in Engineering Plus (course prefix in the catalog GEEN, based on earlier program name of General Engineering Plus).

We request to change the name of our program to Integrated Design Engineering offering a B.S. degree in Integrated Design Engineering (with associated new course prefix in the catalog IDEN).

Background

In 2013 the CCHE approved the degree General Engineering Plus. This reflected the anticipated accreditation under ABET (Accreditation Board for Engineering and Technology) Engineering Accreditation Commission (EAC) under the general criteria. The degree was designed so that students would have flexibility and choice, selecting an emphasis in engineering (aerospace, architectural, civil, electrical, environmental, or mechanical) and an additional concentration (the ‘plus’) that was outside of engineering (e.g., teaching, business, policy). Because this curriculum included some depth in a single discipline of engineering, the “general engineering” part of the name was believed to inaccurately convey the education that students would receive. Therefore, in 2015 the name was changed to Engineering Plus (but retained the GEEN course prefix). The first students graduated from the program in December 2015. The degree received ABET EAC accreditation in 2018.

Motivation for Change

The name Engineering Plus has proven to be confusing and unclear to prospective students and their parents, as well as employers. This has created challenges for growing the student enrollment in our program, as well as challenges for students graduating from the program as they enter the job market. The Engineering Plus program has only been attracting a small number of incoming first-year students directly matriculating into our major each fall (summary of data from CU tableau below). We believe a name change would help improve this situation.

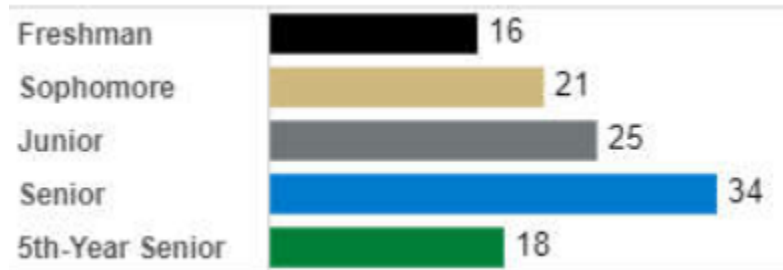
Incoming CU Boulder Students Applying, Admitted, and Enrolling in Engineering Plus (GEEN)

# students / Year	2017	2018	2019	2020	2021
Applied	32	18	29	38	43
Admitted	32	17	26	32	40
Enrolled	15	11	7	10	16

<https://public.tableau.com/app/profile/university.of.colorado.boulder.ir/viz/QualComp/AdmissionsCounts>



The program is a gaining major, which attracts student's interest once they are here at CU Boulder and learn that the degree offers curriculum attributes that interest them (2021 fall enrollment undergraduate class levels below). These student demographics include a large percentage of female students (44.7% females among all enrolled e+ students in fall 2021).



The program has explored a name change numerous times. The new director who started in July 2019 conducted an alumni survey to invite feedback on a name change. We benchmarked other engineering degrees accredited under the general criteria by the ABET EAC in spring 2021. In summer 2021, “Strategic Relations and Communications and the College of Engineering and Applied Science (CEAS) partnered to conduct 6 focus groups among Engineering Plus (e+) students (three sessions, with most being intra-university transfers) and alumni (three sessions) in July 2021. Participation ranged from just one participant in a group to six.” They provided a report of their findings dated August 11, 2021. There was generally broad support for changing the name of the degree.

The proposed name change is timely in its alignment with a broader movement in engineering, reflected in a workshop at the October 2021 Frontiers in Education Conference, co-sponsored by the American Society for Engineering Education (ASEE) and the Institute of Electrical and Electronics Engineers (IEEE). The workshop was titled “Towards a Community Vision of Integrated Engineering”, co-authored by Susan Lord (chair of the Integrated Engineering program at the University of San Diego), Rebecca Bates (Minnesota State University Mankato), and Emanuela Tilley (University College London). They articulated three core concepts of integrated engineering: crossing disciplines, including professional skills in technical context, and aiming for holistic education. This aligns with preparing graduates to adept to and blend with a changing world. This vision is also consistent with the educational model of the e+ program.

Curriculum Changes

We do not intend to change the current curriculum. The B.S. curriculum consists of 128 total credit hours including:

- 16 credits of mathematics (APPM or MATH),
- 12-14 credits of natural science (PHYS, CHEM, CHEN, EBIO, or MCDB),
- 28 credits of core engineering courses (GEEN and others),
- 22-28 credits in one of the six engineering emphasis areas (ASEN, AREN, CVEN, EEEN, EVEN, MCEN),



- 12-15 credits in a concentration (from a menu of about 20 options or self-designed),
- 3 credits of writing,
- 15 credits of humanities or social science electives,
- free electives

The name “Integrated Design Engineering” accurately reflects the current e+ curriculum. Design-focused courses are integrated into each year of the curriculum (GEEN 1400 First-Year Engineering Projects, GEEN 2400 Engineering Projects for the Community, GEEN 3400 Invention & Innovation, capstone design with the engineering emphasis (ASEN 4018+4028, AREN 4317, CVEN 4899, ECEN 4610+4620, EVEN 4434, or MCEN 4045+4085). Within GEEN 1400, 2400, and 3400 different engineering disciplines are integrated to achieve design goals. These courses also integrate perspectives of community service (GEEN 2400) and entrepreneurship (GEEN 3400). Engineering Plus teaches core engineering courses that integrate hands-on projects and design (GEEN 2851 Statics for Engineers, GEEN 3010 Circuits for Engineers, GEEN 3024 Materials Science for Engineers, GEEN 3852 Thermodynamics for Engineers, GEEN 3853 Data Analysis for Engineers). Students also integrate their concentration (currently their ‘plus’) with engineering and their future plans.

Faculty Review Process

The Engineering Plus faculty unanimously voted for the new name Integrated Design Engineering at our meeting on September 7, 2021. In a follow-up meeting with Julie Chiron and Interim Dean Keith Molenaar, there was verbal support for the name change.

The name change proposal was formally submitted to CEAS Associate Dean for Undergraduate Education Rhonda Hoenigman on Oct. 4, 2021. This was followed by a presentation to the College of Engineering & Applied Science Undergraduate Education Council in its meeting on October 20, 2021. There was verbal support for the change. A vote was taken and the UEC approved changing the name of the degree (19 favorable votes).

Impact on Other Units

There is anticipated to be negligible impact on other units. Because the curriculum is not changing, the enrollment of undergraduate IDEN students would remain comparable to e+ students.

Resource Implications

There are not significant resource implications associated with the proposed program and degree name change.

CU websites would need to be updated with the new program name.

The College of Engineering & Applied Science (Interim Dean Keith Molenaar and Julie Chiron) endorsed the change and committed resources to help brand with a new logo.



Engineering Plus

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There would be forms to fill out and submit to ABET, with a commitment from the CEAS Director of Analytics, Assessment and Accreditation, Vanessa Dunn, to assist with this process..

Continuity Plans for Current Students

Undergraduate student who are currently enrolled in the B.S. degree in Engineering Plus will have the choice to attain the degree name in which they enrolled or adopt the new name (Integrated Design Engineering). Students who declare the major in Fall 2022 or later will be enrolled under the new degree name.

In summary, we believe that changing the name of the Engineering Plus program and B.S. degree to **Integrated Design Engineering** better reflects our current degree and more accurately conveys our missions to external and internal constituents.

Sincerely,

A handwritten signature in black ink that reads "Angela R. Bielefeldt".

ANGELA R. BIELEFELDT, Ph.D., P.E.

Director, Engineering Plus

Professor Civil, Environmental, & Architectural Engineering

CU President's Teaching Scholar