

CEGE Academy
2020 Needs and Support Assessment

Framework Appendix I- 2020 Academy/Faculty Outreach Study

CEGE Academy Activity Expansion Faculty and Academy Input Summary Activity Priority Ranking

I. Executive Summary and Recommended Actions

CEGE Faculty and Academy members were engaged for an information gathering exercise directed at identifying potential areas of Faculty support that CEGE Academy members might be able to assist with.

A. Faculty Inquiry

Faculty members were queried on line via Google forms and asked to assign priority to a list of 9 potential activities that the Academy members might be able to support.

The full description of the 9 support areas are listed below in report section II, in the priority identified by faculty, along with notation on where each activity ranked on a scale of 1 to 5. Priority rankings were developed on a scale with 1 being the highest priority and 5 being the least priority.

The number 1 and 2 ranked activities are:

- ❖ ***Provide assistance with class projects or senior design projects (subject-matter expert).***
- ❖ ***Highlight under-developed specialty areas of the profession or areas where Civil/Environmental/Geospatial Engineers could have an increasingly influential role.***

While these areas graded out as the two highest priorities, no area received a score of higher than 3 on average. This indicates that all of the areas have some viability; however it may make sense to focus upon 1 or 2 priority areas for faculty, and allow the program to flow from this beginning.

Faculty comments are as valuable as the numerical rankings and are summarized below. In general faculty has been supportive of this activity, and has offered some pointed comments on how the Academy could support them.

Perhaps the most immediately actionable comment is relative to establishing a list or database of Academy members, their areas of expertise, and availability to assist.

B. Academy Inquiry

Academy members were queried on a broad basis as respects their willingness to support this type of effort, and how they might be able to do so. The areas of inquiry generally mirrored the questions posed to faculty, but were more broadly drafted. As a result we were able to obtain a wide range of input from the Academy members who responded.

The summary of the Academy input is shown below in detail. Overall the respondents were enthusiastic in their response, although a minority of Academy members responded. It is possible that we will see

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greater engagement once the program's immediate and long term goals are established and better clarified.

Based upon the input from the Academy it's clear that the capabilities of its members have the potential to support the highest ranked priorities of faculty. Several respondents have assisted with senior capstone projects in the past and all respondents indicate a willingness to support this going forward.

C. Recommended Actions

Based upon the initial inquiry there is an obvious desire on the part of the Academy to assist with the identified priority support areas voiced by faculty. In order to give the program the maximum potential for success it is recommended that the initial implementation should include:

- 1) Capturing a more detailed, current and accessible summary of Academy members technical and professional capabilities, along with
- 2) Focusing both Academy members and Faculty on the number 1 and 2 ranked activities listed above, and in the table that follows, and
- 3) The specific action plan to develop and implement this should be developed by CEGE departmental leadership, and members of the Academy that expressed interest in ongoing support and participation.

II. Summary of Faculty and Academy Inquiries

A. Faculty

i. Potential Support Areas Listed by Faculty Priority

Activity Detail	Ranking Score 1-5
Provide assistance with class projects or senior design projects (subject-matter expert).	1.4
Highlight under-developed specialty areas of the profession or areas where Civil/Environmental/Geospatial Engineers could have an increasingly influential role	1.75
Share a picture of the current trajectory and future path of various disciplines within CEGE	1.83
Provide feedback on the technical components of the curriculum to enhance students future viability	1.9
Provide feedback on non-technical components (i.e., legal, financial, business operations, proposal writing, contracts, starting a business, regulatory nuance, etc) of the curriculum to enhance students future viability	1.9
Provide insights on research opportunities and organizations that may not be known to faculty or students	2.0
Identify employment sectors not currently being pursued by students	2.25
Provide insights on processes-data sets-applications that need to be improved or need to be developed in the future	2.75
Convey intellectual capital assets that may be owned by Academy members	2.8

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ii. Additional Faculty Comments

- ❖ Connect with faculty and industry sectors to better support teaching, research, and professional service effort.
- ❖ I'd like to see a list of CEGE Academy Members on our website for internal use so that we know who they are and how we can reach out to them, especially when we need to get their support.
- ❖ It takes work to develop this. However, it has value.
- ❖ In general, all the activities above are important, but none really any more important than the others, as I have ranked them. The real key is which of these important activities each individual academy member best able to do is. Not everybody can do everything.
- ❖ Simply some level of continuing interaction would be extremely valuable. Also, use of their connections to get really good guest speakers.
- ❖ I think the current limited interaction is kind of sad, so I welcome this initiative....the only way is up!
- ❖ All of our students can benefit from perspectives from industry, government, and nonprofit sectors.
- ❖ Opportunities for applied research are also important for our graduate program and faculty development.
- ❖ I'd like to see the Academy support our graduate program. Our undergrad curriculum is very different than experienced by CEGEPAC, especially with the reduction of total required credits in the BSCE program and the further reduction of required technical content from the days of a quarter system. Think about this: how many CEGEPAC members graduated with a MTU-BSCE and never had a concrete OR steel design course? Our MSCE program is intended to expand the technical content that our BSCE students are missing. It would be appreciated if CEGEPAC could help instill the value of deeper technical knowledge and the need for critical thinking skills.

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B. CEGE Academy Response Summary

Respondent	E Mail	Status	Specialty Area	Speaker Series	Promote Prof. Org.	Mentoring	Fund Raising	Research Support	Curriculum Suggestions	Intellectual Capital	Process Guidance
Bob Wylie	rwiley@charter.net	Retired 34 years	Retired								
Frank Townsend	ftown@ce.ufl.edu	Prof. Emeritus	Geotechnical	x	x	x	x	X Comments on Transportation			x
Bill Verrette	verretww@championinc.com	Culture Maintenance- Champion Inc	Structural, Construction, Mgmt., Concrete, Mining				x Program from '90's called "partnering with the future" \$1.1mm raised				x Discussion Database Matching Expertise by Discipline
Craig Holmes	cholmesgos@charter.net	Post career consulting	Hydraulics, Risk Assessment, BCP, Enterprise Risk Mgmt., Hazard Mitigation, Entrepreneurial skills	x		x	x		X Hazard Mitigation Planning as an executable addition	x Process Mapping for BCP Development, Platform for Plan Mgmt.	x
Kristine Kraus	Not Provided	Retired	Environmental, Management	x							x
Roger Liska	Not Provided	Retired	Engineering Education								
Bill Leder	bleder@mtu.edu	Retired Houghton	Transportation	x		x Sr. Project Support mentoring					
Richard Anderson	Roape1@aol.com	Retired	Geotechnical								x Suggests consideration of Faculty visits to

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Respondent	E Mail	Status	Specialty Area	Speaker Series	Promote Prof. Org.	Mentoring	Fund Raising	Research Support	Curriculum Suggestions	Intellectual Capital	Process Guidance
											industry locations
Helmuth Wilden	Not provided	Retired	Structural								
Eric Peterson	ericgpet@gmail.com	Retired	Transportation Railroad	x							x
Kim Lobdell	klobdell@klengineering.com	Active	Transportation Civil/Survey Consulting Entrepreneurial skills	x		x Senior Capstone Support for visits by students to her firm			x Advisor to Faculty		x
William Marshall	847-922-8497 231-529-6104	Retired	Construction-Pipelines	x		x Experience Transfer			x		
Brenda O'Brien	Not Provided	Retired Near Houghton 4 Months per year	Transportation/Construction			X Notes need for introduction to students					
Ted Pintcke	Not Provided	Retired Raleigh, NC	Business Development Managing Teams Project Execution	x							x