Workshop on Overcoming Challenges to Infusing Ethics into the Development of Engineers

Building Faculty Capacity
Affinity Group Report
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Affinity Group Members

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Affinity Group Objective – Approaches for Building and Developing Faculty Capacity

- Strategies for capacity-building among faculty to build confidence and skills in initiating and/or facilitating conversations about complex ethical questions with no clear right or wrong answers

- Engineering faculty's pedagogical needs for teaching ethics

- Difficulty considering/addressing/teaching ethical issues that lack clear right or wrong answers, or for which a clear answer is not supported by a professional code of ethics

What key factors need to be dealt with to overcome this challenge?

Faculty	Admin & Program
Intrinsic motivation	Resistance to change
Extrinsic motivation	Resistance to non-technical aspects of education
Faculty confidence in teaching subject – lack of faculty expertise	Space in the curriculum
Scaffolding (e.g. materials)	Lack of resources
Rubrics (Assessment)	
Workload – Faculty Bandwidth	

What are the three most promising approaches/strategies and why?

Approach/Strategy	Benefit
Partner with faculty from other programs, e.g., philosophy, medical ethics	Leverages existing institution resources
Workshops offered by center for teaching and learning, basic teaching techniques	Resources/SMEs in one place and can be leveraged when needed
Virtual online community of practice to get ideas and support from faculty at other institutions who teach engineering ethics	Connects faculty with SMEs and other interested faculty
Campus Community of Practice	Connects campus SMEs with interested faculty
Engage local industry • "Professors of Practice"	Funding research; faculty stipends, and prizes for well done ethics integration in classrooms or student projects; relate real-world experiences
Ethics Professional Certifications	Credentials offer a great incentive to learning
Ethics Fellows (Modeled after Georgia Tech Diversity Fellows)	Offers faculty specialized training and recognition

What can the community of attendees do to help with this challenge?

Ideas
Leave workshop with several defined actions items
Periodic F2F check-ins (reunions), status reports on activities and progress, e.g. ASEE conference
Teams to hold each other accountable on outcomes
Create a workshop database (activities, main contacts, websites, status, resources) – integrated into Online Ethics Center
Presentations/sessions at related conferences (ASEE, IEEE, ASME. ASCE, etc.)

What can the broader engineering community do to help with this challenge?

Technical/Engineering   Professional Societies
IEEE Example: Could develop workshops on Ethics for Early Career Faculty; Ethics Resources for Faculty (projects and course materials for the classroom); online training modules; student competitions and challenges; IEEEx (create MOOCs) for faculty or to complement in-class work; ethics workshops at sponsored conferences
Department Head Associations
Leverage associations like **ECEDHA** (Electrical and Computer Engineering Department Heads Association) to create awareness, assess needs, share best practices and distribute resources
Industry Advisory Boards and Industry Partners
Industry breakfasts – bring together local industry managers and academia to discuss and exchange ideas (could be facilitated by local professional society sections (IEEE, ASME, ASCE. Etc.)
Other
Perspectives on Ethics Survey – Survey Industry Managers, Ethics and Compliance Officers, Faculty and Early Career Professional (0 – 2 years on job) to assess state of Ethics Training/Applications – could be facilitated by professional societies and sent to their members

Summary

- Need Finding

- Connect to each other for sharing resources and best practices

- Empower Champions!