ASEE 2021 ANNUAL CONFERENCE

THE SUN ABOVE, THE FUTURE THE FUTURE AHEAD

VIRTUAL MEETING

JULY 26-29,2021 PACIFIC DAYLIGHT TIME The Engineering Leadership Development Division: A Journey of Becoming and Belonging

David Niño Senior Lecturer & Senior Program Manager Massachusetts Institute of Technology

July 29, 2021

LEAD History and Origins

- Dave Bayless and Ron Bennett initiated filing for Division in 2011
- Inspired by two publications
- Gained 200 interested members
- LEAD founded on June 14, 2014
- Full history is in our inaugural strategic plan

Division history is in our Appendix, posted at http://lead.asee.org/

ASEE Engineering Leadership Development Division (LEAD)

Strategic Plan 2016-2020

Version 1.0

Calls for "engineers who are broadly educated, who see themselves as global citizens, who can be leaders in business and public service, and who are ethically grounded."

2

The Engineer of 2020: Visions of Engineering in the New Century National Academy of Engineering, p. 5.

2014 National COMPLETE Conference at Rice University

- COMPLETE formed to share practices among EL programs
- First-of-its kind conference; 215 attendees from North America
- President of NAE, Director of Johnson Space Center, former Director of the NSF and White House Office of Science and Technology Policy



3

LEAD Achievements in Publications

We've become the sole academic repository for engineering leadership scholarship Top 25 papers 112 total papers 21,075

downloads

4



6/24/2017	An Approach to Understand the Role of Identity in Engineering Leadership	2015
6/26/2016	'I Survived the Crisis!' - Using Real World Scenarios to Teach Crisis Leadership Skills to Undergrad Engineering Students	1684
6/15/2014	Hoshin Kanri X-Matrix Drives Engineering Leadership Program Success	664
6/14/2015	Developing Personal Case Studies as a Method for Deepening Lessons in Engineering Leadership	615
6/26/2016	Mixed Method Study of the Evolution of Leadership Traits during a Leadership Experience	564
6/26/2016	Values-Congruent vs. Values-Artifact Leadership: How Are They Different?	501
6/26/2016	Developing Engineering Leaders Using a Reflective Autobiographical Exercise	455
6/24/2017	Developing Leadership through an Immersive Service-Oriented International Internship	361
	Curricular and Non-Curricular Factors Impacting Development of Leadership Competencies in Undergraduate Civil	
6/14/2015	Engineering and Construction Students	355
6/26/2016	Identifying Engineering Leadership Potential During the On-Campus Recruiting Process	351
6/26/2016	Developing Engineering Leaders: An Organized Innovation Approach to Engineering Education	312
6/26/2016	LEADing The Way: A Review of Engineering Leadership Development Programs	302
6/23/2018	Faculty, Student, and Practitioner Initial Conceptions of Leadership	300
6/26/2016	Lion Leadership Lessons Video Series' - Delivering Engineering Leadership Lessons to a Broad Audience	279
6/15/2014	From Faculty to Change Agent: Lessons Learned in the Development and Implementation of a Change Workshop	271
6/15/2014	An Experiential Learning Approach to Develop Leadership Competencies in Engineering and Technology Students	255
6/14/2015	Training for Leadership and Team Skills from Freshman Year Forward	255
6/23/2018	Board 92 : What is Engineering Leadership? A Proposed Definition	250
6/14/2015	What Behaviors and Characteristics Do Engineering Student Competition Team Members Associate with Leadership?	248
6/23/2018	Convergent Approaches for Developing Engineering Leadership in Undergraduates	245
6/26/2016	Developing the Global Engineering Leader at a Leading Engineering Institution in the Southeast	237
6/26/2016	Completing the Pass: Leadership 'On' and 'In' the Field	231
	Achieving Excellence in Master of Engineering Education: A Case Study of National University of Defense Technology's	
6/26/2016	Practice	221
6/26/2016	Charting the Landscape of Engineering Leadership Education in North American Universities	217
6/14/2015	Developing Leaders by Putting Students in the Curriculum Development Driver's Seat	208

Engineering Leadership Development Division, History of Membership

Jun-12



FY21-Q3 ASEE MEMBERSHIP REPORT

of Division Members (sorted by number of members)



Other LEAD Achievements 2014-2021

- Helped build legitimacy for the emerging EL academic field
- New relationships and collaborations across programs
- New ways to engage our members, Ex., Leadership lounges
- Establishing "leadership" among ABET criteria
- 25 of these have been downloaded 200+ times totaling 11,396

8

• Our collective values express inclusion and belonging

Two Challenges – Three Opportunities

Challenges

- Need to strengthen quality and scope of our papers
- How can we foster and reward excellent reviewership?
- How can we broaden our focus on stakeholder needs?

Opportunities

- Publish case studies in engineering leadership and development
- Explore boundaries between engineering, science, and technology

9

 Build more bridges to the Engineering Management Division

Thank you for the opportunities to serve our community!

10