

## Table of Contents

Tank Depressurization Experiments for the Classroom or Laboratory .....	1
<i>Meagan Olsen, Andrew Buck, Roy Penney and Ed Clausen</i>	
Preparing Engineering Students for Industry .....	11
<i>Charles Baukal, Mark Vacarri, Thomas DeAgostino, Carter Stokeld and Courtney Baukal</i>	
The Effect of Plus-Minus Grades on Graduation With Academic Distinction for Engineering Students at Wichita State University .....	21
<i>Roy Myose, Elizabeth Rollins, Klaus Hoffmann, Kimberly Engber and Sarah Myose</i>	
Design and Development of an Integrated Firewall-Seat for Formula SAE Car .....	30
<i>Alana Gorski, Hannah Gross and Masoud Mojtahed</i>	
University-Led Engineering Outreach to Adults: Public Engagement and Senior Adult Initiatives .....	42
<i>Ashlee N. Ford Versypt, Joel J. Versypt and Heather Gappa-Fahlenkamp</i>	
Training Engineering Students on Synthesis and Characterization of Superhydrophobic Electrospun Nanocomposite Fibers from Recycled Polystyrene Foams .....	48
<i>Eylem Asmatulu, Md. Nizam Uddin, Yeshaswini Baddam and Polo Osornio Cornejo</i>	
Integrating 4D Printing Processes into STEM Education .....	58
<i>Eylem Asmatulu, Yeshaswini Baddam, Md. Nizam Uddin and Thisath Nisitha Dasal Attampola Arachchi Attampola Arachchige Don</i>	
Mitigations of Machine Damaged Fiber Reinforced Composites for Improved Mechanical Strengths and Educational Practices for Engineering Students .....	69
<i>A Kunza, A.S.A Shairi, K.A Brauning and R Asmatulu</i>	
Microfluidics-based Learning and Analysis for Plant Cell Studies .....	75
<i>Eylem Asmatulu, Sattar Ali, A. Bilal Ozturk and Amanuel Wondimu</i>	
Saving Time In and Out of Class: Video Exam Solutions .....	84
<i>Christi Luks</i>	
The Retention of Graduates from Engineering Education Expansion in Kansas .....	89
<i>Roy Myose, Scott Miller, Steven Skinner and James Myose</i>	
Prerequisite Testing as a Tool to Gauge Incoming Student Capability and Knowledge in an Engineering Statics Course .....	100
<i>Roy Myose, Syed Raza, Elizabeth Rollins, Brandon Buerge and Nicholas Smith</i>	
Incorporating Entrepreneurial Minded Learning into an Undergraduate Dynamics Course .....	110
<i>Michael Hennessey</i>	
Top Administrators' Perceptions of the Quality in E-learning .....	120
<i>Mohammed Al Awadh and Gamal Weheba</i>	
Implementation of Problem Based Learning into Materials Testing lab .....	132
<i>Jonathan Kuchem and Nicolas Libre</i>	

Restructuring a Modeling Dynamics Course with Absorb-Do-Connect Learning Units . . . . .	143
<i>Brett Whorley, Camilo Giraldo, Arjun Kamath, Molly McVey, Meagan Patterson and Carl Luchies</i>	
Women in Engineering – Focus on Self-Efficacy in Modeling and Design through Project-Based Learning . . . . .	150
<i>Muhammad Khan and Mohamed Ibrahim</i>	
Structured Redesign of a Circuits Laboratory . . . . .	159
<i>Amardeep Kaur and Theresa Swift</i>	
Student Performance Characteristics in a Hybrid Engineering Statics Course . . . . .	170
<i>Roy Myose, Scott Miller and Elizabeth Rollins</i>	
Influencing Elementary Students Perceptions about the Work of an Engineer . . . . .	181
<i>Juliana Utley, Drew Gossen and Toni Ivey</i>	
Big Data Analytics for Big Outcomes in Healthcare . . . . .	189
<i>Hailey Michael and Shankar Krishnan</i>	
Research Safety and Professional Development-A Graduate Course Focused on the Role of Safety in Laboratory Management . . . . .	198
<i>Tammy Lutz-Rechtin</i>	
Introduce high school students to engineering disciplines: Activities and Assessment . . . . .	208
<i>Nicolas Libre and Stuart Baur</i>	
Project-Based Approach to Intensify STEM Education Experience – A Case Study . . . . .	218
<i>Kishore Konda Chidella, Srikanth Gampa and Abdulrahman Almohaimeed</i>	
Superhydrophobic Electrospun Nanocomposite Fibers for Training Engineering Students . . . . .	227
<i>Md. Nizam Uddin, Fenil Desai, Arvind Raj Murali, Andrew Swindle and Eylem Asmatulu</i>	