ECEPULSE
THE HEARTBEAT OF INNOVATION

A tech conference by students, for students

With **ECE Pulse 2016**, our goal is to expose students to the wide breadth of new opportunities with an electrical or computer engineering degree. We aim to showcase the innovations of industry today. In this way, we will inspire the future generation of engineers to tackle the challenges of tomorrow. It goes without saying that University of Illinois, especially **ECE Illinois**, is a widely recognized hub for innovation and impact.

This will be our fifth year running ECE Pulse. Throughout this weeklong celebration, approximately 500 students with a passion for technology will participate in a variety of events. We begin on Jan. 23rd with student-made student-run competitions, which will allow competitors to tackle practical design challenges common in various subfields of electrical and computer engineering. The following weekend, we will host a series of technical workshops and presentations. Finally, we conclude ECE Pulse on Jan. 30th with a startup fair, encouraging our attendees to explore technology entrepreneurial pursuits.

Sponsors of ECE Pulse can enjoy interacting with one of the best and brightest engineering student bodies. By supporting our esteemed department, corporate sponsors also promote their technology and brand. Your company can directly contribute to our wide array of activities such as our competitions, tech talks, workshops, and networking sessions.

Included in this document is a sponsorship tier list, which lists specific benefits for each level. Your involvement with ECE Pulse is entirely customizable, so if you have any questions, freely contact us at ece-pulse@illinois.edu.

We look forward to working with you to make ECE Pulse even bigger and better!

Thank you,

ECE Pulse Team

ece-pulse@illinois.edu
http://pulse.ece.illinois.edu

ECE Pulse 2016 Sponsorship Tiers	Startups $500	Amp $1,250	Volt $2,000	Charge $3,500	Megawatt (only 1) $7,000
Invitation to Private Networking Dinner	X	X	X	X	X
Networking Session in ECEB	X	X	X	X	X
Website Advertisement	X	X	X	X	X
T-shirt Logo (Provided to all participants)	Small	Small	Medium	Large	Primary
Tech Talk Slots	Available Upon Request	Available Upon Request	Available Upon Request	Available Upon Request	Available Upon Request
Access to Resume Book	X	X	X	X	X
Social Media Advertising	X	X	X	X	X
Giveaways (If Desired)		X	X	X	X
Swag Bag (Branded goods given to students)		X	X	X	X
Sponsored Prizes (Competition/Raffles)[1]			X	X	X
Invitation to private networking dinner with staff & competition winners				X	X
Technical Workshop				X	X
Exclusive Meeting with Student Organization					X
Exclusive Title Sponsorship (example: ECE Pulse Co-Hosted by "Company")					X
Early Access to Resume Books					X

* For sponsorship packages with customized combinations of the above options, feel free to email us at ece-pulse@illinois.edu.

*1: Must request for sponsored competition/prizes and is on a first come first serve basis; email us at ece-pulse@illinois.edu

ECE PULSE Tentative Schedule

Date	Event	Start Time	End Time
Saturday (1/23/16)	Competitions Start	10:00 AM	
	Breakfast	9:30 AM	10:30 AM
	Lunch	12:00 PM	1:00 PM
	Dinner	5:30 PM	6:30 PM
	Competitions End		10:00 PM
Thursday (1/28/16)	Registration	4:30 PM	5:00 PM
	Introduction Video	5:00 PM	5:05 PM
	Director's Welcome	5:05 PM	5:15 PM
	Department Head's Welcome	5:15 PM	5:30 PM
	Keynote Introduction	5:30 PM	5:35 PM
	Keynote Speech	6:30 PM	6:30 PM
	Keynote Q & A	6:30 PM	6:45 PM
	Dinner	6:45 PM	-
Friday (1/29/16)	Tech Talk #1	5:00 PM	6:00 PM
	Dinner	6:00 PM	6:30 PM
	Workshop 1	6:30 PM	7:00 PM
Saturday (1/30/16)	Workshop 2	10:00 AM	11:00 AM
	Tech Talk #2	11:15 AM	12:15 PM
	Lunch	12:15 PM	1:15 PM
	Tech Talk #3	1:15 PM	2:15 PM
	Workshop #3	2:30 PM	3:30 PM
	Tech Talk #4	3:45 PM	4:45 PM
	Startup Panel	5:00 PM	6:15 PM
	Exclusive Dinner	6:30 PM	8:00 PM
	Social Mixer	8:00 PM	10:00 PM

ECE PULSE Curriculum Information

For sponsors who would like to contribute with a tech talk or with a competition design, we have provided you the following information for you to better understand our curriculum. Based on the listed courses, sponsors can better cater their presentations towards our students and connect with their coursework.

Required Electrical/Computer Engineering Core Curriculum

Course Number	Core Concepts
ECE 110: Intro to Electrical & Computer Eng	• DC circuit analysis • Discrete components
ECE 120: Computer Eng I	• Digital logic • Computer organization •
ECE 210: Analog Signal Processing	• Fourier Analysis • Frequency domain analysis
ECE 220: Intro to Computing Systems	• C Programming • Binary representations
ECE 313: Probability with Eng Applications	• Probability distributions (Gaussian, etc) • Applications of probability
ECE 329: Fields and Waves I	• Maxwell's equations • Transmission line analysis
ECE 340: Semiconductor Devices	• BJTs, MOSFETs, p-n junctions • Semiconductor fundamentals
ECE 385: Digital System Design Lab	• VHDL or Verilog • Digital system design using FPGA

Required Supplementary Computer Engineering Curriculum

Course Number	Core Concepts
CS 173: Discrete Structures	• Sets, propositions, Boolean algebra • Induction, recursion, graphs
CS 225: Data Structures & Software Principles	• C++ and basics of object-oriented programming • Data structures (linked lists, trees, graphs)
ECE 391: Computer Systems Engineering	• Device programming • Operating system fundamentals
ECE 411: Computer Organization & Design	• Instruction set architectures • Memory organization • Input-Output

Required Supplementary Electrical Engineering Curriculum

Course Number	Core Concepts
ECE 445: Senior Design Project Lab	• Team project development • Circuitry design and layout • Documentation process

Additional Electrical & Computer Engineering Electives

Course Number	Core Concepts
ECE 310: Digital Signal Processing	• Discrete-time signal processing • Digital filter design
ECE 330: Power Circuits and Electromechanics	• Magnetic circuits • Three-phase circuits
ECE 342: Electronic Circuits	• Large-signal and small-signal circuit analysis • Diodes, transistors, amplifiers
ECE 350: Fields and Waves II	• Radiation, antennas, waveguides • Plane-wave propagation
ECE 361: Digital Communications	• Communication over additive Gaussian noise, wireline, wireless • Signal reliability
ECE 408: Applied Parallel Programming	• Computational thinking and parallelism • Efficient data structures
ECE 420: Embedded DSP Lab	• Sampling, digital filtering on chips • Real-time DSP applications
ECE 425: Intro to VLSI Design	• CMOS circuit and logic design • VLSI system design methods
ECE 431: Electric Machinery	• Induction and DC machines • Synchronous machines
ECE 438: Computer Networking	• TCP/IP and network protocols • Data link and multi-access protocols
ECE 444: IC Device Theory & Fabrication	• Photolithography and etching • Fabrication of IC devices
ECE 453: Wireless Communication Systems	• Phase-locked loops, modulation • Two-port network analysis
ECE 464: Power Electronics	• Switching converter topologies • Real component analysis
ECE 482: Digital IC Design	• Design of VLSI circuits • Programmable logic arrays

ECE 483: Analog IC Design	• Large and small signal analysis • Op amp design, feedback amplifiers
ECE 486: Control Systems	• Modeling, state space analysis • Root locus and frequency response design method

For a more complete list of the courses offered, visit ece.illinois.edu/courses.