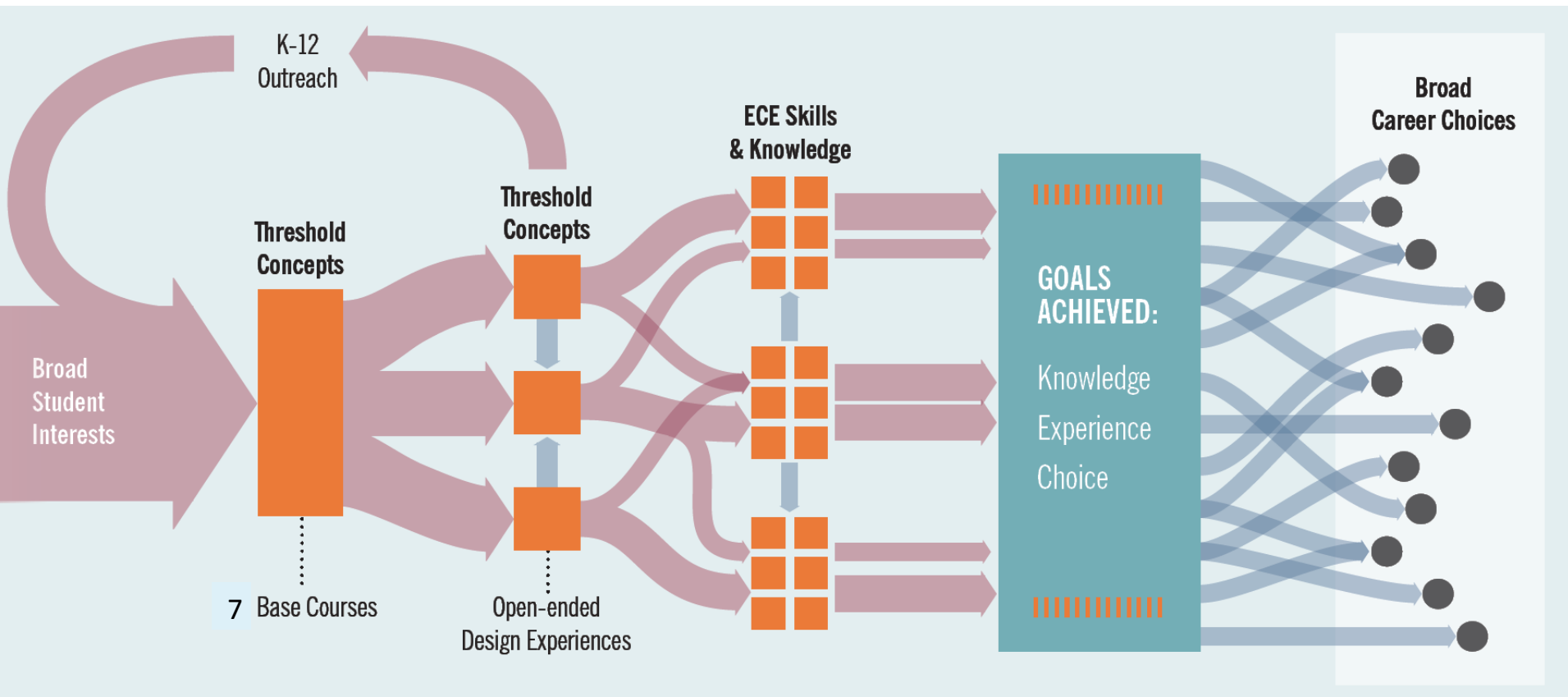


Virginia Tech ECE: Radically Expanding Pathways in PFE





"If we get this grant,
my department is going
to f****g hate me . . ."

—*field notes, fall 2015*

THIRD YEAR

EE 314, 324, 334 Network Theory.....
 EE 315, 325, 335 Electromagnetic Fields....
 EE316, 326, 336 Electronics.....
 EE317, 327 Instrumentation/Circuits Labo
 EE 319, 329 Electronics Laboratory.....
¹Social Science Humanities Elective.....
 Phys 347 Foundations of Physics IV.....
²Math 419, 429, 439 Applied Math for Eng



Third Year

FIRST SEMESTER

EE 3105: EM Fields I
 EE 3204: Electronics II
 EE 3274: Lab II
 EE 3305: Power I
 EE 3714: Circuits, Signals, Systems
 Stat 4714: Statistics/Probability or
 Math 4554: Numerical Analysis
 Humanities Elective¹

SECOND SEMESTER

EE 3106: EM Fields II
 EE 3306: Power II
 EE 3354: Lab III
 EE 3604: Communication Systems
~~Math 4574: Vector Analysis~~
~~Engl 3764: Technical Writing~~
~~Humanities Elective¹~~



Junior Year

Fall Semester

[ECE 3004 AC Circuit Analysis](#) - 3C
 Prereq: 2704
 Co-req: 3074

[ECE 3074 AC Circ Analy Lab](#) - 1C
 Prereq: 2074
 Coreq: 3004

[ECE 3105 Electromag Fields](#) - 1C
 Prereq: PHYS 2306, MATH 2224 or MATH 2224H, ECE 2004 or ECE 2004H

[ECE 3704 Cont & Disc Sys](#) - 3C
 Prereq: 2704

STAT 4714
 Probability &
 Statistics for EE - 3C
 Prereq: MATH 2224

ENGL 3764
 Technical Writing - 3C

Spring Semester

[ECE 3106 Electromag Fields II](#) - 3C
 Prereq: 3105

[ECE 3204 Analog Electronics](#) - 3C
 Prereq: 2204
 Coreq: 3274

[ECE 3274 Electrnc Circ Lab II](#) - 1C
 Prereq: 2274, 3074
 Co-req: 3204

[ECE 3304 Intro Power Sys](#) - 3C
 Prereq: 3004

[ECE 3354 Power Lab](#) - 3C
 Co-req: 3304

[ECE 3614 Intro Comm Sys](#) - 3C
 Prereq: 2704, STAT 4714

CLE Area 6

1971

1989

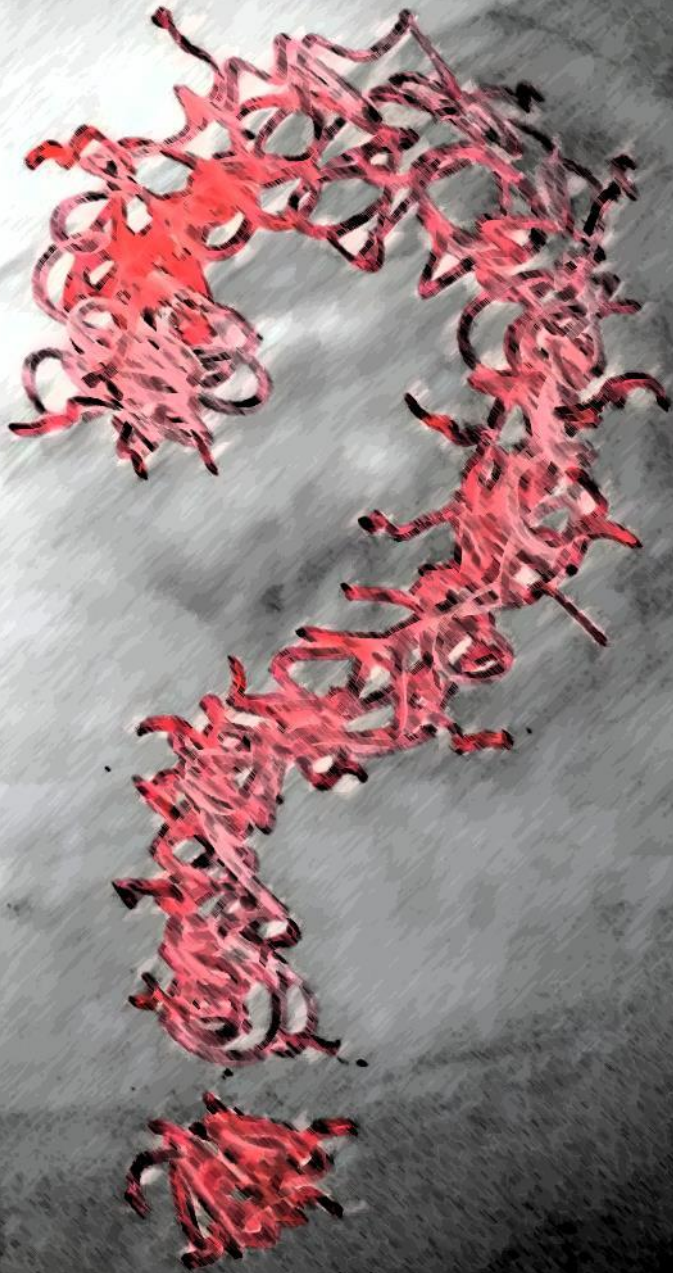
2016





What's missing?

- RIGOR (not necessarily. Mathematical)
- Modeling & Engineering Method.
Design, Analysis, Implementation.
- ~~Real time vs. Pseudo Real Time~~ ✓
- Result of temperature and time on electronics (I_c , R_c , C_c , C_c, \dots)
- ~~dB~~ ✓
- ^{Linear} References + Regulators



ECE PEOPLE

ECE Faculty Honors

NATIONAL ACADEMY OF ENGINEERING

IEEE FELLOWS

R. Michael Buehrer (2017)

For contributions to wideband signal processing in communications and geolocation.

Jung-Min (Jerry) Park (2017)

For contributions to dynamic spectrum sharing, cognitive radio networks, and security issues.

Theresa Mayer (2017)

For contributions to nano materials integration and directed assembly.

Luiz Da Silva (2016)

For contributions to cognitive networks and resource management for wireless networks.

I amine Mili (2016)



Engineering researcher honored at
White House for advancing e-textiles

27, 2006



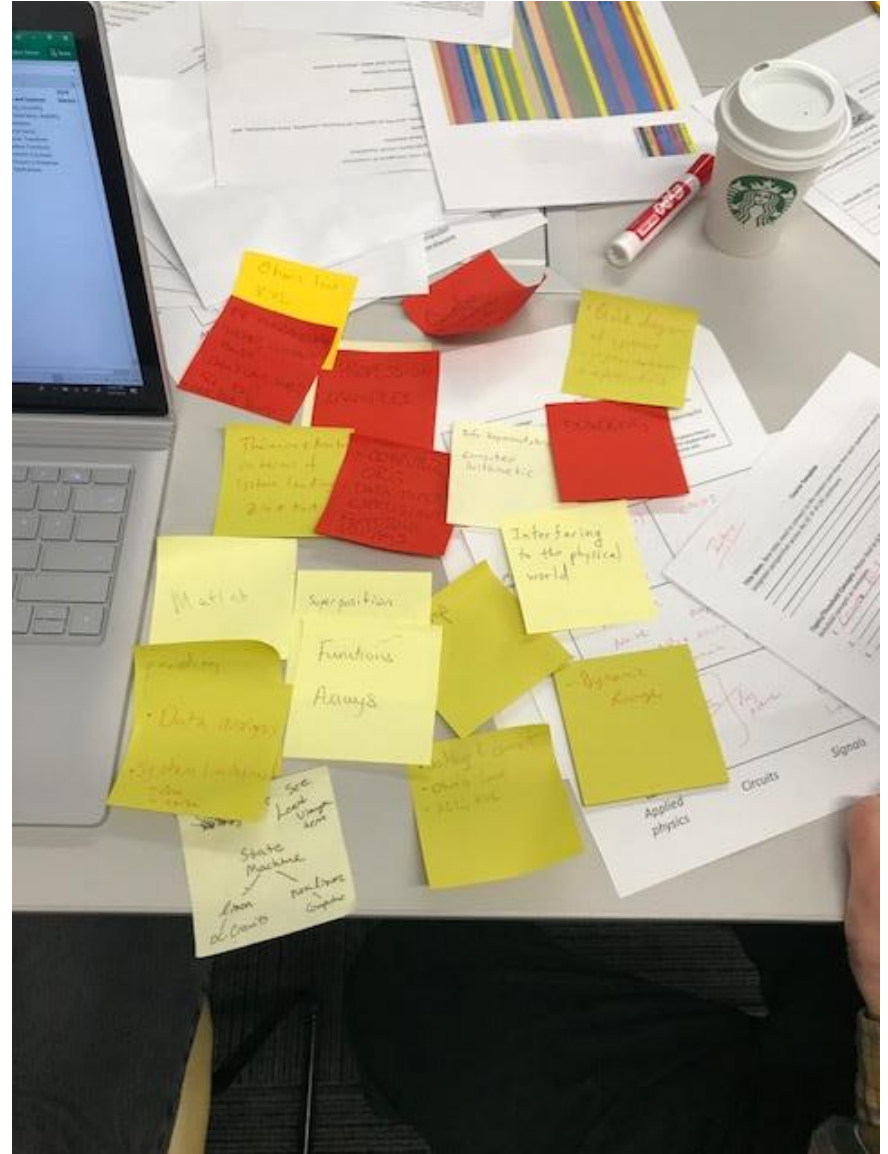


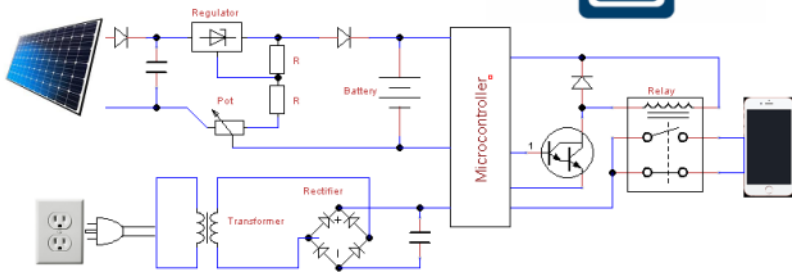
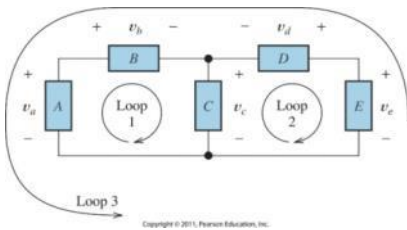


Virginia Tech preps for largest freshman class in school history, faces housing crunch

By Robby Korth robby.korth@roanoke.com (540) 381-1679 Jul 15, 2017 (5)





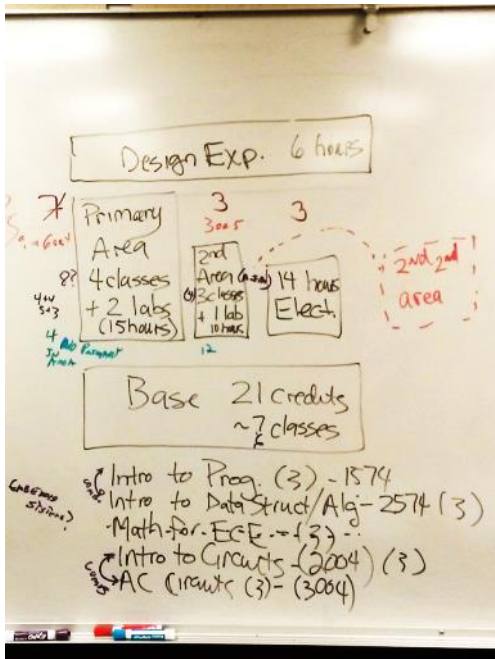


Design Exp. 6 hours

\times Primary Area 3
 3005 3
 4 classes + 2 labs (15 hours)
 4w 5+3
 4th Area
 2nd Area (14 hours)
 3 classes + 1 lab 10 hours
 12
 2nd. 2nd area

Base 21 credits
 ~7 classes

Intro to Prog. (3) - 1574
 Intro to Data Struct/Alg - 2574 (3)
 Math for ECE - (3)
 Intro to Circuits - (2004) (3)
 AC Circuits (3) - (3004)



Virginia Tech preps for largest freshman class in school history, faces housing crunch

By Robby Korth roby.korth@roanoke.com (540) 381-1679 Jul 15, 2017 (5)



DESIGN TEAM

CORE FACULTY



David Bieri



Mark Embree



Paul Heilker



James Ivory



Paul Knox



Kim Filer



Sylvester Johnson



Lara Khansa



Luke Lester



Nikki Lewis



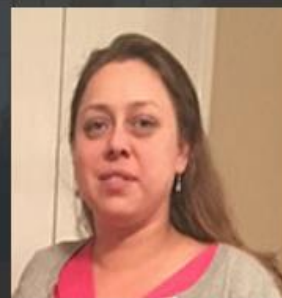
Tom Martin



Thanassis Rikakis



Akshay Sharma



Anne-Lise Velez