

ECE Curriculum Committee Meeting

Tuesday, June 3rd, 2025

Attending: Arabshahi, Bushnell, Chen, Dela Cruz, Fazel, Hauck, Huberman, Kaushansky, Kirschen, Lim, Rudell, Mishra, Moritz, Sallows, Shepard, Swanson, Van Fossen

Absent: Majumdar, Reyes

Agenda:

1. Annual Review of the Communications Group
2. Annual Review of the Very Large-Scale Integrated/Integrated Systems Group
3. Annual Review of the Signal Image Processing / Data Science Group

Annual review of the Communications group

Group chair Payman Arabshahi presented to the committee an overview of the current academic year for the Communications Group (Comms) and comparing it to the performance of last academic year to update the committee on trends/growths and goals that were achieved/needs improvement on. Data reviewed shows an overall upward trend in enrollment, balanced outcomes for ABET requirements, and stable evaluations from students.

- Comms Slides - Link
- Enrollment show signs of an overall healthy enrollment
 - EE 391: Probability for Information and Communication Engineering has good enrollment numbers for this Spring quarter being its second offering
 - EE 400: Advanced Topics in Electrical Engineering (Tiny Machine Learning) is on future agendas to become a regular course
- ABET Outcomes mostly meet the requirements of at least ~75% or higher of students assessed are “Competent/Exemplary”
 - There is only one instance of a course dropping below the 75% of assessed students
 - Autumn 2024 – EE 418: Network Security and Cryptography
- Student Course Evaluations show a stable trend of results
 - Participation is high for nearly all courses
 - Adjusted combined median ranges from 3.8 - 5.0
 - Challenge and Engagement Index (CEI) ranges from 4.1 - 4.9
 - Hours per credit ranges from 1.4 - 2.9

ECE Curriculum Committee Meeting

Tuesday, June 3rd, 2025

Annual review of the Very Large-Scale Integrated/Integrated Systems group

Group chair Chris Rudell presented to the committee an overview of the current academic year for the Very Large-Scale Integrated/Integrated Systems Group (VLSI) and comparing it to the performance of last academic year to update the committee on trends/growths and goals that were achieved/needs improvement on. Data reviewed shows an overall upward trend in enrollment, balanced outcomes for ABET requirements, and stable evaluations from students.

- VLSI Slides - Link
- Enrollment show signs of an overall healthy enrollment
 - EE 332: Devices and Circuits II's enrollment is steadily increasing
 - EE 473: Linear Integrated Circuits is currently in high demand and needed its capacity increased twice
- ABET Outcomes mostly meet the requirements of at least ~75% or higher of students assessed are "Competent/Exemplary"
 - The participation between courses varies, but overall is in an acceptable state for review
- Student Course Evaluations show a stable trend of results
 - Participation varies for nearly all courses, but most have high participation
 - Adjusted combined median ranges from 2.3 - 4.7
 - Challenge and Engagement Index (CEI) ranges from 4.7 - 6.6
 - Hours per credit ranges from 1.8 - 3.7

Annual review of the Signal Image Processing / Data Science group

Group chair Maryam Fazel presented to the committee an overview of the current academic year for the Signal Image Processing / Data Science (SIP) and comparing it to the performance of last academic year to update the committee on trends/growths and goals that were achieved/needs improvement on. Data reviewed shows an overall upward trend in enrollment, stable evaluations from students, but some concerns arouse from the ABET outcomes.

- SIP Slides - Link
- Enrollment show signs of an overall healthy enrollment

ECE Curriculum Committee Meeting

Tuesday, June 3rd, 2025

- o Fazel noted that EE 342: Signals, Systems, and Data II will be moved to one offering a year
 - Kirschen started the side discussion that EE 342 is a prerequisite to EE 442: Digital Signals and Filtering
 - It is anticipated that to work with this change, EE 342 will have to be offered in the Winter quarter while EE 442 will have to be offered in the Spring quarter
- o Fazel noted that EE 440: Introduction to Digital Imaging Systems will either be retired or hidden
 - Will be decided in future curriculum committee meetings
- o New courses scheduled to come next academic year:
 - EE 344
 - EE 345
 - EE 445
- Student Course Evaluations show a stable trend of results
 - o Participation varies for nearly all courses
 - EE 241: Programming for Signal and Information Processing Applications has particularly low participation
 - Other courses show average participation ranging from half to quarter of enrollment
 - o Adjusted combined median ranges from 1.6 - 5.3
 - o Challenge and Engagement Index (CEI) ranges from 3.5 - 6.5
 - o Hours per credit ranges from 1.5 - 3.6
- Most ABET Outcomes meet the requirements of at least ~75% or higher of students assessed are “Competent/Exemplary”, but EE 442 and EE 443 were the only concerns where Electrical Engineering students’ reviews were below standard
 - o EE 442 and EE 443 have been working on trying to better prepare students for material to improve scores for ABET review