California State University, Long Beach

Department of Electrical Engineering

Graduate Studies Information Session

for incoming and returning MSEE Students

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Outline

- Welcome
- Important contact info
- Where to seek help?
- MSEE degree requirements
  - What is conditionally classified status?
  - What is academic warning?
- MSEE roadmap
  - 5 required courses
  - MSEE concentrations
- ATC
- Culminating activities
  - Comp exam
  - Thesis
- Apply to graduate
- Faculty research activities

People (EE Department)

EE Chair:

Dr. Ebrahim Amiri,
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Office: ECS 510

Graduate Advisor:

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Office: ECS 515

Administrative Support Assistant:

Ms. Dyani Park
Email: Dyani.Park@csulb.edu
Office: ECS-561
Phone: 562.985.8043 (Department Office)

People (College of Engineering)

Graduate Student Success Center (GSSC)

Associate Director:

Ms. Helen Yohannes
Email: Helen.Yohannes@csulb.edu
Phone: 562.985.5119

Graduate Advisor:

Ms. Tu Ngo
Email: tu.ngo@csulb.edu

Where to Seek Help

- (For international students) Have questions about your visa status, I-20, traveling internationally, number of classes you are allowed to take, etc., contact the ***Center of International Education*** (***CIE***).
  - https://www.csulb.edu/international
- Have questions about registration, graduation, tuition, fees, payments, etc., contact the ***Enrollment Services*** (***ES***).
  - https://www.csulb.edu/enrollment-services
- Have questions about your IT access, email account, Canvas issues, etc., contact the ***Academic Technology Services*** (***ATS***).
  - https://www.csulb.edu/academic-technology-services
- Have questions about your academic progress, choosing classes, etc., contact your ***Graduate Advisor*** (***GA***).

MSEE degree requirements

- Master's degree in EE involves four major steps:

1) Admission to CSULB and the academic unit granting the degree (department, college, etc.) as either a ***conditionally classified*** or ***classified*** graduate student;

2) Completion of the requirements to ***achieve classified status*** if admitted in conditionally classified status;

3) Preparation of a program of study and ***advancement to candidacy (ATC)***; and

4) Fulfillment of all remaining requirements for the degree, resulting in graduation.

Conditional Classified Status (Deficiency)

- ***Conditionally Classified status*** indicates that you did not take the necessary pre-requisite class/classes for MSEE admission during your undergraduate program.
- You need to take the deficiency classes (usually at 300 level) and pass them with grade C or better within your ***first two semesters*** in the MSEE program.
- Failure to complete deficiencies within the first two semesters may result in disqualification from the university.
- Some notes:
  - After passing all deficiencies, ***send an email*** to your graduate advisor to change the state from ***Conditionally Classified*** Status to ***Classified*** Status.
  - You cannot advance to candidacy, if you still have deficiencies.
  - You may need to request a permit from the EE office staff to enroll in those classes.

Academic Warning (Probation)

- As a graduate student, you ***should always*** maintain GPA 3.0 or higher in each semester.

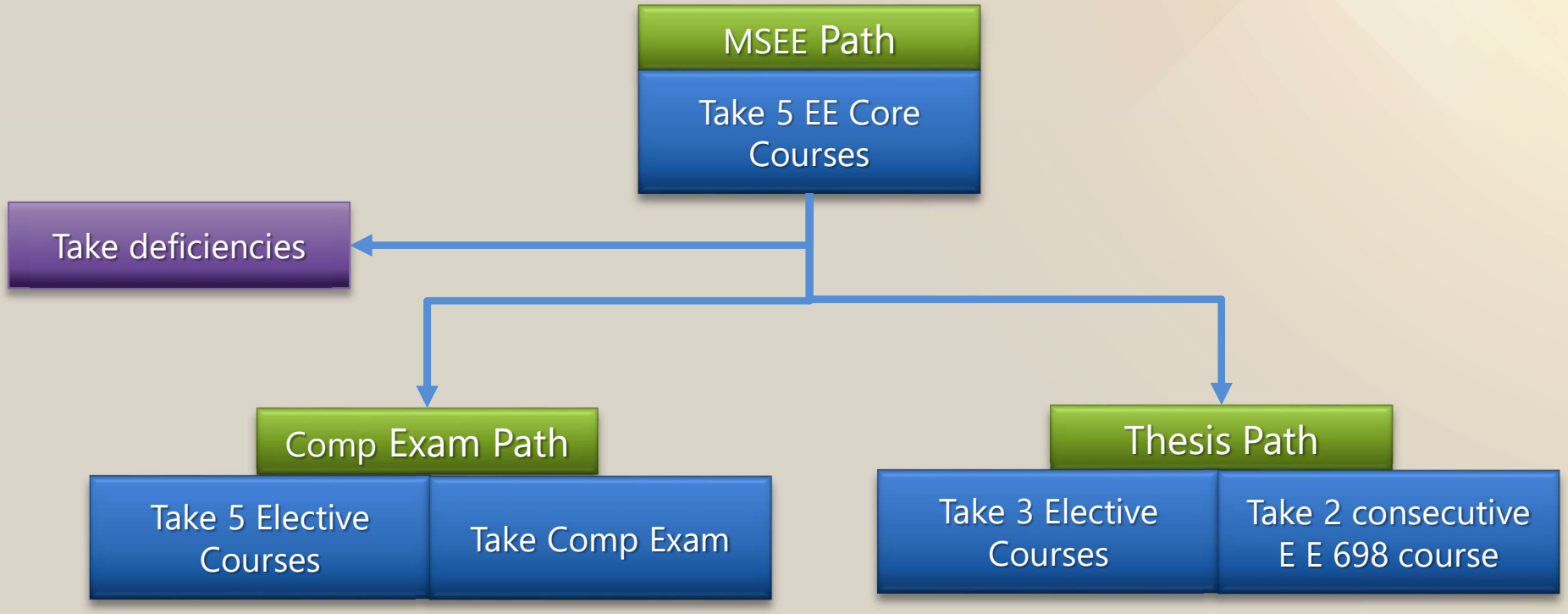
- If your GPA falls below 3.0, then
  - You will be placed on ***probation*** (***Academic Warning***) until your GPA becomes 3.0 or higher.
  - You will NOT be permitted to Advance to Candidacy (ATC).
  - You will NOT be permitted to take or continue Comp Exam or Thesis research.
  - You will NOT be permitted to graduate.

- You will have two semesters to raise your GPA to 3.0. Failure to do so will result in ***disqualification*** from the university.

- Even your deficiencies count toward your GPA.

- When your GPA is at least 3.0, then you are in Good Academic Standing.

MSEE Flowchart



MSEE 5 Core (Required) Courses

- **E E 508** - Probability Theory & Random Process (usually offered in **FA SP**)
- **E E 511** - Linear Systems Analysis (usually offered in **FA SP**)
- **E E 531** - CMOS Electronics (usually offered in **FA SP**)
- **E E 554** - Power Systems and Applications (usually offered in **FA SP**)
- **E E 588** - DSP for MIMO Communication Systems (usually offered in **FA SP**)

MSEE Concentrations

The Electrical Engineering department offers the following four concentrations

- **Communications, Networking, Machine Learning**
- **Electronics, Digital Systems**
- **Power, Control Systems**
- **Biomedical Engineering**

Communications, Networking, Machine Learning

Suggested specific elective courses

- EE 545, Computer Comm Networks
- EE 592, Wireless Communications
- EE 585, Adv Digital Signal Processing
- EE 587, Fiber Optic Networks

Other suggested elective courses

- EE 527, Digital Filter Design and Audio Processing
- EE 528, Speech Signal Processing
- EE 547, Sensor Networks
- EE 581, Satellite Communication Systems
- EE 583, Digital Image Processing
- EE 585, Adv Digital Signal Processing
- EE 576, Neural Nets Fuzzy Logic
- EE 591, Adaptive Systems
- EE 589, Multiuser Communications

Faculty members

- Dr. Aftab Ahmed
- Dr. Chin Chang
- Dr. Sean Kwon
- Dr. Henry Yeh

Electronics, Digital Systems

Suggested specific elective courses

- EE 526, High Speed Communications Circuits
- EE 534, Mixed-Signal IC Design
- EE 535, VLSI Design
- EE 546, Advanced Microprocessors & Embedded Controllers II

Other suggested elective courses

- EE 532, Analog Signal Processing
- EE 535A, Microelectronics
- EE 540, Advanced Digital Sys & Computer Architecture
- EE 545, Computer Communication Networks
- EE 551, Theory and Applications of DC/DC Converters
- EE 566, RF and Microwave Electronics
- EE 576, Neural Nets Fuzzy Logic
- EE 587, Fiber Optic Networks
- EE 591, Adaptive Systems

Faculty members

- Dr. Ava Hedayatipour
- Dr. James Ary
- Dr. I-Hung Khoo
- Dr. Anna Lee,
- Dr. Mohammad Mozumdar,
- Dr. Robert Teng,
- Dr. Mahmoud Wagdy,
- Dr. Fei Wang

Power, Control Systems

Suggested specific elective courses

- EE 503, Optimization theory and techniques
- EE 505, Adv Engineering Mathematics for EE
- EE 556, Solar Power
- EE 570, Digital Control Systems
- EE 574, Robot Modeling and Control
- EE 575, Nonlinear Control Systems

Other suggested elective courses

- EE 551, Theory & Applications of DC/DC Converters
- EE 553, Protection of Power Systems
- EE 566, RF and Microwave Electronics
- EE 576, Neural Nets Fuzzy Logic
- EE 583, Digital Image Processing
- EE 591, Adaptive Systems

Faculty members

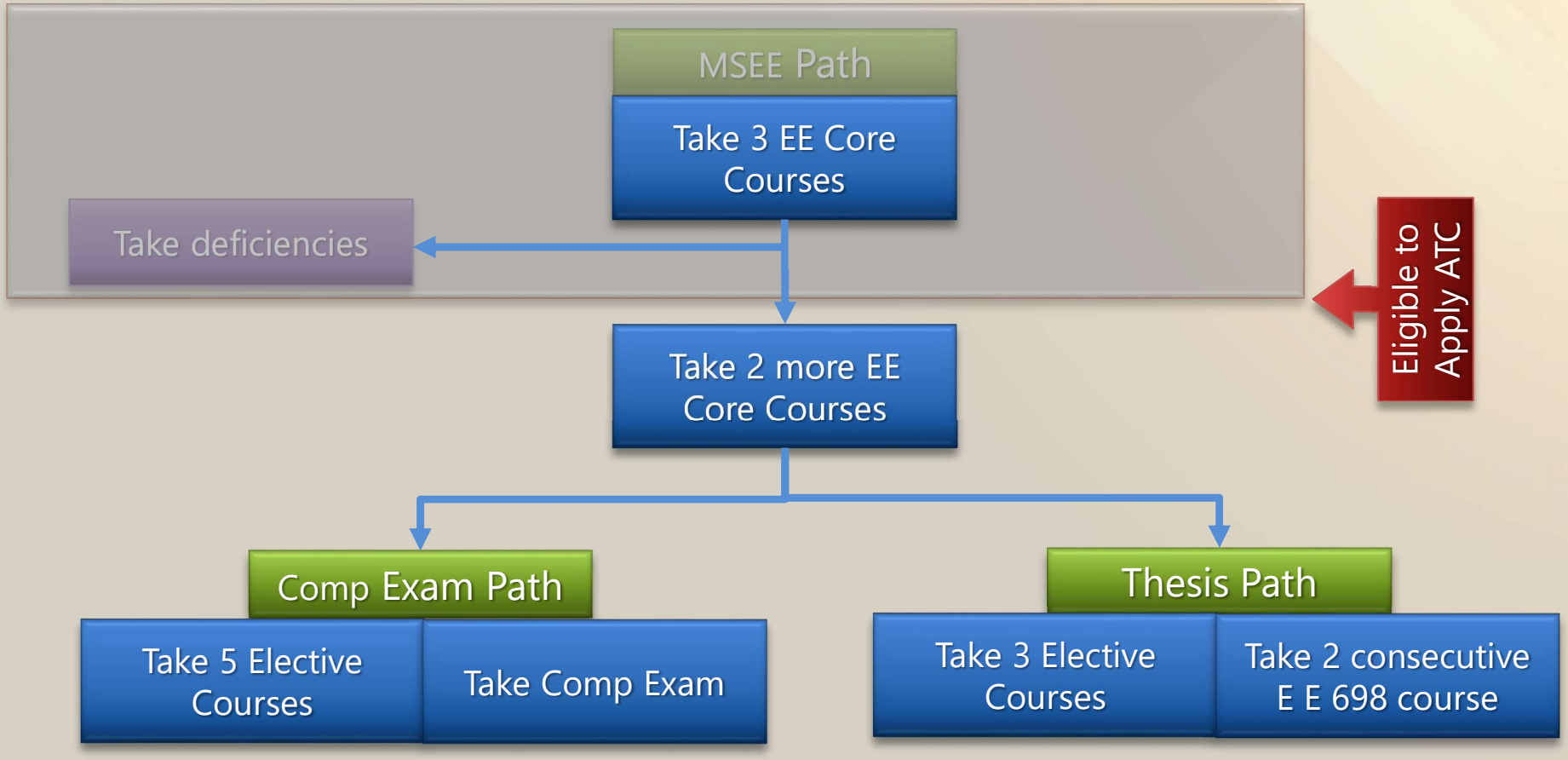
- Dr. Ebrahim Amiri
- Dr. Anastasios Chassiakos
- Dr. Henry Yeh

Biomedical Engineering

- **Suggested specific elective courses**
  - EE 576, Neural Nets Fuzzy Logic
  - EE 583, Digital Image Processing
- **Other suggested elective courses**
  - EE 527, Digital Filter Design and Audio Processing
  - EE 528, Speech Signal Processing
  - EE 574, Robot Modeling and Control
  - EE 585, Adv Digital Signal Processing

- **Faculty members**
  - Dr. James Ary
  - Dr. Ava Hedayatipour
  - Dr. I-Hung Khoo

MSEE Flowchart



Advancement to Candidacy (ATC)

- ***Advance to Candidacy*** (***ATC***) is the process by which you choose your concentration and present the university with your academic plan for graduation.
- Requirements are:
  - Completion of any deficiencies
  - Completion of at least 9 units of EE core courses with GPA≥3.0
  - Selection of culminating activity (comp exam or thesis)
  - Selection of concentration (one of the four concentrations)
  - Being currently enrolled
- You *MUST* advance at least one semester before you apply to graduate.
- It is the student responsibility to initiate the ATC process.
- Choose your culminating activity carefully, not easy to switch.
- Find additional information & form at www.csulb.edu/college-of-engineering/ee-forms

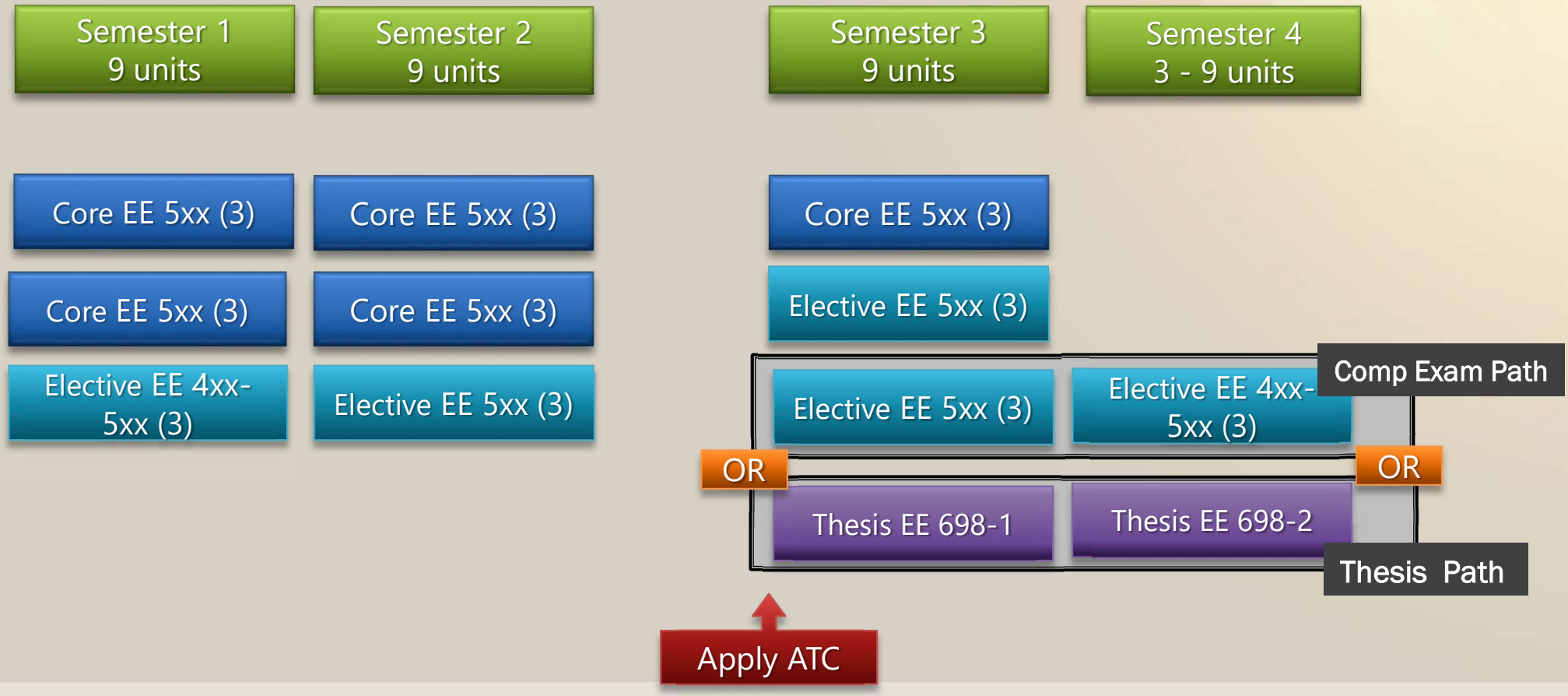
Culminating Activity: Comp Exam

- Requirements are:
  - Must be advanced to candidacy (ATC).
  - Must be in Good Academic Standing, (i.e., GPA $\geq$ 3.0).
  - Must have completed relevant MSEE core courses.
- The comprehensive (comp) exam comprises materials from three MSEE core courses asfollows:
  - Every student is required to take E E 508 and E E 511.
  - The third topic will depend on your concentration, (as declared in your ATC application):
    - **Electronics and Digital Systems:** E E 531
    - **Power, Control, and Robotics**: E E 554
    - **Communications, DSP, and Machine Learning**: E E 588
- Comp exam schedule:
  - Fall semester: First Friday of October
  - Spring semester: First Friday of March
- Expect to receive an email 2 to 3 weeks before the exam for exam registration.
- Failure to pass the comp exam ***twice*** will result in ***disqualification*** from the university.

Culminating Activity: Thesis (EE 698)

- Requirements are:
  - Must be advanced to candidacy (ATC).
  - Must be in Good Academic Standing, (*i.e.*, GPA ≥ 3.0).
  - Must have an MS thesis advisor (not the Graduate Advisor)
- Based on the discussion with the MS thesis advisor, enroll in EE 698.
  - You need to request for a permit from the EE office staff
  - Find additional information & form at www.csulb.edu/college-of-engineering/ee-forms
- In general, take 3 units of EE 698 in one semester; take another 3 units in next semester.
- Thesis presentation/defense with 3 thesis committee members (need their approval of passing the defense).
- You must submit the approved document to the University Thesis and Dissertation Office for evaluation.
- Deadline for thesis submission (to the library):
  - https://www.csulb.edu/thesis-and-dissertation-office/submission-deadlines
- COE submission deadline is usually 2 weeks before the library submission deadline.

Summary: Suggested MSEE Course Works



Apply to Graduate

- The option to ***Apply to Graduate*** will appear on your portal only after
  - you have completed your course works
  - advanced to candidacy (ATC)
  - passed your culminating activity (comp exam or thesis)
  - being in good academic standing (*i.e.*, GPA ≥3.0)
- Apply through
  - https://www.csulb.edu/student-records/apply-to-graduate-graduate-students
- Graduation filing schedule:
  - Fall semester: Apply by October 15
  - Spring semester: Apply by March 1
- What happens if you miss the deadline to apply?
  - You can still apply with missed deadline fee ($10)

Curricular Practical Training (CPT)

- CPT program provides international graduate students in the College of Engineering with the opportunity to gain practical experience in their fields of study. To qualify for CPT, the student must:
  - Have at least one academic year of enrollment in valid F-1 status;
  - Have Advanced to Candidacy completed;
  - Be in the good academic standing status.

Advising Period

- Graduate advising (in person or via email) is available during instructional weeks in Fall & Spring semesters.
  - This is the university policy for all colleges & departments.
- Graduate advising is NOT available during academic & public holidays, summer or winter breaks.
  - For urgent requests, contact the department chair.
- Please plan accordingly so that you can move forward based on the university schedule without problems.

Final Notes - I

- Always include your SID when communicating with your advisor, EE faculty & EE staffs.
- Always use your CSULB email account.
- Get your student ID card. You are required to have your ID card. Your ID card is your official form of identification on campus.
- Not all courses are offered every semester.
  - Some courses may be offered every semester.
  - Some courses may be offered every other semester.
  - Some courses may be offered if the department sees enough interests.
- Check course offering from previous semesters to have an ***idea*** what might be offered in coming semester(s). Remember that course offering is always subject to change.

Final Notes - II

- You need to take ***at least 30 eligible units*** to graduate (excluding deficiencies):

Comp exam path:	Thesis path:
5 EE core courses = 15 units	5 EE core courses = 15 units
5 EE elective courses = 15 units	3 EE elective courses = 9 units
	2 EE 698 = 6 units

- You can take up to two relevant EE 400-level courses as part of your elective courses
  - Exception. You cannot take these three courses: EE 400D, EE 405, and EE 490
  - To enroll in EE 400 level or 300 level courses, you may need permits from the EE office
- Except for EE 500 –level courses, you cannot take courses arbitrarily. Consult with your graduate advisor.
  - Some courses may not be approved, and your graduation will be delayed.
- Every course taken must be aligned with the MSEE curriculum.

Final Notes - III

- Always maintain your GPA above 3.0, otherwise you will be in the Academic Warning (Probation) status.
  - Choose your courses wisely. Choose your courseload carefully. Find the balance.
  - Deficiencies (3xx) count toward your "Overall GPA" but not toward "Degree Requirement" GPA. Need to bring and maintain both GPAs above 3.0.
- Do Not wait, do these as early as possible.
  - Take your 5 EE core courses
  - Talk to a potential thesis advisor (for thesis path)
  - Enroll in next semester classes. Late enrollment may result in a class to be full (due to class capacity) or a class to be cancelled (due to low enrollment)
- You *MUST* advance at least one semester before your graduation.
  - Be careful. You cannot switch between comp exam path and thesis path.
  - Any changes in your plan of study (courses you want to take) should be approved.

Final Notes - IV

- Add and dropping courses:
  - During the first two weeks of classes, you may add or drop classes using self-service registration.
  - Starting third week, you will need to request dropping (it is called withdrawal 'W').
  - Three weeks before the week of final exams, you cannot drop any classes.

- Students
  - (1) with no credits left,
  - (2) in good academic standing, and
  - (3) need additional time to complete their thesis, project, or comprehensive exam,

must take the course Graduate Studies GS-700.

  - GS-700 must be approved by EE graduate advisor, EE chair, and the college.
  - International students need to obtain permission from the CIE (for Reduced Course Load).

Final Notes - V

- International students on F1 visa cannot take less than 8 units in each semester, exceptions:
  - Last semester, in which you need to have permission from the CIE (request for Reduced Course Load).
- It is the student responsibility to initiate:
  - Change from Conditionally Classified Status to Classified Status.
  - Request Advancement To Candidacy (ATC).
  - Request enrollment in GS-700 (and reduced course load, if applicable).
  - Request enrollment in EE 698, or comp exam.

Thank you!

and

Questions?