Both Electrical Engineering and Computer Engineering students must choose a primary technical core/ component (8 courses) and a secondary technical core** (includes 4 courses). Electrical Engineering students must choose their primary technical core/component from the Electrical Engineering tracks listed below; Computer Engineering students must choose theirs from the Computer Engineering tracks. For the secondary technical core, students may choose any technical core, including Academic Enrichment. **IF you are 18-20 Catalog, your “secondary” is actually Free Electives (14 hours required).

IMPORTANT NOTES:

- Courses in brackets [ ] denote general prerequisite requirements, which are subject to change.
- Registrar’s online course schedule contains the most accurate course topics and pre-requisites.
- UT course syllabi are available at https://utdirect.utexas.edu/apps/student/coursedocs/nlogon/
- Consult the department offering a course if you have any questions about pre-requisite requirements.
- You must complete at least 48 credit hours of engineering topics for your degree. Required courses (EE 302, 306, 411, 312, 313, 319K, 333T, 351K, 364, 464) yield 25 credit hours of engineering topics, 4 in math & basic sciences and 3 in other. Math courses count as math & basic sciences. See the Technical Core ABET advising sheet.
- All primary technical core courses and electives must be engineering courses with the exception of the advanced math course listed for the primary technical core.

### ELECTRICAL ENGINEERING TECHNICAL CORES

#### COMMUNICATION, SIGNAL PROCESSING, NETWORKS AND SYSTEMS

This technical core considers communication systems, system and signal analysis, networking theory and protocols, and control and optimization theory. Applications include wireless communications; speech, audio, image and video processing; and feedback control and robotics.

**Required:**

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 427L</td>
<td>EE 351M</td>
<td>EE 362K</td>
<td>EE 445S</td>
</tr>
<tr>
<td>Adv Calculus for Applications II</td>
<td>Digital Signal Processing</td>
<td>Real-Time Digital Signal Processing Laboratory</td>
<td>&amp; 471C</td>
</tr>
<tr>
<td>Pre-requisite:</td>
<td>Co-requisite: EE 351K</td>
<td>Pre-requisites: EE 313 &amp; M 340L</td>
<td>Wireless Communications Laboratory</td>
</tr>
<tr>
<td>M 427J</td>
<td>OR</td>
<td>OR</td>
<td>Pre-requisite: EE 351K &amp; 333T</td>
</tr>
<tr>
<td>OR</td>
<td>EE 325</td>
<td>EE 371R</td>
<td>Co-requisite: EE 333T</td>
</tr>
<tr>
<td>Electromagnetic Engineering</td>
<td>Digital Image and Video Processing</td>
<td>Pre-requisites: EE 313 &amp; EE 351K</td>
<td></td>
</tr>
<tr>
<td>Co-requisites: EE 411; M 472K or 477K; PHY 330L and 103N</td>
<td>Co-requisite: EE 351K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-requisite: M 427L</td>
<td>Intro to Digital Communications</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students must pick 4 additional electives from the following Technical Core courses:

- EE 325 Electromagnetic Engineering [EE 411; M 472K or 477K; PHY 330L and 103N; co-requisite: M427L]
- EE 325K Antennas and Wireless Propagation [EE 325]
- EE 445S Real-Time Digital Signal Processing Laboratory [EE 312, 313 and 319K; co-requisites: EE 333T and 351K]
- EE 351M Digital Signal Processing [EE 313; co-requisite: EE 351K]
- EE 360C Algorithms [EE 312 and M 325K]
- EE 360K Introduction to Digital Communications [EE 351K]
- EE 361M/461P Introduction to Data Mining/Data Science Principles [EE 351K and 360C; M 340L]
- EE 362K Introduction to Automatic Control [EE 313 and M 340L]
- EE 363M Microwave and Radio Frequency Engineering [EE 325]
- EE 471C Wireless Communications Laboratory [EE 445S, 351M or 360K; co-requisite: EE 333T]
- EE 371R Digital Image and Video Processing [EE 313 & EE 351K]
- EE 379K/460J Data Science Laboratory [EE 313, EE 351K, EE 360C, and M 340L; co-requisite: EE 333T]

See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.
ELECTRONICS AND INTEGRATED CIRCUITS
This core trains students for careers involving design of electronics and integrated circuits including analog and digital integrated circuits, radio frequency circuits, power electronics, and biomedical electronics. The additional elective is only required for those picking this technical core as primary.

Required:

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
<th>Additional Elective</th>
</tr>
</thead>
</table>

Students must pick 3 additional electives from the following Technical Core courses:

EE 438K Analog Electronics [EE 438]
EE 338L Analog Integrated Circuit Design [EE 438]
EE 440 Microelectronics Fabrication Techniques Laboratory [EE 339; co-requisite: EE 333T]
EE 445L Embedded Systems Design Laboratory [EE 411, 312, 313 and 319K; co-requisite: EE 333T]
EE 445S Real-Time Digital Signal Processing Laboratory [EE 312, 313 and 319K; co-requisite: EE 333T and 351K]
EE 460M Digital Systems Design Using HDL [EE 312, 316 and 319K]
EE 460N Computer Architecture [EE 306, 312, and 319K]
EE 460R Introduction to VLSI Design [EE 316 and 438]
EE 363M Microwave & Radio Frequency Engineering [EE 325]
EE 374K Biomedical Electronic Instrument Design [EE 438]
EE 374L Applications of Biomedical Engineering [EE 374K; co-requisite: EE 333T]

See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.

ENERGY SYSTEMS AND RENEWABLE ENERGY
This technical core area provides the foundation for a career in electric power systems, generation, grid operation, motors and drives, and renewable energy sources. The additional elective is only required for those picking this technical core as primary.

Required:

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
<th>Additional Elective</th>
</tr>
</thead>
</table>

Students must pick 3 additional electives from the following Technical Core courses:

EE 339 Solid-State Electronic Devices [M 427J or 427K; PHY 303L and 103N]
EE 339S Solar Energy Conversion Devices
EE 341 Electric Drives and Machines [EE 313]
EE 362Q Power Quality and Harmonics [EE 313]
EE 362R Renewal Energy and Power Systems [EE 313]
EE 362S Development of a Solar-powered Vehicle [EE 313]
EE 368L Power Systems Apparatus and Laboratory [EE 313; co-requisite: EE 333T]
EE 369 Power Systems Engineering [EE 313]
EE 362G Smart Grids [EE 368L or EE 369]
ME 337C Intro to Nuclear Power Systems [ME 218; PHY 303L and 103N]

ME 337C has all credit hours in engineering topics. See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.
FIELDS, WAVES AND ELECTROMAGNETIC SYSTEMS

Students in this technical core area study different aspects of applied electromagnetics, including antennas, radio wave propagation, microwave and radio frequency circuits and transmission structures, optical components and lasers, and engineering acoustics. The additional elective is only required for those picking this technical core as primary.

Required:

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
<th>Additional Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 408D, 408L or 408S</td>
<td>Pre-requisite: EE 411; M 427J or 427K; PHY 303L and 103N</td>
<td>Pre-requisite: M 427L; PHY 303L and 103N</td>
<td>Pre-requisite: EE 313 &amp; 333T</td>
<td>Pre-requisite: EE 325</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Co-requisite: M 427L</td>
<td>OR</td>
</tr>
</tbody>
</table>

Students must pick 3 additional electives from the following Technical Core courses:

EE 325K Antennas and Wireless Propagation [EE 325]
EE 334K Quantum Theory of Engineering Materials [M 427K; PHY 303L and 103N]
EE 341 Electric Drives and Machines [EE 313]
EE 347 Modern Optics [EE 313 and 325]
EE 348 Laser and Optical Engineering [EE 339]
EE 361R Radio Frequency Circuit Design [EE 325, 438 and 339]
EE 363M Microwave and Radio Frequency Engineering [EE 325]
EE 363N Engineering Acoustics [M 427K]
EE 369 Power Systems Engineering [EE 313]
EE 374K Biomedical Electronic Instrument Design [EE 438]
EE 374L Applications of Biomedical Engineering [EE 374K; co-requisite: EE 333T]

See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.

NANOELECTRONICS AND NANOTECHNOLOGY

Students in this technical core area learn about the materials and devices used in modern electronic and optoelectronic systems.

Required:

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
<th>Additional Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 427L</td>
<td>EE 325 Electromagnetic Engineering</td>
<td>EE 339 Solid-State Electronic Devices</td>
<td>EE 440 Microelectronics Fabrication Techniques Laboratory</td>
<td>EE 325K Antennas and Wireless Propagation Laboratory</td>
</tr>
<tr>
<td>M 408D, 408L or 408S</td>
<td>Pre-requisite: EE 411; M 427J or 427K; PHY 303L and 103N</td>
<td>Pre-requisite: M 427L; PHY 303L and 103N</td>
<td>Pre-requisite: EE 339</td>
<td>Pre-requisite: EE 325</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Co-requisite: M 427L</td>
<td>OR</td>
</tr>
</tbody>
</table>

Students must pick 4 additional electives from the following Technical Core courses:

EE 334K Quantum Theory of Engineering Materials [M 427K; PHY 303L and 103N]
EE 438 Fundamentals of Electronic Circuits I Laboratory [EE411; Credit or registration of EE 313]
EE 338L Analog Integrated Circuit Design [EE 438]
EE 339S Solar Energy Conversion Devices
EE 347 Modern Optics [EE 313 and 325]
EE 348 Laser and Optical Engineering [EE 339]
EE 460R Introduction to VLSI Design [EE 316, 438 and 339]
EE 340P High-Throughput Nanopatterning [EE 411, EE 339, and M 427]

See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.
**COMPUTER ENGINEERING TECHNICAL CORES**

**COMPUTER ARCHITECTURE AND EMBEDDED SYSTEMS**
This core involves understanding the operation and design of computers and embedded systems on many different levels, including the instruction set, microarchitecture, logic design, stand-alone systems, and software and hardware components of a larger system. *The additional elective is only required for those picking this technical core as primary.*

**Required:**

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
<th>Additional Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M 325K</strong> Discrete Mathematics</td>
<td>EE 316 Digital Logic Design</td>
<td>EE 460N Computer Architecture</td>
<td>EE 445L Embedded Systems Design Laboratory</td>
<td><strong>EE 360C</strong> Algorithms</td>
</tr>
<tr>
<td>Pre-requisite: M 408D, 408L or 408S</td>
<td>Pre-requisite: EE 306</td>
<td>Pre-requisite: EE 306, 312 and 319K</td>
<td>Pre-requisites: EE 411, 312, 313 and 319K</td>
<td>Pre-requisites: EE 333T</td>
</tr>
</tbody>
</table>

Students must pick 3 additional electives from the following Technical Core courses:
- EE 422C Software Design & Implementation II [EE 312 or CS 312]
- EE 445M Embedded and Real-Time Systems Laboratory [EE 445L or EE 445S; co-requisite: EE 333T]
- EE 445S Real-Time Digital Signal Processing Laboratory [EE 312, 313 and 319K; co-requisites: EE 333T and 351K]
- EE 460M Digital Systems Design Using HDL [EE 312, 316 and 319K]
- EE 360P Concurrent and Distributed Systems [EE 422C and EE 360C]
- EE 460R Introduction to VLSI Design [EE 316 and 438]
- EE 361C Multicore Computing [EE 422C]
- EE 461S Operating Systems [EE 312 and 319K, and M 325K]
- EE 362K Introduction to Automatic Control [EE 313 and M 340L]
- EE 379K Information Security & Privacy [EE 312 or EE 331]

See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.

**DATA SCIENCE AND INFORMATION PROCESSING**
This core trains students in information and signal processing, data mining as well as decision and control algorithms. Applications include data analytics, machine learning, sound and image processing as well as knowledge extraction and actuation. *The Additional Elective is only required if Data Science is the primary core.*

**Required:**

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
<th>Additional Elective</th>
<th><strong>Required Tech Elective</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M 325K</strong> Discrete Mathematics</td>
<td>EE 361M or EE 461P</td>
<td>EE 360C</td>
<td>EE 460J or EE 379K</td>
<td>EE 351M Digital Signal Processing</td>
<td><strong>EE 316 or EE 445S or E E 471C</strong></td>
</tr>
<tr>
<td>Pre-requisite: M 408D, 408L or 408S</td>
<td>Pre-requisites: EE 351K, EE 360C, M 340L</td>
<td>Pre-requisite: EE 312 and M 325K</td>
<td>Data Science Laboratory</td>
<td>Pre-requisites: EE 313, EE 351K, EE 360C, M 340L</td>
<td>Co-requisite: EE 333T</td>
</tr>
</tbody>
</table>

Students must pick 2 additional electives from the following Technical Core courses:
- EE 422C Software Design & Implementation II [EE 312 or CS 312]
- EE 445S Real-Time Digital Signal Processing Laboratory [EE 312, 313 and 319K; co-requisites: EE 333T and 351K]
- EE 360P Concurrent and Distributed Systems [EE 422C and EE 360C]
- EE 361C Multicore Computing [EE 422C]
- EE 461L Software Engineering and Design Laboratory [EE 422C and M 325K; co-requisite: EE 333T]
- EE 362K Introduction to Automatic Control [EE 313 and M 340L]
- EE 471C Wireless Communications Laboratory [EE 445S, 351M or 360K; co-requisite: EE 333T]
- EE 371R Digital Image and Video Processing [EE 313 & EE 351K]
- EE 379K Architecture for Big Data Science [EE 422C and 351K, and M 340L]

**If you are choosing Data Science along with Academic Enrichment, it is required you take one of the following Technical Core Electives: EE 316 or EE 445S or E E 471C.**

See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.
SOFTWARE ENGINEERING AND DESIGN
This core covers the engineering life cycle of software systems, including requirement analysis and specification, design, construction/programming, testing, deployment, maintenance, and evolution.

Required:

<table>
<thead>
<tr>
<th>Advanced Math</th>
<th>Core</th>
<th>Core</th>
<th>Core Lab</th>
<th><strong>Required Tech Elective</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>M 325K</td>
<td>EE 422C</td>
<td>EE 360C</td>
<td>EE 461L</td>
<td>EE 316 or EE 445L</td>
</tr>
<tr>
<td>Discrete Mathematics</td>
<td>Software Design &amp; Implementation I</td>
<td>Algorithms</td>
<td>Software Engineering and Design Laboratory</td>
<td></td>
</tr>
<tr>
<td>Pre-requisite:</td>
<td></td>
<td>Pre-requisites:</td>
<td>Pre-requisites:</td>
<td></td>
</tr>
<tr>
<td>M 408D, 408L, or 408S</td>
<td>EE 312</td>
<td>EE 312 and M 325K</td>
<td>EE 333T</td>
<td></td>
</tr>
</tbody>
</table>

Students must pick 3 additional electives from the following Technical Core courses:

- EE 316 Digital Logic Design [EE 306 or CS429]
- EE 445L Embedded Systems Design Laboratory [EE 411, 312, 313 and 319K; co-requisite: EE 333T]
- EE 445M Embedded and Real-Time Systems Laboratory [EE 445L or 445S; co-requisite: EE 333T]
- EE 360F Intro to Software Engineering [EE 422C or CS314 (or 314H)]
- EE 460N Computer Architecture [EE 306, 312 and 319K]
- EE 360P Concurrent and Distributed Systems [EE 422C and EE 360C]
- EE 360T Software Testing [EE 422C]
- EE 361C Multicore Computing [EE 422C]
- EE 361M/461P Introduction to Data Mining/Data Science Principles [EE 351K and 360C; M 340L]
- EE 361Q Requirements Engineering [EE 312]
- EE 461S Operating Systems [EE 312 and 319K, and M 325K]
- EE 379K/460J Data Science Laboratory [EE 313, EE 351K, EE 360C, and M 340L; co-requisite: EE 333T]
- EE 379K Information Security & Privacy [EE 312 or EE 313]

**If you are choosing Software Engineering and Design along with Academic Enrichment, it is required you take one of the following Technical Core Electives: EE 316 or EE 445L.* --If you are 18-20 Catalog, this is required—

See the Technical Core ABET advising sheet for allocation of engineering versus math & basic science topics. All primary technical core courses and electives must be engineering courses with the exception of the advanced math course.

ACADEMIC ENRICHMENT TECHNICAL CORE

A student may choose the Academic Enrichment as his or her secondary technical core ONLY. For this core, the student selects 14 hours of coursework to support his or her personal or career goals. At least three of the 14 hours must be an upper division math/science course. Before registering for these courses, students are strongly encouraged to look through the Course Database on our ECE website for a list of pre-approved courses.

You must complete at least 48 credit hours of engineering topics for your degree. Required courses (EE 302, 306, 411, 312, 313, 319K, 333T, 351K, 364, 464) yield 25 credit hours of engineering topics, 4 in math & basic sciences and 3 in other, as described on the last page. The primary technical cores described above would yield a minimum of 22 / 23 credit hours of engineering topics and 4 / 3 hours of math & basic science topics, depending on whether M 427L / M 325K were taken.

Academic Enrichment courses may include traditional upper-division technical courses in Electrical Engineering and other allied fields. For example, those wanting to strengthen their mathematical background might consider the courses listed on the next page. In particular, those wanting to prepare for graduate studies in communications, data science, machine learning, networks, signal processing, and/or systems/controls, might consider the following:

- M 362M Introduction to Stochastic Processes [M 362K or EE 351K]
- M 365C Real Analysis I [At least two of the following: M 325K, M 328K, M 340L/341; consent of undergraduate advisor]
- M 378K Introduction to Mathematical Statistics [M 362K or EE 351K]
Those wanting a stronger background in system software might consider the following courses:

- **CS 356** Computer Networks [CS 439 or 372]
- **CS 371P** Object-Oriented Programming [CS 310 or 429]
- **CS 375** Compilers [CS 310 or 310H; CS 336 or 336H; M 408D or 408M]
- **EE 360P** Concurrent and Distributed Systems [EE 422C and EE 360C]
- **EE 461S** Operating Systems [EE 312 and 319K, and M 325K]

Academic Enrichment courses may be in other fields, such as business, economics, communication, music, and philosophy; or research done with a faculty member in EE X60 *Special Problems in Electrical and Computer Engineering*. The courses must be completed in residence; courses in an approved study abroad program require the approval of the Undergraduate Faculty Advisor. There may include up to three hours of EE 325L *Cooperative Engineering*, EE 225M *Cooperative Engineering*, and EE 125S *Internship in Electrical and Computer Engineering*.

### ALTERNATIVE ADVANCED MATH COURSES

**If a student chooses BOTH Electrical Engineering Technical Core Areas**

- **M 325K** Discrete Mathematics [M 408D, 408L or 408S]
- **M 328K** Introduction to Number Theory [M 325K]
- **M 346** Applied Linear Algebra [M 340L]
- **M 348** Scientific Computing [M 340L, CS 303E or 307]
- **M 358K** Applied Statistics ## [M 362K or EE 351K]
- **M 361** Theory of Functions of Complex Variables [M 427K or 427L]
- **M 362M** Introduction to Stochastic Processes [M 362K or EE 351K]
- **M 365C** Real Analysis I [At least two of the following: M 325K, M 328K, M 340L/341; consent of undergraduate advisor]
- **M 372K** Partial Differential Equations and Applications [M 427K]
- **M 374** Fourier and Laplace Transforms [M 427K]
- **M 374M** Mathematical Modeling in Science and Engineering [M 427K; M 340L or 341]
- **M 378K** Introduction to Mathematical Statistics ## [M 362K or EE 351K]

### ALTERNATIVE ADVANCED MATH COURSES

**If a student chooses BOTH Computer Engineering Technical Core Areas**

- **M 427L** Advanced Calculus for Applications II [M 408D or 408M]
- **M 328K** Introduction to Number Theory [M 325K]
- **M 343K** Introduction to Algebraic Structures [two of the following: M 325K, M 328K and M 341]
- **M 344K** Intermediate Symbolic Logic [PHL 313, 313K or 313Q]
- **M 348** Scientific Computation in Number Analogy [M 340L; CS 303E or 307]
- **M 358K** Applied Statistics ## [M 362K or EE 351K]
- **M 365C** Real Analysis I [At least two of the following: M 325K, M 328K, M 340L/341; consent of undergraduate advisor]
- **M 374M** Mathematical Modeling in Science and Engineering [M 427K and 340L]
- **M 378K** Introduction to Mathematical Statistics ## [M 362K or EE 351K]
- **CS 341** Automata Theory [Computer Science 429 (or 310) or 429H (or 310H)]
- **CS 346** Cryptography [CS 429 (or 310) or 429H (310H); 331 (or 357), 331H (or 357H), 341, or 341H; co-requisite: M 340L]

##

**Check with the CS Dept. / Advisor for ALL PREREQUISITE REQUIREMENTS & CLASS SEAT AVAILABILITY***
DATA SCIENCE AND INFORMATION PROCESSING (IF CHOOSING AS YOUR PRIMARY TECHNICAL CORE):
This technical core trains students in information and signal processing, data mining as well as decision and control algorithms. Applications include data analytics, machine learning, sound and image processing as well as knowledge extraction and actuation. Choose a faculty advisor from among Profs. Constantine Caramanis, Alex Dimakis, Joydeep Ghosh, Evdokia Nikolova, Sujay Sanghavi and Haris Vikalo. Please review their research interests on the ECE website to find a mentor that matches your career goals. Select your two technical cores.

* Secondary Technical Core: _______________________________  Graduating Semester: __________________

### Advanced Math
- **M 325K**
  - Discrete Mathematics
  - Pre-requisite: M 408D, 408L or 408S

### Core
- **EE 461P or EE 361M**
  - Intro to Data Mining
  - Pre-requisites: EE 351K and 360C, M 340L
- **EE 360C**
  - Algorithms
  - Pre-requisites: EE 312 and M 325K
- **EE 379K or EE 460J**
  - Data Science Laboratory
  - Pre-requisites: EE 351K and 360C
  - Co-requisite: EE 333T
- **EE 351M**
  - Digital Signal Processing
  - Co-requisite: EE 351K
- **EE 445S or EE 471C or EE 316**

Students must pick 3 additional electives from the following Technical Core courses:
- EE 422C Software Design & Implementation II [EE 312 or CS 312]
- EE 445S Real-Time Digital Signal Processing Laboratory [EE 312, 313 and 319K; co-requisites: EE 333T & EE 351K]
- EE 360P Concurrent and Distributed Systems [EE 422C and EE 360C]
- EE 361C Multicore Computing [EE 422C]
- EE 461L Software Engineering and Design Laboratory [EE 422C and M 325K; co-requisite: EE 333T]
- EE 362K Introduction to Automatic Control [EE 313 and M 340L]
- EE 471C Wireless Communications Laboratory [EE 445S, 351M or 360K; co-requisite: EE 333T]
- EE 371R Digital Image and Video Processing [EE 351K]
- EE 379K Architecture for Big Data Science [EE 422C and 351K, and M 340L]

(Secondary courses must add to at least 14 credit hours, with at least one math/science course; must have 48 credit hours of engineering and 32 credit hours of math/science topics; primary electives MUST be a minimum of 23 EE credit hours; BSEE requires a minimum of 125 credit hrs).

Using worksheet below, first meet with a faculty mentor noted above and then Dr. Valvano (ECE Faculty Advisor) to discuss career goals. Create a plan for the 8 courses for the Data Science & Information Processing primary technical core and your 14 hours for your secondary technical core. Please submit form to EER 2.884.

<table>
<thead>
<tr>
<th>Technical Core</th>
<th>Semester</th>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Required</td>
<td>M 325K</td>
<td>EE 461P or EE 361M</td>
<td>Intro to Data Mining</td>
</tr>
<tr>
<td>Primary Required</td>
<td></td>
<td>EE 360C</td>
<td>Algorithms</td>
</tr>
<tr>
<td>Primary Required</td>
<td></td>
<td>EE 460J</td>
<td>Data Science Laboratory</td>
</tr>
<tr>
<td>Primary Required</td>
<td></td>
<td>EE 351M</td>
<td>Digital Signal Processing</td>
</tr>
<tr>
<td>Primary Elective</td>
<td></td>
<td>*EE 445S or EE 471C or EE 316</td>
<td>Data Science Electives</td>
</tr>
<tr>
<td>Primary Elective</td>
<td></td>
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<tr>
<td>Math/Science Secondary</td>
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<tr>
<td>*Secondary</td>
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<td></td>
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<tr>
<td>*Secondary</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>*Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Data Science & Academic Enrichment: If you choose this combination you MUST complete one of the required electives listed above. If you are hoping to appeal the required electives requirement with a different course, you must visit with your technical core faculty advisor.*

Student’s Name ___________________________  Student’s UT EID: ___________________________

1. Student Signature  2. Data Science Faculty Mentor  3. Undergrad Faculty Advisor: Dr. Valvano

Return signed form with three signatures to Sharon Bressette in EER 2.884.  __________ (Date)