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.

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 325K</td>
<td>EE 461P or EE 361M</td>
<td>EE 360C Algorithms</td>
<td>EE 479K or EE 379K Data Science Laboratory</td>
<td>EE 351M Digital Signal Processing Co-requisite: EE 351K</td>
</tr>
</tbody>
</table>

Discrete Mathematics Pre-requisite: M 408D, 408L or 408S

Data Science Principles Pre-requisites: EE 351K and 360C, M 340L

Algorithms Pre-requisites: EE 312 and M 325K

Pre-requisites: EE 312 and M 325K

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 and 351K]
EE 360P Concurrent and Distributed Systems [EE 422C]
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]

Using worksheet below, meet with a faculty mentor noted above and 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.

Technical Core | Semester | Course | Title |
-------------|----------|--------|-------|
Primary Required | Semester 1 | M 325K | Discrete Mathematics |
Primary Required | Semester 1 | EE 461P or EE 361M | Intro to Data Mining |
Primary Required | Semester 1 | EE 360C | Algorithms |
Primary Required | Semester 1 | EE 479K or EE 379K | Data Science Laboratory |
Primary Required | Semester 1 | EE 351M | Digital Signal Processing |
Primary Elective | Semester 2 | | |
Primary Elective | Semester 2 | | |
Primary Elective | Semester 2 | | |
Math/Science Secondary | Semester 3 | | |
Secondary | Semester 4 | | |
Secondary | Semester 4 | | |
Secondary | Semester 4 | | |

- 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 required and primary electives MUST be a minimum of 23 EE credit hours.
- BSEE requires a minimum of 125 credit hours.

Student’s Name _____________________________________ Student’s UT EID: ____________________________
Student Signature (date) Faculty Mentor (date) Undergraduate Advisor/Dr. Valvano (date)

Return signed form to Sharon Bressette in EER 2.884.