

**Fundamental Courses**

<b>CSCI 455X</b> Introduction to Programming Systems Design 4 units
<b>EE 483</b> Introduction to Digital Signal Processing 4 units
<b>EE 503</b> Probability for Electrical and Computer Engineers 4 units
<b>EE 510</b> Linear Algebra for Engineering 4 units

**Signal and Image Processing**

<b>EE 566</b> Optical Information Processing 3 units	<b>EE 569</b> Introduction to Digital Image Processing 4 units EE 503
<b>EE 575</b> Computational Differential Geometry for Engineers 3 units	<b>EE 583</b> Statistical Signal Processing 3 units EE 503
<b>EE 592</b> Computational Methods for Inverse Problems 3 units EE 503, EE 483, EE 510	<b>EE 596</b> Wavelets and Graphs for Signal Processing and Machine Learning 4 units EE 483, EE 510
<b>CSCI 667</b> Advanced Computer Vision 4 units	

**Mathematical Foundations**

<b>EE 512</b> Stochastic Processes 3 units EE 503, (EE 510 or EE 518)
<b>EE 562</b> Random Processes in Engineering 4 units EE 503, EE 510

**Data Analysis and Machine Learning**

<b>EE 500</b> Neural Learning and Computational Intelligence 4 units EE 483, EE 503, EE 510	<b>EE 517</b> Statistics and Data Analysis for Engineers 4 units EE 503
<b>EE 518</b> Mathematics and Tools for Financial Engineering 4 units	<b>EE 559</b> Mathematical Pattern Recognition 3 units EE 503, EE 510
<b>EE 563</b> Estimation Theory 3 units EE 503	<b>EE 660</b> Machine Learning from Signals: Foundations and Methods 3 units EE 503, EE 510, EE 559
<b>EE 669</b> Multimedia Data Compression 3 units EE 503	

**Law and Intellectual Property**

<b>EE 682</b> Law and Intellectual Property for Engineers 3 units EE 503
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**Speech, Biomedical, Audio, and Other Applications**

<b>EE 519</b> Speech Recognition and Processing for Multimedia 3 units EE 483	<b>EE 522</b> Immersive Audio Signal Processing 3 units EE 483
<b>EE 523</b> Advanced Biomedical Imaging 3 units EE 483	<b>EE 586L</b> Advanced DSP Design Laboratory 4 units EE 483
<b>EE 591</b> Magnetic Resonance Imaging and Reconstruction 3 units EE 401, EE 503, EE 510	<b>EE 619</b> Advanced Topics in Automatic Speech Recognition 3 units EE 503, EE 519, CSCI 544

**Legend**

**Grouping**

EE 000 Course Title	
Course Units Recommended Prep.	Prerequisite Courses Corequisite Courses

This chart shows course relationships

Please check the University Catalogue for specific course details including any recommended preparatory courses and Degree Requirements