

ECE 220 Checklist

The following skills are recommended for ECE 220 –Signals and Systems I. Choose your textbook from the dropdown menu

Once you have chosen the textbook, click on the words “study plan”. Expand the Chapter + to see the individual sections. For each section below, work through the exercises. If you need help with an exercise, you can click on the menu to the right of the exercise for help, to view an example or to read the related section of the textbook. This textbook does not offer video instruction.

Textbook: **Croft: Mathematics for Engineers, 3e EMA**

- Chapter 6 – Functions
 - 6.5 Parametric Representation of a function
 - 6.6 Describing Functions
 - 6.7 The Straight Line
 - 6.8 Common Engineering Functions
- Chapter 9 – Trigonometry
 - Sections 9.1-9.7 Angles, Trigonometric Ratios, Identities, Equations and Engineering Waves
- Chapter 11 – Complex Numbers
 - 11.1 Arithmetic of Complex Numbers
 - 11.2 Polar form of complex numbers
 - 11.3 Exponential form of complex numbers
 - 11.4 De Moivre’s Theorem
 - 11.5 Finding roots of complex equations
 - 11.6 Phasors
- Chapter 15– Differentiation
 - Sections 15.1-15.3
- Chapter 16– Techniques and Applications of Differentiation
 - Sections 16.1-16.7 Product, Quotient and Chain Rules, Implicit Differentiation, Parametric and Logarithmic Differentiation
- Chapter 17– Integration
 - Sections 17.1-17.8 Definite Integrals, Integration by Parts, Substitution, Using Partial fractions, Integration of Trigonometric Functions.
- Chapter 18– Applications of Integration
 - Sections 18.1-18.6 Volumes of Revolution, Centers of Mass, Moments of Inertia
- Chapter 22– The LaPlace Transform
 - Sections 22.1-22.3
- Chapter 24– Introduction to the Fourier Series and Transform
 - Sections 24.1, 24.2

For more problems and reading choose from the list - **Trim: Calculus for Engineers, 4e**