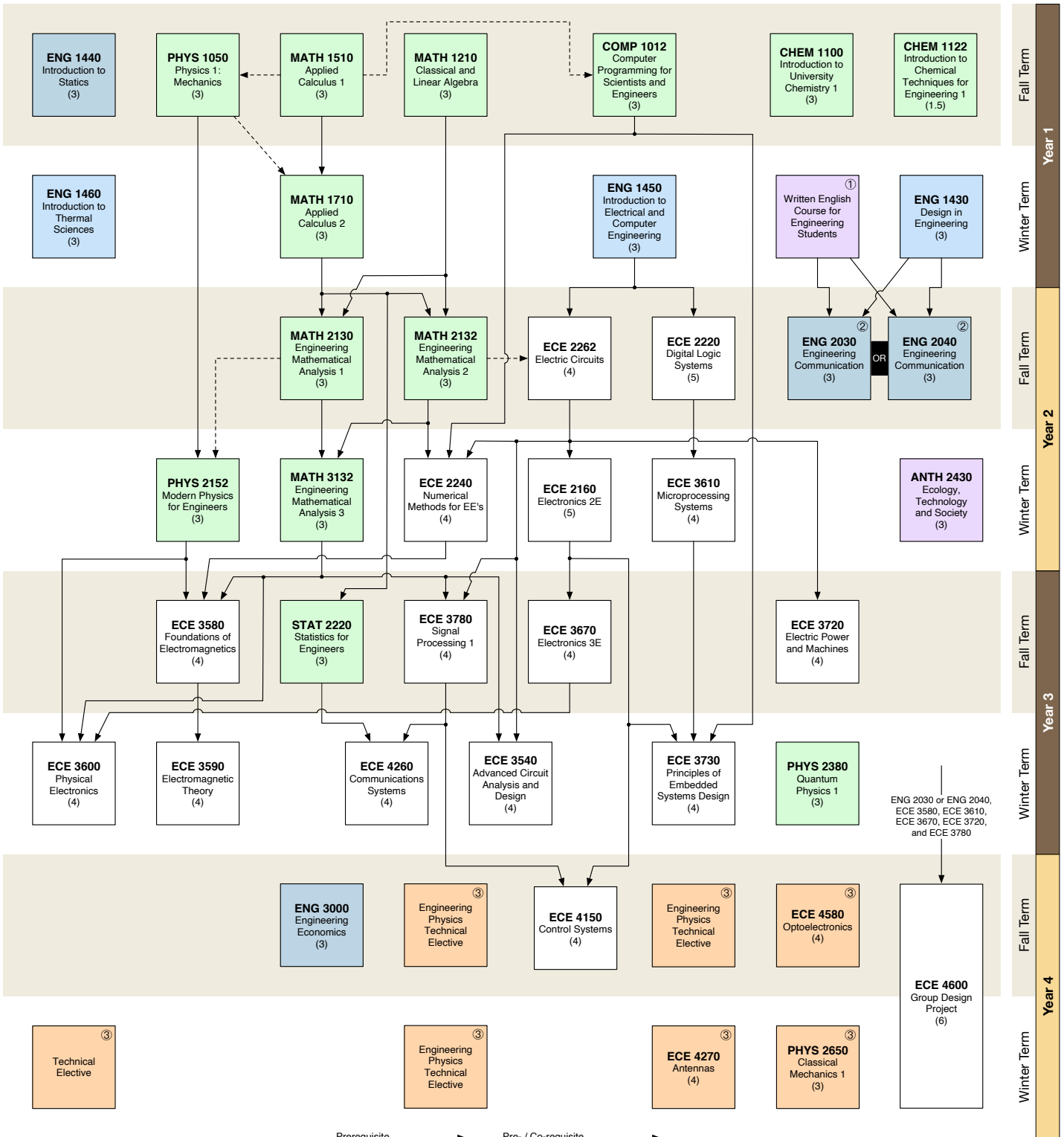


## 2021 – 2022 Electrical Engineering Course Flow Chart Engineering Physics Focus Area – Model 4 Year Program

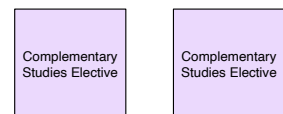


① The written English requirement is satisfied by completing three (3) credit hours from the list of approved *Written English Courses for Engineering Students* listed in the *University Calendar* (see Faculty of Engineering, Section 4.2).

② Students must take either of:  
 – ENG 2030 *Engineering Communication: Strategies for the Profession*  
 – ENG 2040 *Engineering Communication: Strategies, Practice, and Design*

③ Technical Electives:  
 – Seven (7) technical electives are required to complete the program. Six (6) form the *Engineering Physics Focus Area*. The one (1) remaining elective may be selected from either the *Group A* or *Group B* electives lists of the Electrical Engineering Standard Program.  
 – Technical electives may be taken at anytime, subject to prerequisites.

**Additional required elective courses which may be completed in any term.**



This flow chart is intended as a guide, and only applies for the current academic year. It should not be used as a guide for subsequent years. Errors may be present in this document. Students should refer to information in the *University Calendar*.

## Electrical Engineering Focus Areas

Students wishing to pursue more focused studies in an Electrical Engineering subject/research area have the choice of doing so through a recognized Focus Area. Courses taken towards a Focus Area take the place of some or all of the Technical Electives required in the Electrical Engineering program.

### **ENGINEERING PHYSICS FOCUS AREA**

#### **Requirements:**

In the standard Electrical Engineering program, seven (7) Technical Elective courses and one (1) Natural Sciences Elective are required. To complete the Engineering Physics focus area, students are required to take a total of seven (7) courses as indicated below, including the four (4) prescribed Engineering Physics courses. Three (3) further courses must be taken from the list of Engineering Physics Elective courses. To complete the program requirements one (1) additional course must be selected from the elective courses listed in the Electrical Engineering Standard Program.

#### **PRESCRIBED ENGINEERING PHYSICS COURSES:**

ECE 4270 Antennas  
ECE 4580 Optoelectronics  
PHYS 2386 Introduction to Quantum Mechanics and Special Relativity  
PHYS 2650 Classical Mechanics 1

#### **ENGINEERING PHYSICS TECHNICAL ELECTIVE COURSES: (3 required)**

ECE 4860 Materials Characterization  
PHYS 2260 Optics  
PHYS 3220 Medical Physics and Physiological Measurement  
PHYS 3386 Quantum Mechanics 2  
PHYS 3430 Honours Physics Laboratory  
PHYS 3570 Physics of Materials 1  
PHYS 3650 Classical Mechanics 2  
PHYS 3670 Classical Thermodynamics  
PHYS 3680 Statistical Mechanics  
PHYS 4520 Introduction to Solid State Physics  
PHYS 4590 Advanced Optics  
PHYS 4646 Electro- and Magnetodynamics and Special Relativity  
PHYS 4680 Statistical Mechanics