Bachelor of Science in Electrical Engineering (BSEE) Degree Requirements

Institute Core		
Notes	**Course Hours**	**Description**
	3-3-4	CHEM 1310 – General Chemistry (or CHEM 1211K)
	3-0-3	CS 1301 –Intro to Computing
	10-0-10	MATH 1551, 1552, 2551 –Differential, Integral, Multiv. Calc;
	4-0-4	MATH 1554 – Linear Algebra
	4-0-4	MATH 2552 – Differential Equations
	6-6-8	PHYS 2211, 2212 – Introductory Physics I, II
1,8	X-X-3	Science Elective
8	2-0-2	APPH 1040/1050 – Wellness
	6-0-6	ENGL 1101, 1102 – English Composition I, II
5,8	6-0-6	Humanities electives
2,8	3-0-3	History/Government elective
3	3-0-3	Economics elective
5,8	6-0-6	Social Sciences electives
	X-X-62	Subtotal

Electives		
Notes	**Course Hours**	**Description**
4,5,6,7,8	X-X-10	Approved electives
6,7	X-X-5	Non-ECE engineering electives
	X-X-15	Subtotal

ECE Core Courses (Common to EE and CmpE)		
Notes	**Course Hours**	**Description**
	3-0-3	ECE 2020 – Fundamentals of Digital System Design
	2-3-3	ECE 2026 – Introduction to Signal Processing
	1-3-2	ECE 2031 – Digital Design Laboratory
	3-3-4	ECE 2035 or ECE 2036 – Programming elective
	3-0-3	ECE 2040 – Circuit Analysis
9	2-0-2	ECE 4011 – ECE Culminating Design Project I
	1-6-3	ECE 4012 – ECE Culminating Design Project II
	15-15-20	Subtotal

EE Required Courses and Electives		
Notes	**Course Hours**	**Description**
	3-0-3	ECE 3025 – Electromagnetics
	4-0-4	ECE 3040 – Microelectronic Circuits
	1-3-2	ECE 3043 – Measurements, Circuits and Microelectronics Laboratory
	2-3-3	ECE 3072 – Energy Systems
	3-0-3	ECE 3084 – Signals and Systems
6,10	X-X-20	ECE 3XXX/4XXX Electives
	X-X-35	Subtotal

	X-X-132	**Total Hours for the EE Degree**

Bachelor of Science in Electrical Engineering (BSEE) Degree Requirements

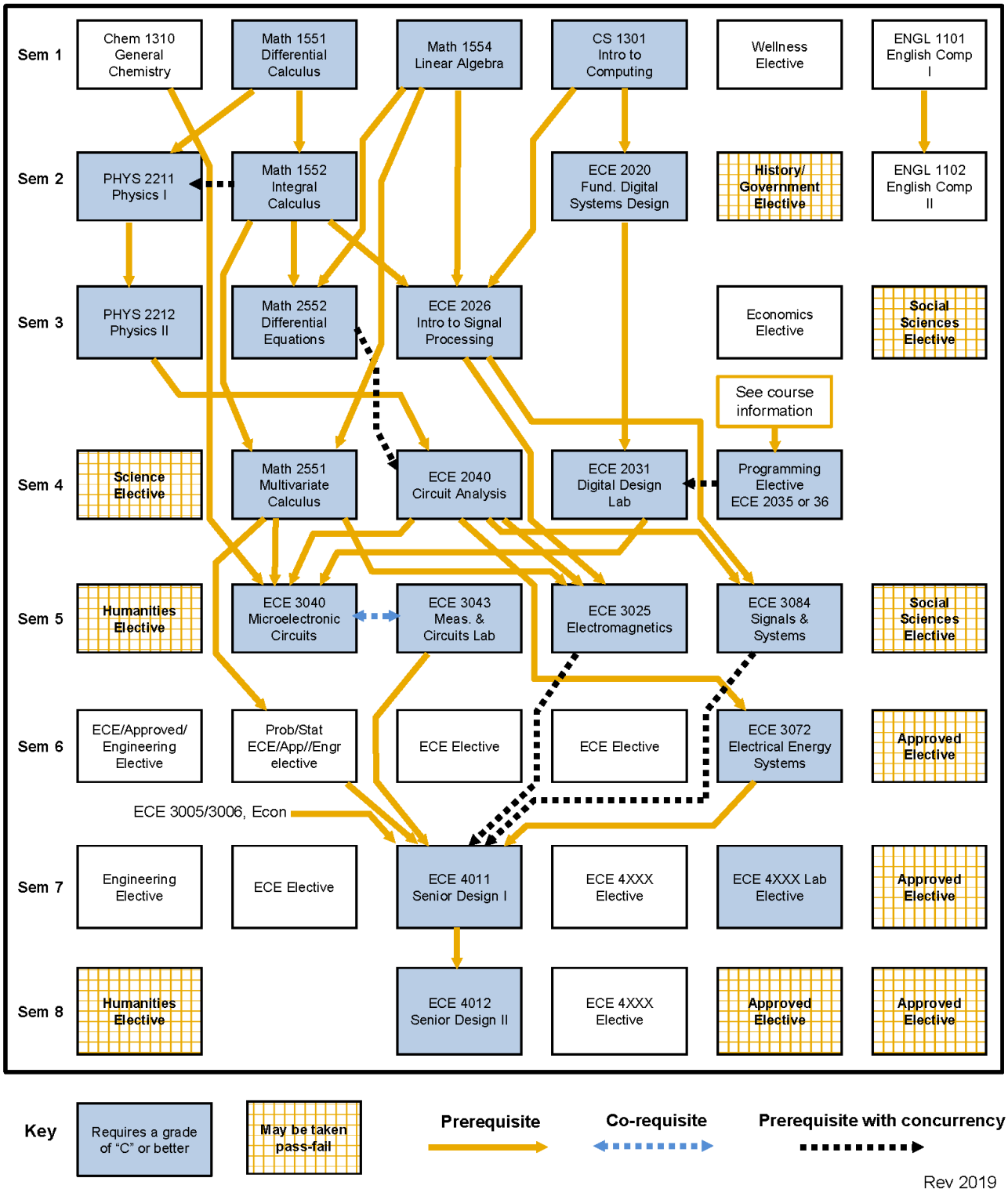
Notes:

1. APPH/BIOL 3753/3755, BIOL 1510, BIOL 1520, CHEM 1212K, CHEM 1315, EAS 1600, EAS 1601, EAS 2600, PHYS 2021, PHYS 2022, or PHYS 2213. All other courses must be approved by the School.
2. HIST 2111, HIST 2112, POL 1101, PUBP 3000, or INTA 1200.
3. ECON 2100, ECON 2101, ECON 2105, or ECON 2106.
4. Approved electives include courses (or excess hours) in ECE, other engineering, math, sciences, computing, management, humanities, social sciences, and ROTC. All other courses must be approved by the School.
5. An approved ethics course must be included in the elective hours. Approved courses include the list maintained at www.catalog.gatech.edu/students/ugrad/core/ethics.php plus CS 4002.
6. An approved probability/statistics course must be included in the elective hours. Approved courses are CEE 3770, ECE 3077, ISYE 3770, or MATH 3670. Any other course must be approved by the School.
7. Approved engineering electives include all courses at the 2000-level or above in the College of Engineering, outside ECE, of at least 2 credit hours, and NOT on a list of excluded courses maintained by the School.
8. Courses used to satisfy these requirements may be taken on a pass-fail basis, subject to Institute limits. Courses used to satisfy other requirements may not be taken pass-fail, unless offered only on that basis.
9. Professional/technical communications requirements for EEs must be met prior to taking ECE 4011 (note that ECE 3005 counts only as part of approved elective hours).
10. ECE electives are subject to School approval and must satisfy the following constraints:
    a. All courses at the 3000-level or higher, including ECE 38XX and ECE 48XX. Exclusions: ECE 3005.
    b. A minimum of 9 credit hours at the 4000-level or higher, where each 4000-level course must have a 3000 or 4000-level ECE course as a prerequisite.
    c. At least one course at the 4000-level must be selected from the list of approved senior laboratory courses: ECE 4043, ECE 4180, ECE 4370/4371, ECE 4445/4446, ECE 4452, ECE 4550, ECE 4502 (Optical Fiber Communications, formerly ECE 4501). A grade of “C” or better is required.
    d. Special problems, undergraduate research, and similar courses may not be included, except for three credit hours for one ECE Undergraduate Research sequence, either ECE 3951+3952 or ECE 4951+4952. For students completing the Research Option but not an ECE UROP sequence, three credit hours for ECE 4699 may be included.

Additional Requirements:

- A grade of “C” or better is required in (a) all ECE core and EE required courses, (b) CS 1301, (c) MATH 1551, 1552, 1554, 2551, 2552, and (d) PHYS 2211, 2212. A student who does not receive a grade of “C” or better in one of these courses must repeat the course and satisfy the requirement prior to enrolling in follow-on courses. A grade of “C” or better also is required in the ECE senior lab elective.
- A maximum of six credit hours of special problems, undergraduate research, and/or similar courses may be applied toward the degree. However, if the Research Option is completed, up to nine credit hours may be applied toward the degree.
- Courses that are cross-listed with ECE must be taken under the ECE number.
- Credit is not allowed for courses that substantially duplicate material from other completed courses.

EE:
Typical 8-Semester Schedule and Significant Prerequisites



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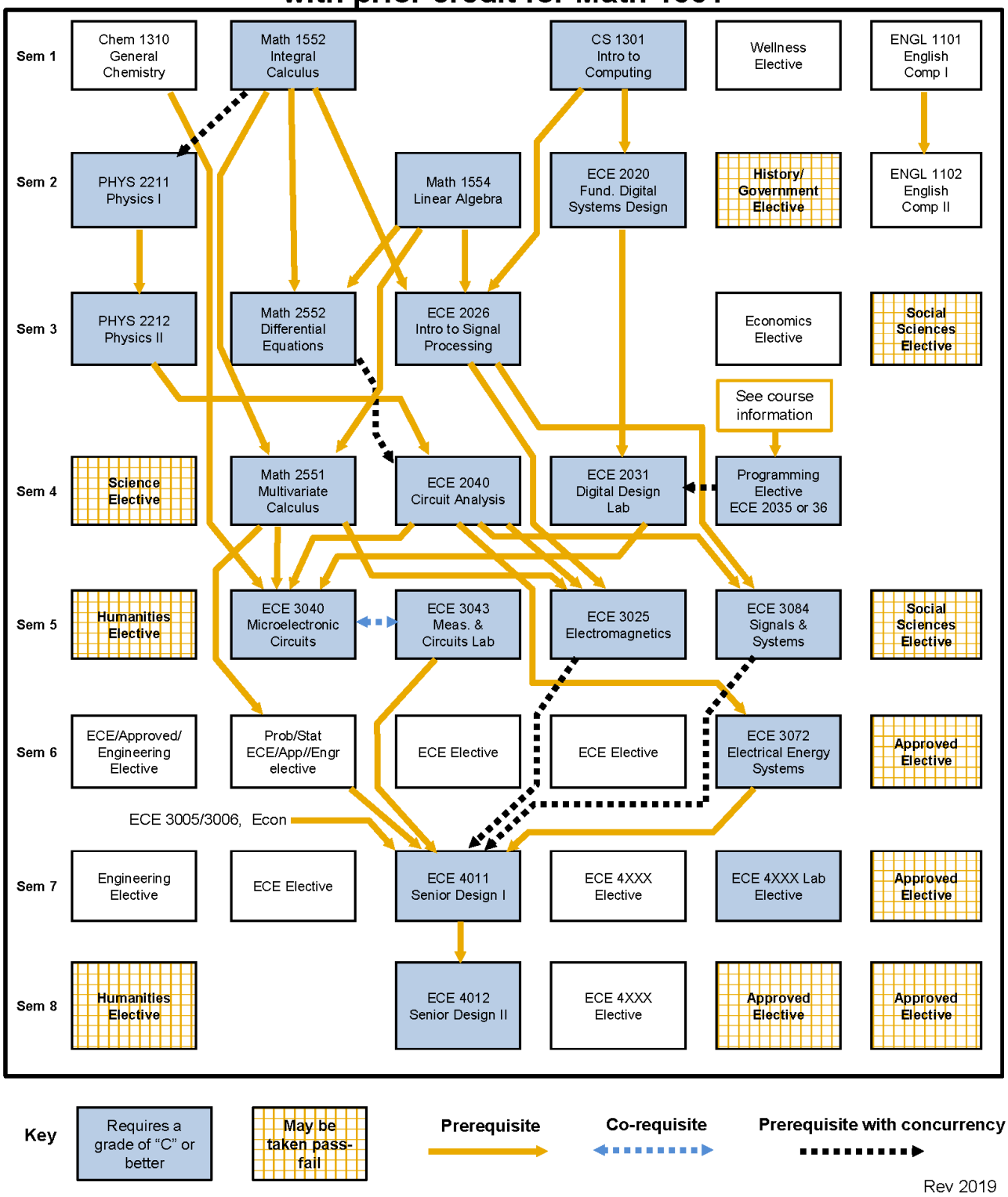
EE:

Typical 8-Semester Schedule and Significant Prerequisites with prior credit for Math 1551



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