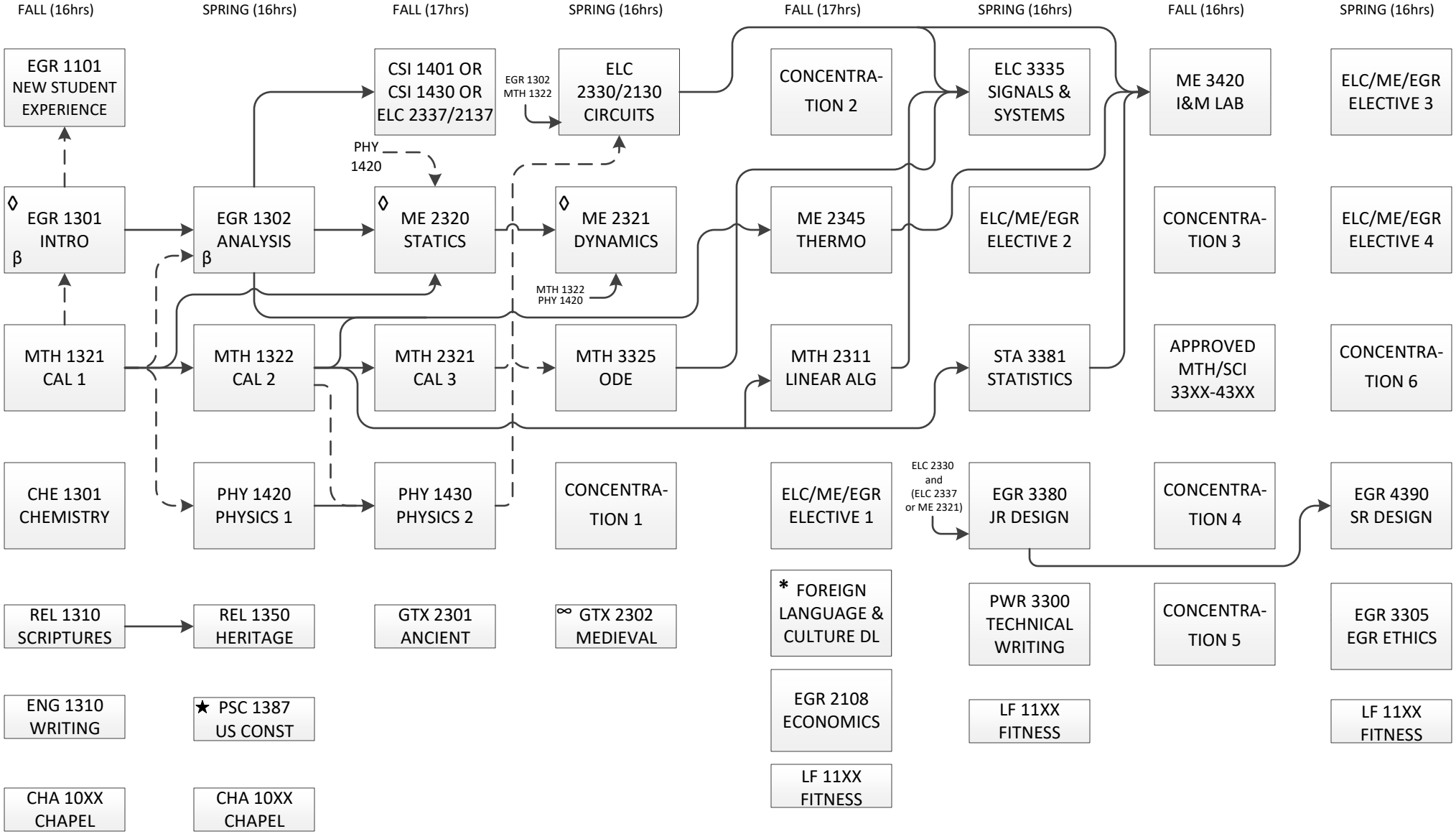
ENGINEERING MAJOR (2022-2023)



◊ Course offered only in semester indicated

→ Prerequisite

⇢ Prerequisite or concurrent enrollment

β Must complete course with a grade of "B" or better to move into the degree-granting majors

∞ GTX 2302 or ENG 2301, 2304, 2306, 2310

★ PSC 1387 or option to take ENG 2301 instead, unless already substituted for GTX 2302

* See Engineering Foreign Language and Culture Distribution List in Undergraduate Catalog

NOTES: This flowchart is meant to be an advising tool. The BU Undergraduate Catalog serves as the student's final authority on all degree requirements.

4/22 SM

Baylor offers an ABET accredited degree in Engineering in addition to majors in Mechanical Engineering and Electrical and Computer Engineering. The major is simply "Engineering" and the degree awarded is the Bachelor of Science in Engineering (B.S.E.). The B.S.E is Baylor's oldest engineering degree.

Engineering students take the same core courses common to the other engineering majors. The curriculum further builds on these fundamentals in follow-on and upper-level courses that deepen their engineering understanding and capabilities.

Because the B.S.E. curriculum is broader than that for traditional engineering majors, a number of employers and advisors are advocates of this approach. Also because of this adaptability it is well suited for students who have a well-honed but non-traditional career plan. B.S.E. students must have defined career aspirations that leverage the advantages of the B.S.E. curriculum. B.S.E. students must also maintain a competitive GPA and make good academic progress.

Complete one of the following:

a. A targeted set of courses in one of the listed concentration areas.
b. Any minor offered by Baylor with the exception of Engineering or Mathematics. (Note that an additional minor in Mathematics can be completed by the proper choice of math/science elective, but it does not satisfy this requirement.)

Biomedical Concentration

- Engineering Electives

ME 3320: Strength of Materials 3
ME 3322: Materials & Manufacturing 3
ELC 4351: Digital Signal Processing 3
BME 4370: Biomaterials 3

- Concentration Electives

CHE 1341 or CHE 4341: Biochemistry 3
HP 1420 or BIO 4432: Human Anatomy 4
PUBH 3350 or BIO 3322: Physiology 3
BME 4374 (Biomechanics) or BME 4376 (Medical Devices Design) 3
BME 4353 (Image Formation) or BME 4372 (Bioinstrumentation) 3
ONE from following – EGR 3V95; BME 4353, 4357, 4372, 4374, 4376, 4378, 4V97 3

Geo-Petro Concentration

- Engineering Electives

ME 3320: Strength of Materials 3
ELC 4351: Dig Signal Processing 3
ME 3321: Fluid Dynamics 3
GEO 4V90 (Numerical Modeling) or GEO 4459 (Engineering Geology) 3-4

- Concentration Electives

GEO 1405: The Dynamic Earth 4
GEO 1306/1106: Earth Through Time 4
GEO 3442: Stratigraphy-Sedimentology 4
GEO 3445: Structural Geology 4
GEO 4458 (Geophysical Exploration II) or GEO 4465 (Petroleum Geology) or GEO 4361 (Concepts of Petroleum Geoscience) 3-4

Environmental Concentration

- Engineering Electives

ME 3345: Advanced Thermodynamics 3
ELC 4351: Dig Signal Processing 3
ME 3321: Fluid Dynamics 3
ME 4345: Heat Transfer 3

- Concentration Electives

ENV 1101: Intro Environmental Analysis 1
ENV 1301: Exploring Environmental Issues 3
CHE 1302: Modern Chemistry II 3
ENV 3316: Intro Air Quality 3
ENV 3387: Environmental Chemistry 3
ENV 4345: Water Management 3
ENV 4365: Environment & Energy 3

Humanitarian Engr. Concentration

- Engineering Electives

ELC/ME/BME 33XX: Elective 1 3
ELC/ME/BME 33XX: Elective 2 3
ELC/EGR/ME/BME 43XX: Elective 3 3
ELC/EGR/ME/BME 43XX: Elective 4 3

- Concentration Electives

EGR 3315: Ethics for International Service 3
EGR 3302: Tech for Developing Countries 3
EGR 3115: International Experience 1
ME 4305: Sustainable Engineering 3
ONE from following: ENV 3333 (Watershed Assessment), ENV 4310 (World Food Problems), ENV 4345 (Water Management) 3
ONE from following: REL 3382 (Cross-Cultural Ministry), PSC/AST 3314 (Politics & Problems of Dev. Countries), REL 3345 (World Religions), ENV 4350 (Development & Indigenous Peoples), REL 4340 (Christian Missions) 3
ONE from following: MGT/ENT 4353 (Social Entrepreneurship & Econ Development), ECO 3355 (Intro to Econ of Poverty & Discrimination) 3

Minor Option

ELC/ME/BME 33XX: Elective 1 3
ELC/ME/BME 33XX: Elective 2 3
ELC/EGR/ME/BME 43XX: Elective 3 3
ELC/EGR/ME/BME 43XX: Elective 4 3

Students may choose any minor offered by Baylor with the exception of Engineering or Mathematics. Concentration electives will be fulfilled by courses required for the minor 18-24

(Note that an additional minor in Mathematics can be completed by the proper choice of math/science elective, but it does not satisfy this requirement.)