

Chemistry/Science/Technical Electives for Chemical and Biomolecular Engineering Spring 2021

Science Electives

Any BCHS, BIOL, CHEM, PHYS, or courses at the 3300 level or above or a pre-approved NSM course at the 3300 level or above can be taken. Typical courses that have been approved in the past include BCHS 3304 (General Biochemistry)**, BCHS 3305 (General Biochemistry II), BIOL 3301 (Genetics), BIOL 3306 (Evolutionary Biology), BIOL 3332 (Elementary Microbiology), CHEM 4336 (Fundamental Biochemistry), CHEM 4365 (Inorganic Chemistry II), GEOL 3370 (Selected Topic is Geology), GEOL 4330 (Intro To Geophysics), MATH 3338 (Probability), MATH 3339 (Statistics for the Sciences), and PHYS 3315 (Modern Physics) for which a general petition is not needed. In case of doubts, please check with a ChBE advisor to ensure its acceptance. A petition might be required to ensure it will be counted toward the degree plan. Please note that CHEM 4370 and CHEM 4373 are duplicates of our CHEE 3466 class so they cannot count towards the degree.

Chemistry Electives

Typical courses that have been approved in the past include CHEM 3369 (Analytical Chemistry), CHEM 4364 (Advanced Organic Chem), CHEM 4369 (Instrmntl Mtds Analysis) or any CHEM course 3300 level or above not already counted in the degree plan. Please note that CHEM 4370 and CHEM 4373 are duplicates of our CHEE 3466 class so they cannot count towards the degree.

Technical Electives

Typical courses that will not require a general petition include:

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CHEE 5323/6323 - Fundamentals of Tissue Engineering
CHEE 5369/6369 - Chemical Process Economics II
CHEE 5377 - Introduction to Polymer Science
CHEE 5379/6379 - Safety and Reliability
CHEE 5397/6397 - Special Topics in Data Analytics
CHEE 6332 - Mathematical Methods in Chemical Engineering II
CHEE 6360 - Biomolecular Engineering
CHEE 6375 - Chemical Processing for Microelectronics

Or courses in other engineering departments, or within CHEE (e.g. Honors thesis, research with a faculty member), or in other colleges at UH with engineering content, if space is available (please check with the appropriate department) Approved courses in the past include CIVE 6391 (Envrn Engr Microbiology), ECON 3363 (Environmental Economics), ECON 3385 (Economics of Energy), ENRG 3310 (Introduction to Energy & Sustainability), ENRG 4397 (Energy and Sustainability), GEOL 3342 (Principles of Air Pollution), MECT 3341 (Computer-Aided Drafting I), PETR 3315 (Introduction to Well Logging), PETR 3362 (Reservoir Engineering I), PETR 53XX, and TECH 4310 (Future of Energy & Environment). For all other courses, a general petition is required to ensure it will be counted toward the degree plan.

**Students may take either BCHS 3304 or CHEM 4336. Credit will not be given for both courses. The science elective can be another chemistry course.