

COLLEGE OF ENGINEERING

Bachelor of Science, Systems Engineering

Four-Year Academic Map 2022-2023

| YEAR 1 | Semester 1 Fall | | | Semester 2 Spring | | | Total |
|----------------|-----------------|-------------------------------|----|-------------------|-------------------------------|----|-------|
| | ENGI 1100 | Introduction to Engineering | 1 | ENGI 1331 | Computing for Engineers | 3 | |
| | CHEM 1311 | Fundamentals of Chemistry* | 3 | MATH 2414 | Calculus II* | 4 | |
| | CHEM 1111 | Fundamentals of Chemistry Lab | 1 | PHYS 2325 | University Physics I* | 3 | |
| | ENGL 1301 | First Year Writing I* | 3 | ENGL 1302 | First Year Writing II* | 3 | |
| | MATH 2413 | Calculus I* | 4 | CORE | Social & Behavioral Sciences* | 3 | |
| | HIST 1301 | The United States To 1877* | 3 | | | | |
| Semester Hours | | | 15 | Semester Hours | | 16 | 31 |

| YEAR 2 | Semester 1 Fall | | | Semester 2 Spring | | | Total |
|--------|-----------------|--|---|-------------------|-------------------------------|---|-------|
| | INDE 2331 | Computer Applications for Industrial Engineers | 3 | HIST 1302 | The United States Since 1877* | 3 | |
| | GOVT 2305 | U.S. & TX Constitution & Politics* | 3 | CORE | Creative Arts* | 3 | |
| | INDE 2333 | Engineering Statistics I | 3 | GOVT 2306 | U.S. Government* | 3 | |
| | MATH 2415 | Calculus III | 4 | ENGI 2304 | Technical Communications* | 3 | |
| | PHYS 2326 | University Physics II | 3 | MATH 3321 | Engineering Mathematics | 3 | |
| | Semester Hours | | | 16 | Semester Hours | | 15 |

| YEAR 3 | Semester 1 Fall | | | Semester 2 Spring | | | Total |
|----------------|-----------------|-------------------------------------|----|-------------------|--|----|-------|
| | CEA 3201 | Computer Programming for Engineers | 2 | INDE 3333 | Engineering Economy I | 3 | |
| | INDE 3330 | Finance and Cost Management | 3 | INDE 3381 | Linear Optimization | 3 | |
| | INDE 3364 | Engineering Statistics II | 3 | INDE 4331 | Analysis of Industrial Activities | 3 | |
| | INDE 3310 | Quality Control and Improvement | 3 | SYSE 3355 | Systems Thinking | 3 | |
| | SYSE 3301 | Fundamentals of Systems Engineering | 3 | SYSE 3340 | Systems Integration, Verification and Validation | 3 | |
| | SYSE 3315 | Systems Architecture & Design | 3 | | | | |
| Semester Hours | | | 17 | Semester Hours | | 15 | 32 |

| YEAR 4 | Semester 1 Fall | | | Semester 2 Spring | | | Total |
|----------------|-----------------|---------------------------------------|----|-------------------|-------------------------------------|----|-------|
| | INDE 4370 | Discrete Event Simulation | 3 | INDE 4315 | Supply Chain Management | 3 | |
| | INDE 3382 | Stochastic Modeling | 3 | INDE 4364 | Data Analytics | 3 | |
| | SYSE 4111 | Systems Engineering Seminar | 1 | INDE 4337 | Human Factors & Ergonomics | 3 | |
| | SYSE 4320 | Project Management of Complex Systems | 3 | SYSE 4334 | Systems Engineering Capstone Design | 3 | |
| | SYSE ELEC | Concentration Elective 1 | 3 | SYSE ELEC | Concentration Elective 2 | 3 | |
| | CORE | Language, Philosophy, & Culture* | 3 | | | | |
| Semester Hours | | | 16 | Semester Hours | | 15 | 31 |
| | | | | | | | 125 |

*State of Texas Core Curriculum

All Major Courses will be taken out of the UH at Katy Campus. Students should meet with their academic advisor to formulate their personalized graduation plan.