



Finish in 4 Curricular Plan Bachelor of Science Engineering Physics



A Finish in 4 Curricular Plan provides a roadmap for completing this academic program and the UB Curriculum in four years. Your actual plan may vary depending on point of entry to the university, course placement and/or waivers based on standardized test scores, earned alternative credit and/or college transfer credit.

All students are encouraged to use this plan in conjunction with other academic planning resources such as your academic advisor, the hUB Academic Advisement Report, My Planner and Path Finder tool.

In addition to following this course roadmap, all other admission and academic requirements of this major as listed in the Undergraduate Catalog must be met in order to successfully complete this degree.

| First Year – Fall Semester | | |
|---|----------|--------|
| Course | Category | Credit |
| MTH 141 College Calculus I | M/MQR | 4 |
| CHE 107 General Chemistry for Engineers | M/SLI 1 | 4 |
| EAS 199 | M/UBS | 3 |
| PHY 107 General Physics I | M/SLI 2 | 4 |
| ENG 105 | CL1 | 4 |
| | | |
| | | |
| | | |
| <i>Total Credits:</i> | | 19 |

| First Year – Spring Semester | | |
|---------------------------------------|----------|--------|
| Course | Category | Credit |
| MTH 142 College Calculus 2 | M | 4 |
| EE 178 Digital Principles | M/GP3 | 4 |
| EAS 202 Engineering Impact on Society | M | 1 |
| Global Pathway | GP1 | 3 |
| PHY 108 General Physics II | M | 4 |
| PHY 158 General Physics II Lab | M | 1 |
| | | |
| <i>Total Credits:</i> | | 17 |

| Second Year – Fall Semester | | |
|--------------------------------------|----------|--------|
| Course | Category | Credit |
| MTH 306 Introduction to Differential | M | 4 |
| EE 202 Circuit Analysis | M | 3 |
| MTH 241 College Calculus 3 | M | 4 |

| Second Year – Spring Semester | | |
|--|----------|--------|
| Course | Category | Credit |
| MTH 418 Survey of Partial Differential Equations | M | 4 |
| EAS 230 Engineering Computations | M | 3 |
| PHY 207 General Physics III | M | 4 |

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|-----------------------|-----|----|
| Technical Elective | M | 3 |
| Thematic Pathway | TP1 | 3 |
| | | |
| | | |
| <i>Total Credits:</i> | | 17 |

| | | |
|-----------------------------------|---|----|
| PHY 257 General Physics III Lab | M | 1 |
| EAS 240 Programming for Engineers | M | 3 |
| | | |
| | | |
| <i>Total Credits:</i> | | 15 |

| Third Year – Fall Semester | | |
|--|----------|--------|
| Course | Category | Credit |
| EE 310 Electronic Devices and Circuits I | M | 3 |
| EE 352 Introduction to Electronics Lab | M | 3 |
| PHY 208 General Physics IV | M | 3 |
| PHY 301 Intermediate Mechanics I | M | 3 |
| PHY 401 Quantum Mechanics I - Fundamentals | M | 3 |
| Thematic Pathway | TP2 | 3 |
| | | |
| <i>Total Credits:</i> | | 18 |

| Third Year – Spring Semester | | |
|---|----------|--------|
| Course | Category | Credit |
| EE 311 Electronic Devices and Circuits II | M | 3 |
| EE 353 Electronic Circuits Lab | M | 3 |
| PHY 402 Quantum Mechanics II - Applications | M | 3 |
| PHY 307 Modern Physics Lab | M | 2 |
| Global Pathway | GP2 /DL | 3 |
| EAS 360 | M/CL2 | 3 |
| | | |
| <i>Total Credits:</i> | | 17 |

| Fourth Year – Fall Semester | | |
|---|----------|--------|
| Course | Category | Credit |
| MAE 335 Fluid Mechanics | M | 3 |
| PHY 403 Electricity and Magnetism I | M | 3 |
| PHY 405 Thermal and Statistical Physics I | M | 3 |
| Technical Elective | M | 3 |
| UBC 399 | CAP | 1 |
| <i>Total Credits:</i> | | 13 |

| Fourth Year – Spring Semester | | |
|--|----------|--------|
| Course | Category | Credit |
| EE 494 Senior Capstone Design Project | M | 3 |
| PHY 404 Electricity and Magnetism II | M | 3 |
| PHY 407 or PHY 408 Advanced Laboratory | M | 3 |
| EE 336 Fundamentals of Energy Systems | M/TP3 | 3 |
| | | |
| <i>Total Credits:</i> | | 12 |

| | |
|---|------------|
| Total Credits Required for Degree: | 128 |
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Category Legend:

M = Course Required for Major (including pre-requisites needed for admission to the major)

E = Elective (course not required for major or UB Curriculum)

The following are all components of the UB Curriculum (UBC) For more information on the UBC and course options visit: <http://undergrad-catalog.buffalo.edu/policies/degree/ubcurriculum.html>

- UBS = UB Seminar
- CL1/CL 2 = Communication Literacy (2 required)
- CAP = UB Capstone
- DL = Diversity Learning
- GP1/GP2/GP3 = Global Pathway Course (3 required)
- MQR = Math and Quantitative Reasoning
- SLI1/SLI2 = Scientific Literacy and Inquiry (2 required)
- TP1/TP2/TP3 = Thematic Pathway Course (3 required)

Note: Some classes may count toward both a major (M) and UB Curriculum (UBC) requirement. Courses that count towards more than one requirement are indicated by a "/" (slash) in the category column indicating which categories the course will satisfy.