



# ACADEMIC PLANNING GUIDE - MECHANICAL ENGINEERING

effective with 2017-2018 Catalog

## MAJOR REQUIREMENTS

**Required Semester Hours:**            **BS: 72 semester hours**

**Supporting Courses: 20 semester hours**

- MATH 1510: Calculus I (4) - *meets Analytical & Quantitative Reasoning Requirement*
- MATH 1520: Calculus II (4)
- MATH 2030: Differential Equations (4)
- MATH 3050: Vector Calculus **or**  MATH 3100: Linear Algebra (4)
- CHEM 1150: General Chemistry I (4)

*Note: Some of the above courses may require prerequisites not included in this list.*

**Required Core Courses: 52 semester hours**

- PHEN 1210: Introductory Physics I (4) - *meets Physical Science Requirement*
- PHEN 1220: Introductory Physics II (4)
- PHEN 1330: Mechanical Comprehension (2)
- PHEN 1340: Design Thinking (2)
- PHEN1410: Pursuit of Knowledge (2)
- PHEN 1510: Mathematical Methods of Physics (2)
- PHEN 2170: Systems (4)
- PHEN 2510: Electronics for Scientists (3)
- PHEN 2520: Electronics Lab (1)
- PHEN 3110: Statistical Thermodynamics (4)
- PHEN 3120: Materials for Design (4)
- PHEN 3310: Dynamics (4)
- PHEN 3610: Transport Phenomena (4)
- PHEN 4030: Knowledge Reloaded (2)
- PHEN 4930: Research Methods (4)
- PHEN 4970: Internship (4)
- PHEN 4010: Fourth Year Seminar (2)

The Academic Planning Guide is designed as a guide for students planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of a faculty advisor. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered the institution.



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## CORE CURRICULUM

Starting with the framework of North Park's identity as a Christian, liberal arts institution, our Core Curriculum is intentionally multi-disciplinary and multi-year. It is set up as a progress through three areas: Foundation Courses, Explorations Courses, and Capstone Courses.

<http://www.northpark.edu/Academics/Undergraduate-Studies/Core-Curriculum>

### Foundations

Preparing for more in-depth work in both the Core Curriculum and your major

|  |
|--|
| Cornerstone Seminar (4sh)  |
|  |
| Biblical Studies (4sh)   |
|  |
| Health and Well-Being (2sh)  |
|  |
| Analytical & Quantitative Reasoning (4sh)<br><i>met by MATH 1510</i> |
|  |
| Global Histories (4sh)   |
|  |
| Modern Languages (8sh)   |
|  |
|  |

### Explorations

Knowledge in specific disciplines, with strong emphasis on how you can use them in the context of your own life

|   |
|---|
| Art and Aesthetics (2sh)                              |
|   |
| Christian Life & Thought (4sh)                        |
|   |
| Life Science (2sh/lab)                                |
|   |
| Physical Science (2sh/lab)<br><i>met by PHYS 1210</i> |
|   |
| Culture and Society (4sh)                             |
|   |
| Ethical Reasoning (2sh)                               |
|   |

### Intermediate Level Writing

Two courses in the context of your major that specifically address writing clearly and doing effective research

|   |                               |
|---|-------------------------------|
| Writing Intensive Course (4sh)<br><i>met by PHEN 1410 and PHEN 2950</i> | Research Writing Course (4sh) |
|   |                               |

### Keystone

Interdisciplinary integration of skills and knowledge applied to contemporary social issues

|                        |
|------------------------|
| Keystone Seminar (4sh) |
|                        |

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