**Northwest Nazarene University**

**Bachelor of Science in Engineering – Mechanical Engineering Concentration**

**2023-24 Plan of Study (126 credits)**

# **Fall Freshman year Spring**

| **Course #** | **Cr** | **Course Title** | **Course #** | **Cr** | **Course Title** |
| --- | --- | --- | --- | --- | --- |
| ENGR 1010 | 3 | Intro to Engineering | ENGR 1050 | 3 | Engr CAD & Prototyping |
| MATH 2510 | 4 | Calculus I  | MATH 2520 | 4 | Calculus II  |
| ENGR 1100 | 3 | Engineering Software Skills | PHYS 2110 | 3 | Physics I |
|  |  |  | PHYS2110L | 1 | Physics I Lab |
| HUMN1020 | 1 | Cornerstone |  | 3 | US History Elective |
| ENGL 1040  | 3 | University Writing | BIBL 1100 | 3 | Biblical Studies |
|  | **14** |  |  | **17** |  |

# **Fall Sophomore year Spring**

| **Course #** | **Cr** | **Course Title** | **Course #** | **Cr** | **Course Title** |
| --- | --- | --- | --- | --- | --- |
| ENGR 2100 | 3 | Statics  | ENGR 2110 | 3 | Dynamics |
| ENGR 2200 | 3 | Digital Systems | ENGR 2210 | 3 | Electrical Circuits |
| ENGR2200L | 1 | Digital Systems Lab | ENGR2210L | 1 | Electrical Circuits Lab |
| MATH 3540 | 4 | Differential Equations | MATH 3530 | 4 | Calculus III |
| PHYS 2120 | 3 | Physics II | ENGR 2310 | 1 | Instrumentation &Msmt Lab |
| PHYS2120L | 1 | Physics II Lab | KINE | 1 | Activity |
| KINE 1000 | 1 | Fund. Wellness | THEO 2100 | 3 | Christian Theology |
|  | **16** |  |  | **16** |  |

# **Fall Junior year Spring**

| **Course #** | **Cr** | **Course Title** | **Course #** | **Cr** | **Course Title** |
| --- | --- | --- | --- | --- | --- |
| ENGR 3400 | 3 | Control Systems | ENGR 3410 | 3 | Engineering Econ & Ethics |
| ENGR3400L | 1 | Control Systems Lab | ENGR3110L | 1 | Materials & Thermo Lab |
| PHYS 3500 | 3 | Statistical Analysis for P&E | ENGR 3110 | 3 | Thermodynamics |
| ENGR 3100 | 3 | Mechanics of Materials |  | 3 | Literature Elective |
| CHEM 2230 | 3 | Chemistry for Engineers | ENGL 3015 | 3 | Technical Writing  |
| CHEM2230L | 1 | Chemistry for Engineers Lab |  |  |  |
| ENGR 4140 | 3 | Vibrations | ENGR 4110 | 3 | Machine Design |
|  | **17** |  |  | **16** |  |

# **Fall Senior year Spring**

| **Course #** | **Cr** | **Course Title** | **Course #** | **Cr** | **Course Title** |
| --- | --- | --- | --- | --- | --- |
| ENGR 4971 | 2 | Senior Design Project I | ENGR 4972 | 2 | Senior Design Project II |
| COMM3211 | 3 | Technical Communication |   | 3 | Philosophy Elective |
| ENGR 4130 | 3 | Mechatronics  |  | 3 | Non US History Elective |
| ENGR4130L | 1 | Mechatronics Lab |  | 3 | Bible/Theology Elective |
| ENGR 4100 | 3 | Fluid Mechanics | ENGR 4120 | 1 | Fluids & Thermal Lab |
|  | 3 | Art/Music Elective | ENGR 4150 | 3 | Heat Transfer |
|  | **15** |  |  | **15** |  |

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