



# Department of Physics

## Dual Degree Program, Physics and Engineering

### Academic Road Map

Sample only— academic advisors will help create an individualized plan. Students with more than one program should communicate with their advisor prior to enrollment. \*Upper-division major electives should be selected in consultation with departmental faculty mentors.

| YEAR 1                | Fall Quarter |                    | Winter Quarter                       |             | Spring Quarter                             |                          |    |
|-----------------------|--------------|--------------------|--------------------------------------|-------------|--|--------------------------|----|
|                       | UNIV 101     | Transition to CWU  | K1 Academic Writing II (ex: ENG 111) |             | K2 Cmty. Cult. & Citizenship (ex:WGSS 201) |                          |    |
|                       | MATH 172     | Calculus I         | MATH 173                             | Calculus II | MATH 272                                   | Multivariable Calculus I |    |
|                       | PHYS 181     | General Physics I  | PHYS 182 General Physics II          |             | PHYS 183 General Physics III               |                          |    |
|                       | ENG 101      | Academic Writing I |                                      |             |  |                          |    |
| Total Quarter Credits |              | 16                 | Total Quarter Credits                |             | 15   | Total Quarter Credits    | 15 |

| YEAR 2                | Fall Quarter            |                          | Winter Quarter           |                           | Spring Quarter                         |                       |    |
|-----------------------|-------------------------|--------------------------|--------------------------|---------------------------|--|-----------------------|----|
|                       | PHYS 317                | Modern Physics I         | ETSC 311                 | Statics                   | ETSC 265                               | 3D Modeling           |    |
|                       | PHYS 363                | Optics                   | PHYS 289                 | Physics Major Intro       | MATH 265                               | Linear Algebra        |    |
|                       | CS 110                  | Programming Fundamentals | MATH 273                 | Multivariable Calculus II | K5 Humanities (ex: PHIL 104)           |                       |    |
|                       | CHEM 181                | General Chemistry I      | CHEM 182                 | General Chemistry II      | K8 Science & Technology (ex: PHYS 304) |                       |    |
| CHEM 181Lab           | General Chemistry Lab I | CHEM 182Lab              | General Chemistry Lab II |                           |  |                       |    |
| Total Quarter Credits |                         | 17                       | Total Quarter Credits    |                           | 15                                     | Total Quarter Credits | 18 |

| YEAR 3                | Fall Quarter                         |                          | Winter Quarter        |                       | Spring Quarter |                           |    |
|-----------------------|--------------------------------------|--------------------------|-----------------------|-----------------------|----------------|---------------------------|----|
|                       | MATH 376                             | Differential Equations I | PHYS 361              | Computational Physics | ECON 202 (K4)  | Macroeconomics            |    |
|                       | ECON 201 (K6)                        | Microeconomics           | PHYS 489              | Senior Assessment     | MATH 377       | Differential Equations II |    |
|                       | K3 Creative Expression (ex: MUS 103) |                          | MATH 314              | Statistics            | ENG 310        | Technical Writing         |    |
|                       |                                      |                          | MET 327               | Dynamics              | ETSC 312       | Mechanics of Materials    |    |
| Total Quarter Credits |                                      | 13                       | Total Quarter Credits |                       | 14             | Total Quarter Credits     | 17 |

| YEARS 4-5 | Engineering Program at Partner Institution   |  |
|-----------|--|--|
|           | Our Dual Degree Program lets you begin your studies at CWU and, after completing a specified curriculum, transfer to the Mechanical Engineering program at Washington State University where you complete engineering coursework.  |  |
|           | <p style="text-align: center;"><u>Timeline:</u></p> <ul style="list-style-type: none"> <li>• Years 1-3: Physics and General Education requirements at CWU (outlined above).             <ul style="list-style-type: none"> <li>• Years 4-5: Engineering requirements at WSU.</li> </ul> </li> <li>• Graduate with Physics BS (CWU) and Abet-accredited Mechanical Engineering BS (WSU).</li> </ul> |  |

\*Assumes placement into MATH 172. If placement requirements are not met, your advisor will help you create a suitable first-year Math sequence to set you up for success.

Department Webpage



CWU Course Catalog



General Education



General Degree Requirements

