

EPC 30 Day Clock Memo

TO: All Faculty
FROM: Educational Policies Committee
SUBJECT: Notice of Curriculum Changes
DATE: September 24, 2021

The 30-day review period begins September 24 and ends October 25, 2021

This notice of Curriculum Changes is published as required by the EPC Manual, which is located in the Faculty Handbook. The following paragraph may be found in Section III, Part VI, Section 3, "Procedures Governing Revision of Curriculum and Degree Requirements":

F: Faculty members must submit objections to proposals in writing to the Chair of EPC via facgov@plu.edu within 30 days from the date listed on the 30-day Notice of Curriculum Changes distributed by the EPC. Objections received within this 30-day period will suspend approval, pending resolution of the objections. In the event a dispute cannot be resolved, the EPC will make its recommendation to the faculty for action at the next regular faculty meeting.

Complete copies of the proposals may be obtained from the Provost's Office or from Matt Smith, Chair of the Educational Policies Committee for the 2021-22 academic year. In addition, some proposals may be found online in the EPC section of the Office of the Provost Sakai site, to which all PLU faculty should have access.

Curriculum Changes for Review – Summary

- **Physics** – create new minor*
- **Social Work** – add courses to meet the program's major and minor elective requirement

*Type 3 proposal requiring a vote at Faculty Assembly

Curriculum Changes for Information Only – Summary

- Academic Performance and Integrity Committee (APIC) – catalog correction

Curriculum Changes for Review

Deletions are indicated by ~~blue strikethrough~~ | Additions are indicated in **blue bold**
For conciseness, courses and catalog language sections that are not being changed, are not listed.

PHYSICS

Fall 2022

Type 3 – create new minor*

*Type 3 proposal requiring a vote at Faculty Assembly

[Engineering & Industry Minor \(link to proposal\)](#)

Catalog

Bachelor of Science Degree Major in Physics

64 semester hours

- PHYS 153, 154, 163, 164, 223, 331, 332, ~~333~~, 336, 354, 356, 401, 499A, 499B
- **ENGR 333**
- Strongly Recommended: ~~CSCI 331~~ **ENGR 355**
- CHEM 341 or PHYS 221 may be substituted for **PHYS ENGR 333**
- CHEM 342 may be substituted for PHYS 401
- **Required supporting courses:**
 - CHEM 115; MATH 151, 152, 253; DATA 133 or CSCI 144

Typical B.S. Physics Major Program Schedule

- **First Year: PHYS 153, 163; MATH 151, 152**
- **Sophomore Year:** PHYS 154, 164, 223, 354; MATH 253
- **Junior Year:** PHYS 331, 336, 356; CHEM 115; DATA 133 or CSCI 144
- **Senior Year:** **ENGR 333**; PHYS 332, ~~333~~, 401, 499A, 499B

Minor

22 semester hours

- PHYS 153; 154; 163; 164; 223
- Plus: 8 additional semester hours in physics (excluding PHYS 110), of which at least 4 hours must be upper division.

Engineering & Industry Minor

The curriculum of the Engineering & Industry Minor consists of engineering courses, courses in business, economics, and ethics with a special emphasis on industry, and/or an internship. Students choosing the minor will learn the basics of engineering design and team problem solving, will gain familiarity with industry, and will obtain valuable skills ensuring their success in the workplace or in graduate studies.

An Advisory Board comprised of engineering and science professionals associated with PLU will advise students in the Engineering Internship process for students who choose that option, will evaluate the quality of internships, and will consult with the program leaders on curriculum.

The Engineering & Industry Minor is ideal for all students who would benefit from in-depth exposure to engineering and industry. Typically, students in Natural Sciences, Business, Economics, or any students who have completed the introductory calculus-based physics sequence (PHYS 153/163, PHYS 154/164) would be a good fit for the minor. BS in Applied Physics students are NOT ALLOWED to add this minor, as it essentially is the minor aligned with the Applied Physics major.

Engineering & Industry Minor

28 semester hours

- ENGR 131 (2 hrs)
- Calculus-based Introductory Physics plus laboratory (PHYS 153, 163, 154, 164) – 10 CR
- Plus: 8 additional semester hours chosen from the following Engineering courses:
 - ENGR 240, ENGR 333, ENGR 334, and ENGR 355
- Plus: 8 additional semester hours chosen from:
 - ENGR 495 (Internship): Credits would vary depending on internship type and schedule (0-8 hrs)

- Courses in business, economics, ethics, and history, which would introduce students to various aspects of industry (0-8 hrs):
 BUSA 201, BUSA 310, BUSA 358
 ECON 101, ECON 111, ECON 313, ECON 321, ECON 325
 HIST 254, HIST 346, HIST 370
 PHIL 125, PHIL 223, PHIL 225, PHIL 226, PHIL/HIST 248, PHIL 327

All courses counted toward the minor must be completed with grades of C or higher.

Bachelor of Science Degree - Applied Physics Major

70 semester hours

Also available is a major in applied physics, which includes a substantial selection of courses from engineering to provide a challenging and highly versatile degree. Applied physics can lead to research or advanced study in such areas as robotics—with application in space exploration or joint and limb prosthetics; growth of single-crystal metals, which would be thousands of times stronger than the best steels now available; mechanics of material failure, such as metal fatigue and fracture; turbulence in fluid flow; photovoltaic cell research for solar energy development; or applications of fluid flow and thermodynamics to the study of planetary atmospheres and ocean currents. While many applied physics graduates pursue professional careers in industry immediately after graduation from PLU, the program also provides excellent preparation for graduate study in nearly all fields of engineering.

- PHYS 153, 154, 163, 164, 223, 331, ~~334~~, 354, 356, 499A, 499B
- ~~CSCI~~ ENGR 131, ~~334~~
- Plus: four courses, one of which must be upper division, selected from:
 - CSCI 302, ~~331~~
 - ENGR 240, ~~333~~
 - Strongly Recommended: ~~CSCI 331~~ ENGR 355
 - MATH 331, MATH/STAT 242
 - PHYS 221, ~~240~~, 332, ~~333~~, 336, 401
 - CHEM 341 may be substituted for ~~PHYS 333~~ ENGR 333
 - CHEM 342 may be substituted for PHYS 401
- Required supporting courses:
 - CHEM 115; DATA 133 or CSCI 144; MATH 151, 152, 253

Typical Applied Physics Program Schedule

- **First Year:** PHYS 153, 163; ~~CSCI~~ ENGR 131; MATH 151, 152
- **Sophomore Year:** PHYS 154, 164, 221, 223, 354; MATH 253
- **Junior Year:** ENGR 333; PHYS ~~333~~, 356; CHEM 115; DATA 133 or CSCI 144
- **Senior Year:** PHYS ~~240~~, 331, ~~334~~, 499A, 499B; ~~CSCI 331~~ ENGR 240, ~~334~~, 355

~~Course Offerings by Semester~~

- ~~● Fall Semester (even years): 110+110L, 125+135, 153+163, 154+164, 240, 331, 333, 356, 499A~~
- ~~● Spring Semester (odd years): 126+136, 153+163, 154+164, 223, 332, 354, 401, 499B~~
- ~~● Fall Semester (odd years): 110+110L, 125+135, 153+163, 154+164, 221, 240, 331, 356, 499A~~
- ~~● Spring Semester (even years): 126+136, 153+163, 154+164, 223, 334, 336, 354, 499B~~

ENGINEERING DUAL-DEGREE PROGRAM

PLU Requirements

In order to earn a PLU degree in the Dual-Degree Program, the following requirements must be satisfied:

Completion of the following science and mathematics courses, paired with a Bachelor's of Arts in Physics or Chemistry major, as specified below

44 semester hours

- MATH 151, 152, 253 (12 semester hours)
- MATH 351 or PHYS 354 (4 semester hours)
- PHYS 153, 154, 163, 164, 223 (14 semester hours)
- CHEM 115, 116 (8 semester hours)
- ~~CSCI~~ ENGR 131 (2 semester hours)
- DATA 133 or CSCI 144 (4 semester hours)

Completion of the General Education Program element requirements as specified in the catalog, except that the following general requirements are waived for all dual-degree (3-2) students:

- Completion of a minimum of 128 semester hours on the PLU transcript;
- Completion of a minimum of 40 semester hours from courses numbered 300 and above;
- The requirement that at least 20 of the minimum 40 semester hours of upper-division work must be taken at PLU;
- The requirement that the final 32 semester hours of a student's program be completed in residence at PLU; and
- The requirement that the senior seminar/project be completed at PLU. Senior projects from the engineering school (a characteristic of ABET-accredited schools) will satisfy the PLU senior project requirement for Dual-degree students upon approval of the project by the appropriate PLU department chair.

Bachelor of Arts Degree

Major in Physics

12 additional semester hours

Completion of an additional 12 semester hours of electives in science and mathematics from the following courses:

- MATH 331, 356
- PHYS 221, ~~240~~, 331, ~~333, 334~~, 336
- ~~CSCI 331~~
- **ENGR 240, 333, 334, 355**
- CHEM 341 may be substituted for ~~PHYS-ENGR~~ 333

The particular courses chosen will depend on the intended subdiscipline and the engineering school's entrance requirements. Students should consult with the program director before choosing their electives.

Courses

Engineering (ENGR) - Undergraduate Courses

ENGR 131 ~~CSCI 131~~ : Introduction to Engineering - NS

An introduction to the engineering profession and development of basic skills important to the profession, including problem solving, engineering design, graphics, use of computers, computer programming, engineering economics, and ethics in engineering. Prerequisite: completion of college-preparatory mathematics. (2)

ENGR 240 ~~PHYS 240~~ : Engineering Statics

Engineering statics using vector algebra; equilibrium of rigid bodies; equivalent force and movement systems; centroids and center of gravity; trusses and frames; methods of virtual work; shear and bending moment diagrams; moments of inertia. Prerequisite: PHYS 153 with a C- or higher. (4)

ENGR 333 ~~PHYS 333~~ : Engineering Thermodynamics

Classical, macroscopic thermodynamics with applications to physics, engineering, and chemistry. Thermodynamic state variables, cycles, and potentials; flow and non-flow systems; pure substances, mixtures, and solutions; phase transitions; introduction to statistical thermodynamics. Prerequisites: PHYS 153 with a C- or higher ~~and MATH 253 with a C- or higher~~. (4)

ENGR 334 ~~PHYS 334~~ : Engineering Materials Science

Fundamentals of engineering materials including mechanical, chemical, thermal, and electrical properties associated with metals, polymers, composites, and alloys. Focus on how useful material properties can be engineered through control of microstructure. Prerequisites: PHYS 154 with a C- or higher and CHEM 115 with a C- or higher. (4)

ENGR 355 ~~CSCI 331~~ : Electrical Circuits

Introduction to the fundamental techniques and concepts of analysis and design of DC and AC circuits including Kirchhoff's Laws, circuit theorems, OP Amps, first and second order transient and steady state circuits, and frequency response. Computer simulation and laboratory work are essential parts of the course. Prerequisites: MATH 151; PHYS 154 or consent of instructor. (4)

ENGR 495 : Internship

To permit undergraduate students to relate theory and practice in a work situation. The title will be listed on the student term-based record as Intern: followed by the specific title designated by the instructor in consultation with the student and the Advisory Board for the Engineering internship course and the Engineering & Industry Minor. (1 to 12)

SOCIAL WORK

FALL 2022

Type 2 – add courses to meet the program's major and minor elective requirement

Catalog

**Bachelor of Arts Degree
Major in Social Work**

52 semester hours, including

- SOCW 245, 250, 350, 360, 460, 465, 475, 476, 485, 486, 498, and 499
- SOCW 232 or SOCI 232
- SOCI 101
- STAT 233 (must be completed at PLU)
- 4 semester hours in elective SOCI, ~~or~~ SOCW, or **PSYC 310, 315, 337.**

Social Work majors are required to have the following prerequisites prior to entry to the program: ANTH 102 or 334, PSYC 101, and SOCI 101. BIOL 111 must be completed prior to graduation.

Minor

- SOCW 101 (190) or 245 (4)
- SOCW electives (8)
 - Choose from either course not used above, or from SOCW 250, 350, or 360
- Remaining elective (4)
 - Choose from any course not used above, or from SOCW 175, 287, 320, 325, 329, 345, 387, 491; SOCI 210, 226, 330, 332, 384, 410, 494; SOCW 232 or SOCI 232; PSYC 310, 315, ~~337 335, 345~~; or COMA 340
- SOCW 375 (2)

Curriculum Changes for Information Only

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Academic Performance and Integrity Committee (APIC)

Fall 2022

Type 1 - catalog correction

Catalog

Academic Standing Policy

The following terms are used to describe academic standing at PLU; separate progression and retention policies may be in place in individual programs; please see the individual program section of the catalog for details. Academic standing is determined by the ~~Committee for the Admission and Retention of Students~~ **Academic Performance and Integrity Committee**, which reserves the right to review any student's record to determine academic standing. Academic standing will be reviewed at the end of each semester and term.

First Academic Dismissal

Students are given a first academic dismissal from the University if they fail to meet the conditions set forth in the requirements for students on academic probation or on continued probation. A notation of first academic dismissal will be made on the transcript. Students are dismissed after Fall and Spring Semester. Students dismissed after the fall semester may remain in their January Term courses, but are withdrawn from their Spring Semester courses unless the committee grants reinstatement (see below). Students dismissed after the Spring Semester are withdrawn from all Summer Term courses. If there were extraordinary circumstances that the student believes warrant consideration of an appeal, students may apply for reinstatement by petitioning the ~~Committee for the Admission and Retention of Students (in care of the director of advising)~~ **Academic Performance and Integrity Committee**. If the petition is approved, students are reinstated on continued probation and must earn a semester GPA of 2.00 or better. At the end of the following semester, students must have reached the 2.00 cumulative GPA. Students who are reinstated must also satisfactorily complete each course they attempt. Satisfactory completion means no grades of W (withdrawal), I (incomplete), E or F for the term.

Second Academic Dismissal

Students who are reinstated after the first academic dismissal must earn a semester GPA of at least 2.00 in order to be granted one additional semester of continued probation to reach the required 2.00 cumulative GPA. Students who fail to attain at least a 2.00 term GPA in the semester after reinstatement, or who fail to achieve a 2.00 cumulative GPA or higher in the second semester after reinstatement, are given a second academic dismissal. These students are not allowed to petition the ~~Committee for the Admission and Retention of Students~~ **Academic Performance and Integrity Committee** for reinstatement.