

AFFILIATION PROGRAM: La Sierra University supports an affiliation program in engineering with Walla Walla University, College Place, WA. Upon completion of La Sierra's Pre-Engineering program, students may transfer to Walla Walla with no loss of credits to complete the ABETaccredited

Bachelor of Science in Engineering degree. This degree provides emphases in civil, computer, electrical/electronic, and mechanical engineering. A Bachelor of Science in bioengineering that includes prerequisites for medical and dental schools is also available. For more details, visit Walla Walla University's website at www.wallawalla.edu.

TRANSFER PROGRAM: The Pre-Engineering program at La Sierra also prepares students to transfer to engineering programs such as electrical, mechanical, civil, aeronautical, etc. at University of California and California State University. In consultation with a Pre-Engineering advisor, individual programs will be tailored to meet specific entrance requirements at the engineering school of the student's choice.

NOTE: In preparation for transferring from La Sierra University, students should review the requirements of their prospective Engineering

MAJOR REQUIREMENTS

FALL WINTER SPRING

General Chemistry

CHEM 111 General Chemistry I (4) and CHEM 111L Laboratory (1)

CHEM 112 General Chemistry II (4) and CHEM 112L Laboratory (1)

CHEM 113 General Chemistry III (4) and CHEM 113L Laboratory (1)

Computer Science

CPTG 121 Introduction to Computer Science (4)

Mathematics

MATH 131 Calculus I (4)

MATH 132 Calculus II (4)

MATH 133 Calculus III (4)

MATH 231 Introduction to Linear Algebra and Discrete Mathematics (4)

MATH 232 Differential Equations (4)

MATH 233 Vector Calculus (4)

General Physics

PHYS 231 General Physics I (4) and PHYS 231L Laboratory (1)

PHYS 232 General Physics II (4) and PHYS 232L Laboratory (1)

PHYS 233 General Physics III (4) and PHYS 233L Laboratory (1)

GENERAL EDUCATION REQUIREMENTS

UNST 101A and UNST 101B First Year Seminar OR UNST 100 and UNST 100B Critical

Thinking Skills

ENGL 111 College Writing (3)

ENGL 112 College Writing (3)

ENGL 113 College Writing (3)

HLSC 120 Lifetime Fitness (2)

Religion elective (4)

Religion elective (4)

Humanities: Fine Arts or Literature (4)

Additional electives (Varies)

PRE-ENGINEERING

Pre-Professional Program

CAREER OPPORTUNITIES AND RELATED OCCUPATIONS: The primary fields of engineering are civil, electrical, mechanical, chemical, mining/petroleum, and industrial engineering. Subfields include structural, hydro-environmental, communications, computer, aeronautical, metallurgical, geophysical exploration engineering, sales, and administration. Engineers are the backbone of modern industrial society. Even without a formal degree in engineering, many employees receive that title since it is synonymous with “problem solver.”

EDUCATIONAL QUALIFICATIONS: A Bachelor’s degree is generally acceptable for beginning engineering positions. Graduate training is essential for teaching positions.

JOB OUTLOOK: Overall engineering employment growth will vary depending on the specialty field. From 2014-2024 growth will be from as low as 3% for Architectural Engineering up to 23% for Biomedical Engineers. Engineers have traditionally been concentrated in slow-growing manufacturing industries, in which they will continue to be needed to design, build, test and improve manufactured products. However, increasing employment of engineers in faster growing service industries should generate most of the employment growth. Overall job opportunities in engineering are expected to be favorable because the number of engineering graduates should be in rough balance with the number of job openings over this period.

ENTERING SALARY: The Bureau of Labor and Statistics reports that the Median salary for Engineers in 2015 varies from \$48,000 per year for Environmental Engineers up to \$129,900 for Petroleum Engineers. Annual earnings depend on the field of engineering branch specialized.

ADDITIONAL INFORMATION

Websites

La Sierra University
www.lasierra.edu

Department

www.lasierra.edu/physics

Faculty Advisor

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Department of Engineering

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[www.wallawalla.edu/academics/areas-of-study/
undergraduate-programs/engineering/](http://www.wallawalla.edu/academics/areas-of-study/undergraduate-programs/engineering/)

Professional Organizations

Junior Engineering Technical Society

www.jets.org

The Accreditation Board of Engineering
and Technology, Inc.

www.abet.org

The National Society of

Professional Engineers

www.nspe.org



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