

Santa Clara University
Undergraduate
School of Engineering
Cabrillo College Transfer Guide

For use by Transfer Applicants

Use the **TRANSFER CREDIT PLANNER** to map out your transfer credit.

Thank you for your interest in Santa Clara University! This guide has been designed to help make the course-planning process easier for students who wish to transfer to the School of Engineering at Santa Clara University.

Admission Recommendations for Transfer Students:

School of Engineering:

Bachelor of Science majors: Bioengineering, Civil Engineering, Computer Science & Engineering, Electrical Engineering, General Engineering, Mechanical Engineering, and Web Design & Engineering

Courses strongly recommended for admission:

- Two English composition courses (*aka: Critical Thinking & Writing 1 & 2*)
- Mathematics: MATH 5A and MATH 5B
- One natural science: CHEM 1A
- Two calculus-based physics courses: PHYS 4A and PHYS 4B and/or 4C
 - Web Design Engineering majors are not required to complete CHEM 1A, PHYS 4A & 4B. Complete one course in the Natural Science list.
- GPA 3.5

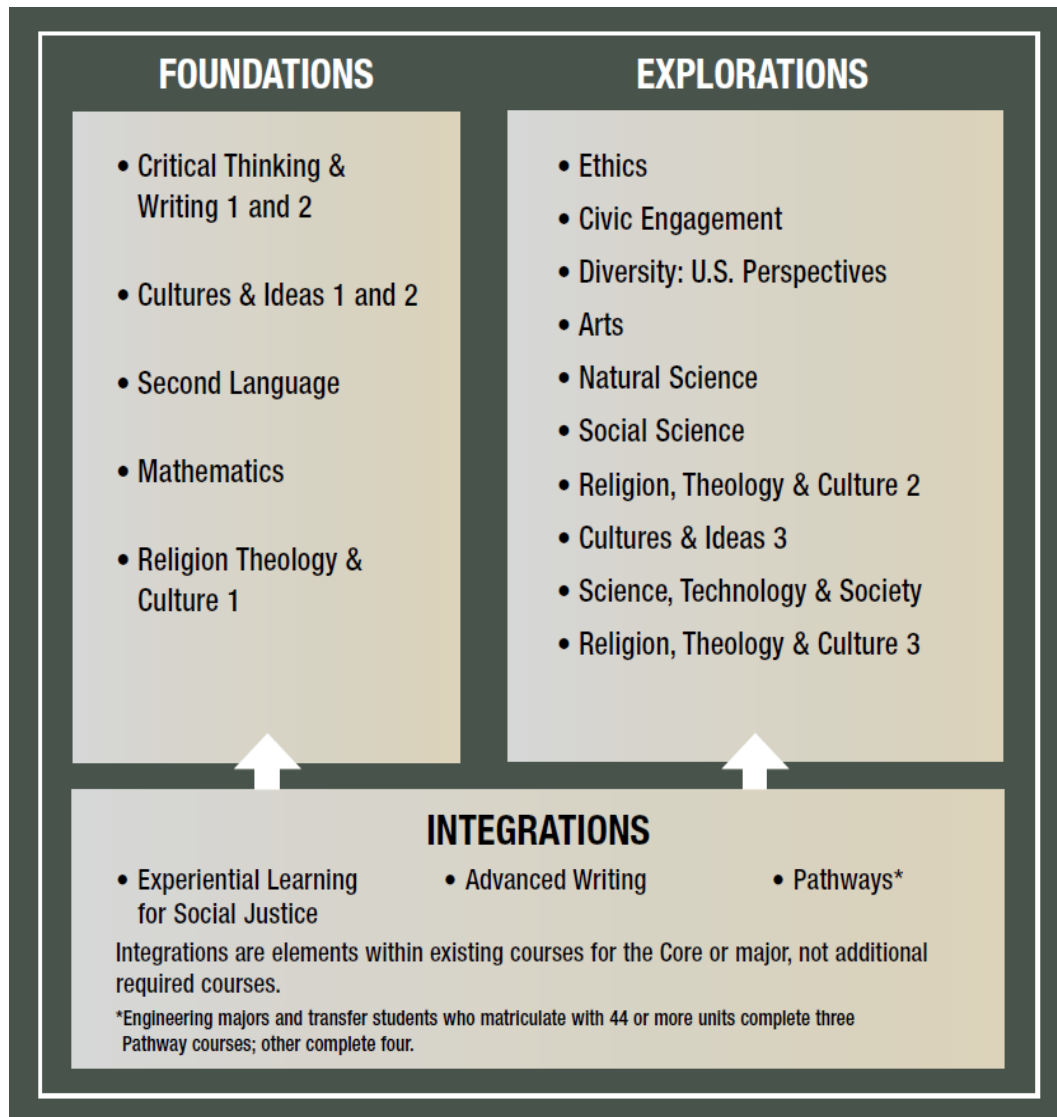
For additional SCU Transfer Admissions information:

<http://www.scu.edu/ugrad/transfer/>

The following information is provided to help transfer students understand and complete additional Santa Clara University Core Curriculum (General Education) and some major requirements.

STRUCTURE OF SANTA CLARA UNIVERSITY GENERAL CORE

Below is a visual representation of Santa Clara University Core Curriculum Requirements. Some Core requirements must be met at SCU: Civic Engagement, Religion, Theology & Culture 2, Science, Technology & Society, Religion, Theology & Culture 3, Experiential Learning for Social Justice, Advanced Writing, and Pathways. Moreover, no courses listed in this guide can fulfill more than one Core requirement.



To learn more about Santa Clara University's Core Curriculum learning goals and objectives, [click here](#).

Note: Current high school students applying as freshmen may not transfer courses to fulfill Core Critical Thinking & Writing 1 and 2 or Cultures & Ideas 1 and 2 in addition to the Core requirements listed above that must be met at SCU.

MAXIMUM NUMBER OF TRANSFER UNITS ACCEPTED:

- Santa Clara University is on a quarter system
 - 1 semester unit is equivalent to 1.5 quarter units
- It is recommended to transfer with 30 or more semester units (44 or more quarter units) of transfer credit (not including AP/IB test credit).
- Students are allowed to transfer in a maximum of one-half of the total quarter units required to graduate in their specific program. The maximum number includes credit transferred from another institution and Advanced Placement and International Baccalaureate test credits.

Academic Division	Minimum number of units required for graduation	Maximum transferrable quarter units	Maximum transferrable Semester Unit equivalency
College of Arts and Sciences	175	87.5	58.33
Leavey School of Business	175	87.5	58.33
School of Engineering:			
<i>Bioengineering</i>	191	95.5	63.66
<i>Civil Engineering</i>	195	97.5	65
<i>Computer Science & Engineering and General Engineering</i>	189	94.5	63
<i>Electrical Engineering</i>	190	95	63.33
<i>Mechanical Engineering</i>	192	96	96
<i>Web Design and Engineering</i>	175	87.5	58.33

TRANSFER CREDIT ACCEPTED:

SCU does not give transfer credit for P/NP, CR, or courses with a grade of C- or lower. Grades are not transferable to SCU, only units. However, awarding of degrees with Latin honors is based on all graded undergraduate courses attempted at SCU and courses taken elsewhere that are used towards the fulfillment of a student's degree. Honors will not be awarded above those merited by the student's record at SCU.

The following courses are not transferrable: most first-year seminars, internships, professional development courses, independent study courses, workshops, most physical education courses, some criminal/administration of justice courses, remedial English and remedial mathematics courses.

Santa Clara University only accepts University of California transferable courses. In addition, SCU does not allow the following Cabrillo College UC transferable courses to transfer for credit: Adaptive Physical Education, Athletics, Culinary Arts and Hospitality Management, Horticulture, and some Kinesiology courses. To view all Cabrillo College's UC transferable courses, visit www.assist.org. UC transferable courses not listed in this guide and not listed above as excluded will be accepted as elective units. After acceptance, students may petition a course that received elective credit to be evaluated, and if approved, fulfill a Core and/or major requirement. Transfer credit evaluations for individual students are completed after admission to SCU. However, the following information will help students evaluate their own course work.

FOUNDATIONS CORE REQUIREMENTS

Critical Thinking & Writing 1 and 2 Core Requirement:

To fulfill the Critical Thinking & Writing 1 and 2 Santa Clara University Core requirements, a student must complete one course from the Critical Thinking & Writing 1 course list, and one course from the Critical Thinking & Writing 2 course list below. If both requirements are not satisfied prior to enrollment at SCU, students who have completed fewer than 30 semester units (or 44 quarter units) of transfer credit will be required to take the 2 quarter course sequence at SCU. Students who transfer with 30 or more semester units (or 44 or more quarter units) of transfer credit and have fulfilled the CTW 1 but not the CTW 2 requirement will be required to complete an additional Advanced Writing course at SCU to satisfy the CTW 2 requirement.

CRITICAL THINKING & WRITING 1: Complete one course from list below.

Admission recommendation: Complete Critical Thinking and Writing 1 Core requirement.

Exceptions for taking a course listed below to satisfy CTW 1: Students placed into the 2nd college level English (any course listed under CTW 2), or who scored a 4 or 5 on the AP English Language exam, may substitute the course placement or the test credit for CTW 1. Students are responsible for submitting the appropriate AP CollegeBoard Report at the time of acceptance to receive such credit.

Cabrillo College Course
ENGL 1A: College Composition
ENGL 1AH: Honors College Composition
ENGL 1AMC: College Composition- Multicultural Emphasis
ENGL 1AMCH: Honors College Composition- Multicultural Emphasis

CRITICAL THINKING & WRITING 2: Complete one course from list below.

Admission recommendation: Complete Critical Thinking and Writing 2 core requirement.

Cabrillo College Course
ENGL 1B: Composition and Literature
ENGL 1BMC: Composition and Literature- Multicultural Emphasis
ENGL 2: Composition and Critical Thinking
ENGL 2H: Honors Composition and Critical Thinking
ENGL 2MC: Composition and Critical Thinking- Multicultural Emphasis
ENGL 2MCH: Honors Composition and Critical Thinking- Multicultural Emphasis
PHIL 49: Intro to Critical Thinking

CULTURES & IDEAS 1 and 2 Core Requirements:

To fulfill the Santa Clara University Cultures & Ideas 1 and 2 Core Curriculum requirements, a student must complete one course from the Cultures and Ideas 1 list, and one course from the Cultures and Ideas 2 course list. If both requirements are not satisfied prior to enrollment at SCU, students who have completed fewer than 30 semester units (or fewer than 44 quarter units) of transfer credit will be required to take the 2 quarter course sequence at SCU. Students who transfer with 30 or more semester units (or 44 or more quarter units) and fulfilled the Cultures & Ideas 1 but not the Cultures & Ideas 2 requirement, will be required to take one course instead of the 2-course sequence at SCU. **Although it is not listed as an admission recommendation, it is advised to fulfill the Cultures and Ideas 1 and 2 course sequence prior to enrollment at SCU.**

CULTURES & IDEAS 1: Complete one course from list below.

Transfer courses cannot fulfill more than one Santa Clara University Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

Cabrillo College Course
AH 11: Ancient Art
AH 11H: Honors Ancient Art
AH 12: Middle Ages- Art/ Mediterranean World and Europe (AD 300-1400)
AH 13: Renaissance to Mid-19 th Century
AH 14: Modern Art
AH 18: Art in America to 1900
AH 20A: Survey of Art from the Prehistoric through Medieval Periods
AH 20B: Survey of Art from the Renaissance to the Present
ENGL 30A: American Literature
ENGL 30B: American Literature
HIST 2A: World History to 1500
HIST 2B: World History- 1500 to Present
HIST 4A: Survey of Western Civilization to 1648
HIST 4B: Survey of Western Civilization- 1648 to Late 20 th Century
HIST 4AH: Honors Survey of Western Civilization to 1648
HIST 4BH: Honors Survey of Western Civilization- 1648 to Late 20 th Century
HIST 15: Recent American History
HIST 17A: United States History to 1865
HIST 17AH: Honors United States History to 1865
HIST 17B: United States History since 1865
HIST 17BH: Honors United States History since 1865
MUS 10M: Historical Survey of Music
PHILO 6: History of Philosophy- Ancient and Medieval
PHILO 7: History of Philosophy- Modern
PS 1: Intro to Government

PS 1H: Honors Intro to Government
PS 5: American Political Thought
WS 1: Intro to Women's Studies

CULTURES & IDEAS 2: Complete one course from list below.

Transfer courses cannot fulfill more than one Santa Clara University Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

Cabrillo College Course
ANTHR 2: Intro to Anthropology- Cultural
ANTHR 8: Anthropology of Religion
AH 16: Art of India and Southeast Asia
AH 17: Art of China, Korea and Japan
AH 19: Art of the Americas
AH 52: Latin American Art
ENGL 40: Latin American Literature
ENGL 45: World Literature
GEOG 2: Cultural Geography
GEOG 4: World Regional Geography
HIST 2A: World History to 1500
HIST 2B: World History- 1500 to Present
HIST 6: History of the Middle East
HIST 16A: Latin American to 1825
HIST 16B: Latin American since 1825
HIST 16C: History of Mexico
HIST 19A: Intro to South and Southeast Asian History
HIST 19B: Intro to Chinese History
MUS 11LA: Latin American Music Appreciation
MUS 12: World Music
PHILO 14: Non-Western Philosophical Traditions
PHILO 15: Patterns in Comparative Religions
PS 2: Comparative Government (<i>recommended for engineering majors only- course is approved to fulfill both C & I 3 and Social Science. Complete a different course for C & I 2</i>)
PS 3: International Relations
SOC 9: Global Society
SPAN 30B: Mexican Civilization and Cultures
TA 8: World Theatre History
WS 2: Intro to Women's Studies- Global Perspectives

SECOND LANGUAGE

Note: Students accepted in the School of Engineering are not required to fulfill the second language requirement. However, if a student is admitted in the School of Engineering and decides to change schools after enrollment, the student will be required to fulfill the second language requirement at SCU.

MATHEMATICS:

Admission recommendation: Complete MATH 5A & 5B

To fulfill the admissions mathematics requirement, complete both MATH 5A and 5B listed below. A score of 4 or 5 on the Advanced Placement Calculus BC exams will satisfy the mathematics Admission recommendations. Engineering majors at SCU require the completion of more than one math course (see table at the end of this document for additional courses to complete per major).

Cabrillo College Course	SCU course equivalency
MATH 5A: Analy Geom and Calc I	MATH 11
MATH 5B: Analy Geom and Calculus II	MATH 13 (If MATH 5A & 5B completed, equates to SCU's MATH 11, 12 & 13)
MATH 5C: Analytic Geom and Calculus III	MATH 14
MATH 6: Intro to Linear Algebra	MATH 53
MATH 7: Intro to Differential Equat	MATH 22
MATH 23: Discrete Mathematics	MATH 51

Note: SCU does not accept remedial mathematics courses. Although a pre-Calculus course is transferrable, it will not fulfill any general core, major or minor requirements.

RELIGION, THEOLOGY & CULTURE 1: Only needed if transferring with less than 30 semester units of transfer credit. Students transferring with more than 30 semester units of transfer credit will be exempt from this requirement.

Students transferring with less than 30 semester units of transfer credit may complete **one course** from the list below to satisfy the RTC 1 Core requirement.

Transfer courses cannot fulfill more than one Santa Clara Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

Cabrillo College Course

No approved Cabrillo course equivalencies at time of publication

Note: The 'transferring with more than 30 semester units (or more than 44 quarter units) of transfer credit' for the RTC 1 exemption rule does not apply to freshmen applicants.

EXPLORATIONS CORE REQUIREMENTS

ETHICS: Complete one course from the list below.

Note: Students accepted in the Leavey School of Business fulfill the Ethics requirement at SCU. Refer to Leavey School of Business Transfer Guide for specific Core and School requirements.

Cabrillo College Course

PHILO 10/10H: Ethics/Honors Ethics

CIVIC ENGAGEMENT: Must be completed at Santa Clara University.

DIVERSITY: US Perspectives: Complete one course from list below.

Transfer courses cannot fulfill more than one Santa Clara Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

Cabrillo College Course

HIST 14: Women in America

HIST 21A: Chicano History to 1865

HIST 21AH: Honors Chicano History to 1865

HIST 21B: Chicano History since 1865

HIST 21BH: Honors Chicano History since 1865

HIST 24: History of California

SOC 3: Intro to Race and Ethnicity

SOC 8: Intro to Latina/o Studies

WS 1: Intro to Women's Studies

ARTS

School of Engineering students will automatically fulfill the Arts by taking required courses within their major at SCU. However, if a student is admitted in the School of Engineering and decides to change schools after enrollment, the student will be required to fulfill the ARTS requirement by taking a course (s) at SCU. Refer to the College of Arts & Sciences or Leavey School of Business transfer guides for a list of courses that could satisfy the Core Arts requirement.

NATURAL SCIENCE (WITH A LAB) Core Requirement: *Complete one course from list below.*

***Admission recommendation: Complete CHEM 1A; PHYS 4A, 4C and/or 4B. .** It is recommended to complete the PHYS series prior to enrollment at SCU.*

(Note: Web Design & Engineering major completes one course to satisfy Natural Science core requirement. It is recommended to complete CHEM 1A)

Engineering majors at SCU require the completion of more than one science course (see table at the end of this document for additional courses to complete per major).

To satisfy the Core Natural Science requirement, the course must have a lab component.

Cabrillo College Course	SCU Course Equivalency
ANTHR 1/1L: Intro to Anthropology-Biological w/ Lab	ANTH 1
ANTHR 1H/1L: Honors Intro to Anthropology- Biological w/ Lab	ANTH 1
ASTRO 3/8A: Solar System Astronomy w/ Observational Astronomy	TRCR 18
ASTRO 4/8A: Stars, Galaxies and the Origin of the Universe w/ Observational Astronomy	TRCR 18
BIO 1A: Cell and Molecular Biology	BIOL 24/25
BIO 1B: Animal Diversity and Evolutionary Principles	BIOL 21
BIO 1C: Plant Biology and Ecological Principles	BIOL 22/23
BIO 4: Human Anatomy	TRCR 18
BIO 5: Human Physiology	TRCR 18
BIO 6: Microbiology	TRCR 18
BIO 11A: General Biology	TRCR 18
BIO 11B: Marine Biology	TRCR 18
BIO 11C: Ecology	TRCR 18
BIO 13A/13AL: Biology of People-Anatomy and Physiology w/ Lab	TRCR 18
CHEM 1A: General Chemistry I	CHEM 11
CHEM 1B: General Chemistry II	CHEM 13 (If CHEM 1A & 1B)

	completed, equates to SCU's CHEM 11, 12 & 13)
CHEM 2: Intro Inorganic Chemistry	TRCR 18
CHEM 5: Quantitative Analysis	TRCR 18
CHEM 10: Concepts of Chemistry	TRCR 18
CHEM 12A/L: Organic Chemistry I w/ Lab	CHEM 31
CHEM 12B/L: Organic Chemistry II w/ Lab	CHEM 33 (If CHEM 12A/L & 12B/L, equates to SCU's CHEM 11, 12 & 13)
GEOG 1/L: Physical Geography w/ Lab	TRCR 18
GEOL 10: Intro to Earth Science	TRCR 18
GEOL 20: California Geology	TRCR 18
METEO 1/1L: Elementary Meteorology w/ Lab	TRCR 18
OCEAN 10: Intro to Oceanography	TRCR 18
PHYS 2A: General Physics I	PHYS 11
PHYS 2B: General Physics II	PHYS 13 (If PHYS 2A & 2B completed, equates to PHYS 11, 12 & 13)
PHYS 4A: Physics for Scientists and Engineers I	PHYS 31
PHYS 4B: Physics for Scientists and Engineers II	PHYS 33
PHYS 4C: Physics for Scientists and Engineers III	PHYS 32
PHYS 4D: Modern Physics	PHYS 34
PHYS 10/10L: Intro to Physics w/ Lab	TRCR 18
PHYS 11: Elementary Physics	TRCR 18

SOCIAL SCIENCE: Complete one course from list below.

Note: Students accepted in the Levey School of Business take ECON 1A or ECON 1B to satisfy the Social Science requirement. Refer to Levey School of Business Transfer Guide for specific core and school requirements.

Transfer courses cannot fulfill more than one Santa Clara Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

Cabrillo College Course
ANTHR 2: Intro to Anthropology- Cultural
ANTHR 3: Intro to Anthropology- Archaeology
ECON 1A: Intro to Macroeconomics
ECON 1B: Intro to Microeconomics
PS 1: Intro to Government
PS 1H: Honors Intro to Government
PS 2: Comparative Government (<i>recommended for engineering majors only- course is approved to fulfill both C & I 3 and Social Science. Complete a different course for C</i>)

<i>& I 2 Core requirement)</i>
PS 3: International Relations
PSYCH 1: General Psychology
PSYCH 6: Intro to Social Psychology
SOC 1: Intro to Sociology- Understanding Society
SOC 1H: Honors Intro to Sociology- Understanding Society
SOC 2: Contemporary Social Problems
SOC 2H: Honors Contemporary Social Problems
SOC 3: Intro to Race and Ethnicity
SOC 5: Intro to Gender
WS 7: Psychology of Women

RELIGION, THEOLOGY & CULTURE 2: Must be completed at Santa Clara University.

CULTURES & IDEAS 3: Complete one course from the list below.

Transfer courses cannot fulfill more than one Santa Clara Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

Note: Students accepted in the Leavey School of Business fulfill the Cultures and Ideas 3 requirement at SCU. Refer to Leavey School of Business Transfer Guide for specific core and school requirements.

Cabrillo College Course
ANTHR 2: Intro to Anthropology- Cultural
ANTHR 8: Anthropology of Religion
AH 16: Art of India and Southeast Asia
AH 17: Art of China, Korea and Japan
AH 19: Art of the Americas
AH 52: Latin American Art
ENGL 40: Latin American Literature
ENGL 45: World Literature
GEOG 2: Cultural Geography
GEOG 4: World Regional Geography
HIST 2A: World History to 1500
HIST 2B: World History- 1500 to Present
HIST 6: History of the Middle East
HIST 16A: Latin American to 1825
HIST 16B: Latin American since 1825
HIST 16C: History of Mexico

HIST 19A: Intro to South and Southeast Asian History
HIST 19B: Intro to Chinese History
MUS 11LA: Latin American Music Appreciation
MUS 12: World Music
PHILO 14: Non-Western Philosophical Traditions
PHILO 15: Patterns in Comparative Religions
PS 2: Comparative Government (<i>recommended for engineering majors only- course is approved to fulfill both C& I 3 and Social Science. Complete a different course for C & I 2 Core requirement</i>)
PS 3: International Relations
SOC 9: Global Society
SPAN 30B: Mexican Civilization and Cultures
TA 8: World Theatre History
WS 2: Intro to Women's Studies- Global Perspectives

SCIENCE, TECHNOLOGY & SOCIETY: Must be completed at Santa Clara University.

RELIGION, THEOLOGY & CULTURE 3: Must be completed at Santa Clara University.

INTEGRATIONS CORE REQUIREMENTS

EXPERIENTIAL LEARNING FOR SOCIAL JUSTICE: Must be completed at Santa Clara University.

ADVANCED WRITING: Must be completed at Santa Clara University

PATHWAYS: Must be completed at Santa Clara University.

Transfer students who matriculate with fewer than 30 semester units (or 44 quarter units) of transfer credit must take 4 courses to fulfill the pathways requirement. However, students transferring in with more than 30 semester units (or more than 44 quarter units) will complete 3 courses to fulfill the Core Pathways requirement.

ADDITIONAL SCHOOL OF ENGINEERING REQUIREMENTS PER MAJOR

The following courses allow students to complete additional School of Engineering requirements.

BIOENGINEERING MAJOR REQUIREMENTS

Cabrillo College Course	SCU course equivalency
Natural Science:	
** BIO 1B: Animal Diversity and Evolutionary Prin	BIOL 21
** BIO 1A: Cell and Molecular Biology	BIOL 24/25
CHEM 1A: General Chemistry I	CHEM 11
CHEM 1B: General Chemistry II	CHEM 13 (If CHEM 1A & 1B completed, equates to SCU's CHEM 11,12, 13 sequence)
CHEM 12A/L: Organic Chemistry I w/ Lab	CHEM 31
CHEM 12B/L: Organic Chemistry II w/ Lab	CHEM 33 (If CHEM 12A & 12B completed, equates to SCU's CHEM 31, 32, 33 sequence)
PHYS 4A: Physics for Scientists and Engineers I	PHYS 31
PHYS 4B: Physics for Scientists and Engineers II	PHYS 33
PHYS 4C: Physics for Scientists and Engineers III	PHY 32
Engineering:	
ENGR 5: Engineering as a Profession	ENGR 1 (optional)
ENGR 15: Circuits	ELEN 50/50L
ENGR 25: Graphics and Design	MECH 10/10L
ENGR 30: Computer Applications in Engr	COEN 44/44L
Mathematics:	
MATH 5A: Analytic Geometry and Calculus I	MATH 11
MATH 5B: Analytic Geometry and Calculus II	MATH 13 (If Math 5A & 5B completed, equates to SCU's MATH 11, 12, 13)
MATH 5C: Analytic Geom and Calculus III	Math 14
MATH 7: Intro to Differential Equations	Math 22

**** Complete Cabrillo BIO 1B & BIO 1C (Plant Biology and Ecological Principles course) if a student is only interested in majoring in the Bioengineering Medical-device track. Otherwise, complete BIO 1B and BIO 1A.**

CIVIL ENGINEERING MAJOR REQUIREMENTS

Cabrillo College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General Chemistry I	CHEM 11
PHYS 4A: Physics for Scientists and Engineers I	PHYS 31
PHYS 4B: Physics for Scientists and Engineers II	PHYS 33
PHYS 4C: Physics for Scientists and Engineers III	PHYS 32
Engineering:	
ENGR 5: Engineering as a Profession	ENGR 1 (optional)
ENGR 35: Statics	CENG 41
ENGR 15: Circuits	ELEN 50/50L
ETECH 24: Intro to AutoCAD	CENG 7/7L
ENGR 1A: Surveying	CENG 10
ENGR 30: Computer Applications in Engineering	CENG 15
<i>No approved course equivalency at time of publication</i>	CENG 20
<i>No approved course equivalency at time of publication</i>	CENG 44A/44B
ENGR 45: Engineering Materials	CENG 115
Mathematics:	
MATH 5A: Analytic Geometry and Calculus I	MATH 11
MATH 5B: Analytic Geometry and Calculus II	MATH 13 (If Math 5A & 5B completed, equates to SCU's MATH 11, 12, 13)
MATH 5C: Analytic Geom and Calculus III	MATH 14
MATH 7: Intro to Differential Equations	MATH 22

COMPUTER SCIENCE & ENGINEERING

Cabrillo College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General Chemistry I	CHEM 11
PHYS 4A: Physics for Scientists and Engineers I	PHYS 31
PHYS 4B: Physics for Scientists and Engineers II	PHYS 33
PHYS 4C: Physics for Scientists and Engineers III	PHYS 32
Engineering:	
ENGR 5: Engineering as a Profession	ENGR 1 (optional)
ENGR 15: Circuits	ELEN 50/50L
<i>CIS 31 OR CIS 32 OR CS 19</i>	COEN 10/10L
<i>No approved course equivalency at time of publication</i>	COEN 11/11L
CS 21: Introduction to Data Structures and Algorithms	COEN 12/12L
ENGR 30: Computer Applications in Engr	COEN 44/44L
Mathematics:	
MATH 5A: Analytic Geometry and Calculus I	MATH 11
MATH 5B: Analytic Geometry and Calculus II	MATH 13 (If Math 5A & 5B completed, equates to SCU's MATH 11, 12, 13)
MATH 5C: Analytic Geom and Calculus III	MATH 14
MATH 7: Intro to Differential Equations	MATH 22
MATH 6: Intro to Linear Algebra	MATH 53
MATH 23: Discrete Mathematics OR CS 23: Discrete	COEN 19

Mathematics	
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ELECTRICAL ENGINEERING

Cabrillo College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General Chemistry I	CHEM 11
BIO 1B: Animal Diversity and Evolutionary Principles OR MATH 6: Intro to Linear Algebra	BIOL 21 OR MATH 53
PHYS 4A: Physics for Scientists and Engineers I	PHYS 31
PHYS 4B: Physics for Scientists and Engineers II	PHYS 33
PHYS 4C: Physics for Scientists and Engineers III	PHYS 32
PHYS 4C: Physics for Scientists and Engineers III	PHYS 32
PHYS 4D: Modern Physics	PHYS 34
Engineering:	
ENGR 5: Engineering as a Profession	ENGR 1 (optional)
ENGR 15: Circuits	ELEN 50/50L
ENGR 35: Statics	CENG 41
CS 21: Introduction to Data Structures and Algorithms	COEN 12/12L
ENGR 30: Computer Applications in Engr	COEN 44/44L
Mathematics:	
MATH 5A: Analytic Geometry and Calculus I	MATH 11
MATH 5B: Analytic Geometry and Calculus II	MATH 13 (If Math 5A & 5B completed, equates to SCU's MATH 11, 12, 13)
MATH 5C: Analytic Geom and Calculus III	MATH 14
MATH 7: Intro to Differential Equations	MATH 22

GENERAL ENGINEERING

Cabrillo College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General Chemistry I	CHEM 11
PHYS 4A: Physics for Scientists and Engineers I	PHYS 31
PHYS 4B: Physics for Scientists and Engineers II	PHYS 33
PHYS 4C: Physics for Scientists and Engineers III	PHYS 32
Engineering:	
ENGR 5: Engineering as a Profession	ENGR 1 (optional)
ENGR 15: Circuits	ELEN 50/50L
ENGR 25: Graphics and Design	MECH 10/10L
<i>No approved course equivalency at time of publication</i>	MECH 11
ENGR 45: Engineering Materials	MECH 15
ENGR 35: Statics	CENG 41
<i>CIS 31 OR CIS 32 OR CS 19</i>	COEN 10/10L

Mathematics:	
MATH 5A: Analytic Geometry and Calculus I	MATH 11
MATH 5B: Analytic Geometry and Calculus II	MATH 13 (If Math 3A & 3B completed, equates to SCU's MATH 11, 12, 13)
MATH 5C: Analytic Geom and Calculus III	MATH 14
MATH 7: Intro to Differential Equations	MATH 22

MECHANICAL ENGINEERING

Cabrillo College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General Chemistry I	CHEM 11
PHYS 4A: Physics for Scientists and Engineers I	PHYS 31
PHYS 4B: Physics for Scientists and Engineers II	PHYS 33
PHYS 4C: Physics for Scientists and Engineers III	PHYS 32
Engineering:	
ENGR 5: Engineering as a Profession	ENGR 1 (optional)
ENGR 15: Circuits	ELEN 50/50L
ENGR 25: Graphics and Design	MECH 10/10L
<i>No approved course equivalency at time of publication</i>	MECH 11
ENGR 45: Engineering Materials	MECH 15
ENGR 35: Statics	CENG 41
<i>No approved course equivalency at time of publication</i>	CENG 43
ENGR 30: Computer Applications in Engr	COEN 44/44L
Mathematics:	
MATH 5A: Analytic Geometry and Calculus I	MATH 11
MATH 5B: Analytic Geometry and Calculus II	MATH 13 (If Math 3A & 3B completed, equates to SCU's MATH 11, 12, 13)
MATH 5C: Analytic Geom and Calculus III	MATH 14
MATH 7: Intro to Differential Equations	MATH 22

WEB DESIGN AND ENGINEERING

Cabrillo College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General Chemistry I	CHEM 11
Engineering:	
ENGR 5: Engineering as a Profession	ENGR 1 (optional)
<i>CIS 31 OR CIS 32 OR CS 19</i>	COEN 10/10L
<i>No approved course equivalency at time of publication</i>	COEN 11/11L
CS 21: Intro to Data Structures & Algorithms	COEN 12/12L
Mathematics:	
MATH 5A: Analytic Geometry and Calculus I	MATH 11
MATH 5B: Analytic Geometry and Calculus II	MATH 13 (If Math 3A & 3B completed, equates to SCU's MATH 11, 12, 13)
MATH 5C: Analytic Geom and Calculus III	MATH 14

Additional notes:

- Consult the current Undergraduate Bulletin for Advanced Placement and International Baccalaureate test credit equivalencies at:
<http://www.scu.edu/academics/bulletins/undergraduate/>
- Consult the Santa Clara University Undergraduate Bulletin for additional requirements in a major. The Bulletin can be found at:
<http://www.scu.edu/academics/bulletins/undergraduate/>
- Once students are admitted to Santa Clara University, they must abide by the policies, regulations and other requirements outlined in the Undergraduate Bulletin for their cohort year.
- **Per SCU policy, transfer credit earned after enrollment cannot satisfy University Core, major or minor requirements.** Refer to the SCU Undergraduate Bulletin for additional transfer credit restrictions at:
<http://www.scu.edu/academics/bulletins/undergraduate/>
- This guide is to be used by transfer applicants, not freshmen applicants. Admitted freshmen must complete the following Core requirements at SCU: Critical Thinking & Writing 1 and 2; Cultures & Ideas 1 and 2; Religion Theology & Culture 1 (unless transfer credit for a course was preapproved to fulfill the Core RTC 1 requirement); Civic Engagement; Religion, Theology & Culture 2 and 3 (taken in sequence order after RTC 1 is completed); Science, Technology & Society; Experiential Learning for Social Justice; Advanced Writing; and four Pathway courses.

For questions regarding transfer credit or AP/IB test credit, contact Sheli Whiting, Transfer Record Analyst at: swhiting@scu.edu.

Disclosure: The information contained in this document is to be used as a guide for the purpose of admissions into Santa Clara University. This information is reviewed periodically and the date of the most recent update is noted in the bottom right-hand corner of this guide. Students are responsible to make sure that any courses taken are listed on this guide at the time of actual enrollment. Transferability is not guaranteed and is up to our discretion, largely based upon the Santa Clara University core curriculum in effect at the time of admission.

Santa Clara University

School of Engineering

TRANSFER CREDIT PLANNER CHECK-SHEET

*Admission recommendations

University Core Requirement Course Completed or IP (In Progress)

FOUNDATIONS

- Critical Thinking & Writing 1*
Critical Thinking & Writing 2*
Cultures & Ideas 1
Cultures & Ideas 2
Mathematics* Satisfied within major requirements at SCU
Religion Theology & Culture 1
(Students transferring with more than 30 semester units of transfer credit will be exempt from this requirement.)

EXPLORATIONS

- Ethics
Civic Engagement Must be completed at Santa Clara
Diversity: U.S. Perspectives
Arts Satisfied within major requirements at SCU
Natural Science w/Lab* Satisfied within major requirements at SCU
Social Science
Religion, Theology & Culture 2 Must be completed at Santa Clara
Cultures & Ideas 3
Science, Technology & Society Must be completed at Santa Clara
Religion, Theology & Culture 3 Must be completed at Santa Clara

INTEGRATIONS

- E LSJ Must be completed at Santa Clara University
Advanced Writing Must be completed at Santa Clara University
Pathways Must be completed at Santa Clara University

SCHOOL OF ENGINEERING REQUIREMENTS

(Refer to the individual major charts within this transfer guide)

Engineering School Requirement Course completed or IP (In Progress)

MATHEMATICS*

- Calculus and Analytic Geometry I*
Calculus and Analytic Geometry II*
Intermediate Calculus
Differential Equations

NATURAL SCIENCE*

- General Chemistry*
General Chemistry (2nd sem)
Engineering Phys *
Engineering Phys*
Engineering Phys*

ADDITIONAL ENGINEERING MAJOR Requirements

- Intro to Engineering (OPTIONAL)
Intro to Circuit Analysis
Engineering Graphics
Computer Programming
Computer Programming

Total Semester UNITS

TOTAL SEMESTER UNITS x 1.5 = TOTAL QUARTER UNITS

Note: Refer to the chart listing the maximum number of units allowed to transfer (including AP/IB test credit) per major.