

Santa Clara University

Undergraduate

School of Engineering

American River 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 400 and MATH 401
- One natural science: CHEM 400
- Two calculus-based physics courses: PHYS 410 and PHYS 421
 - Web Design Engineering majors are not required to complete CHEM 400, PHYS 410 & 421. Complete one course in the Natural Science list.

- GPA 3.5

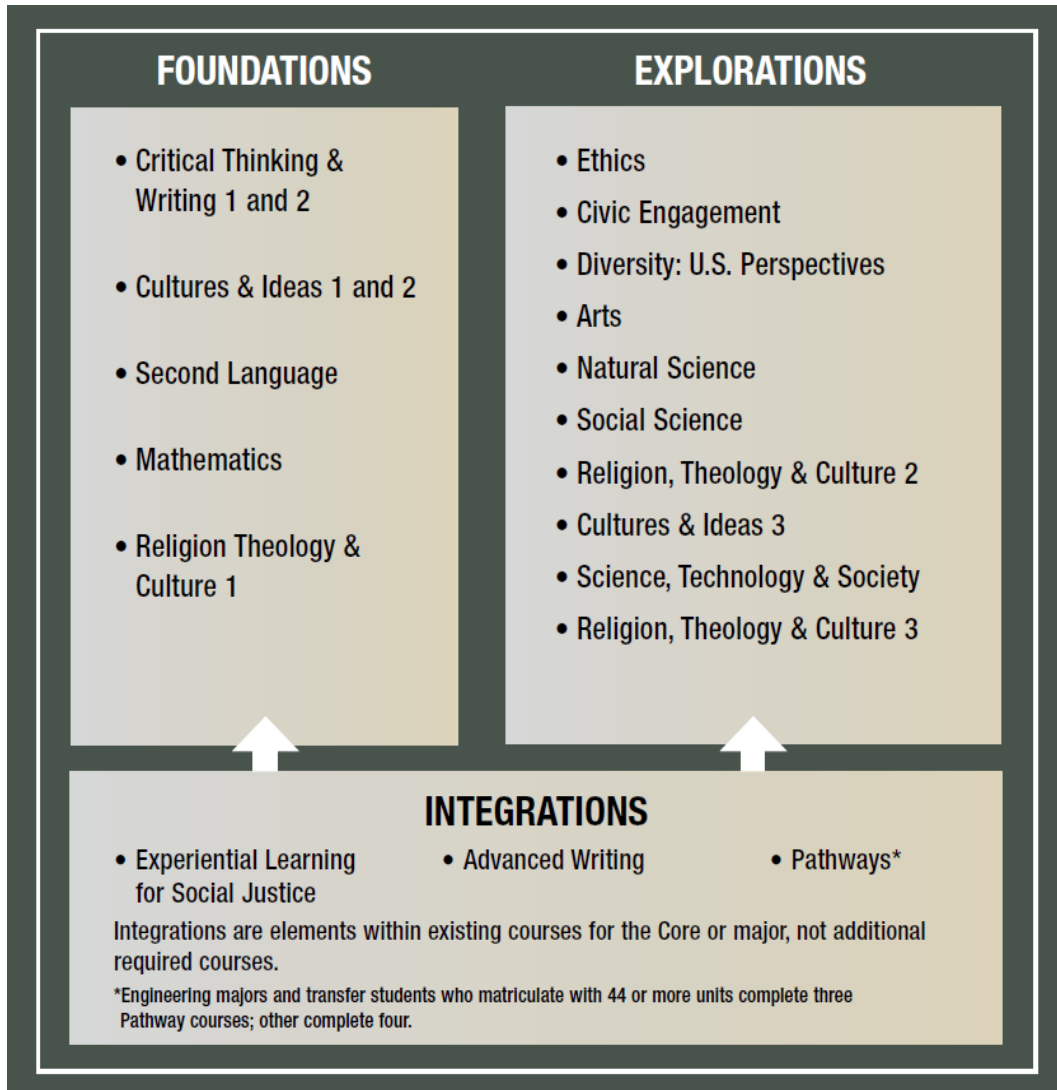
For additional SCU Transfer Admissions information:

<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, most 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 American River College UC transferable courses to transfer for credit: ESL, Fashion Careers, Horticulture, Human Career Development, most Health Education and Kinesiology, Fitness courses, Personal Activity, Sport, and Team activity courses. To view all American River 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. 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 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, 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.

American River College Course
ENGWR 300: College Composition
ENGRW 480: Honors College Composition

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

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

American River College Course
ENGWR 301: College Composition and Literature
ENGWR 302: Advanced Composition and Critical Thinking
ENGRW 481: Honors College Composition and Literature
ENGRW 482: Honors Advanced Comp and Critical Thinking
PHIL 320: Logic and 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.

American River College Course
ADMJ 300: Intro to Admin of Justice
ARTH 302: Art: Stone Age through the Middle Ages
ARTH 308: Renaissance Tradition in Art
ARTH 310: Modern Art
BUS 340: Business Law
ENGLT 320: American Literature
ENGLT 321: American Literature
HIST 300: History of Western Civilization
HIST 302: History of Western Civilization
HIST 305: Women in Western Civilization
HIST 307: History of World Civilizations to 1500
HIST 308: History of World Civilizations, 1500 to Present
HIST 310: History of the United States
HIST 311: History of the United States
HIST 318: American Intellectual and Cultural History
HIST 340: History of California through 1879
HIST 341: History of California: 1879 to Present
HIST 367: History of Russia
HIST 373: History of Mexico
HIST 480: History of Western Civilization- Honors
HIST 481: History of Western Civilization- Honors
HIST 483: History of United States- Honors
HIST 484: History of United States- Honors
HUM 300: Classical Humanities
HUM 310: Modern Humanities
HUM 330: Humanities of the Americas
HUM 481: Honors Classical Humanities

HUM 482: Honors Modern Humanities
PHIL 330: History of Classical Philosophy
PHIL 331: History of Modern Philosophy
PHIL 354: Religions of the West
POLS 301: Intro to Government- United States
POLS 304: Introduction to Government: California
POLS 330: Constitutional Rights
POLS 332: Law and Society
MUFHL 310: Survey of Music History and Literature
MUFHL 311: Survey of Music History and Literature
SOC 301: Social Problems
SOC 320: Minorities in America
SOC 342: Gender Relations in American Society
SOC 350: Sociology of Popular Culture
TA 302: History and Theory of the Theatre I
TA 303: History and Theory of the Theatre II

CULTURES & IDEAS 2: 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.

American River College Course
ANTH 310: Cultural Anthropology
ANTH 315: Cultures in Focus
ANTH 320: Intro to Archaeology and World Prehistory
ANTH 330: Magic, Witchcraft and Religion
ANTH 481: Honors Cultural Anthropology
ARTH 322: Art History of the Non-Western World
ARTH 333: Intro to Islamic Art
ARTH 334: International Contemporary Art
ENGLT 340: World Literature
ENGLT 341: World Literature
ENGLT 345: Mythologies of the World
GEOG 310: Human Geography: Exploring Earth's Cultural Landscapes
GEOG 320: World Regional Geography
HIST 307: History of World Civilizations to 1500
HIST 308: History of World Civilizations, 1500 to Present
HIST 364: Asian Civilization
HIST 365: Asian Civilization
HUM 302: Global Humanities:
HUM 320: Asian Humanities
HUM 326: Middle Eastern Humanities
MUFHL 330: World Music
NUTRI 310: Cultural Foods of the World
PHIL 353: Religions of the Far East
POLS 302: Intro to Government: Foreign
POLS 310: Intro to International Relations

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 400 and MATH 401

To fulfill the admissions mathematics requirement, complete both MATH 3A and 3B 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).

American River College Course	Equates to	SCU Course
MATH 400: Calculus I		MATH 11
MATH 401: Calculus II		MATH 13 (If MATH 400 & 401 completed, equates to SCU's MATH 11, 12 & 13)
MATH 402: Calculus III		MATH 14
MATH 410: Intro to Linear Algebra		MATH 53
MATH 420: Differential Equations		MATH 22

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.

American River College Course
HUM 360: Intro to the Old Testament (Hebrew)
HUM 365: Intro to the new Testament

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.

American River College Course
PHIL 310: Introduction to Ethics
PHIL 315: Contemporary Moral Issues

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.

American River College Course
HIST 318: American Intellectual and Cultural History
HIST 320: History of the United States: African-American Emphasis
HIST 323: History of the United States: The American Indian Experience
HIST 325: History of Asian/ Pacific Americans
HIST 327: History of the Chicano/Mexican American
HIST 330: Women in American History
SOC 301: Social Problems
SOC 320: Minorities in America
SOC 335: Sociology of Aging
SOC 342: Gender Relations in American Society
TA 306: Diversity in American Drama (1960 to Present)
TA 318: Diversity in American Film

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 Arts core requirement.

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

Admission recommendation: *Complete CHEM 400; PHYS 410 & 421.*

(Note: Web Design & Engineering major completes one course to satisfy Natural Science core requirement. It is recommended to complete CHEM400)

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

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).

When an ARC course does not have a direct SCU course equivalent, but fulfills the Natural Science Core requirement, a transfer credit (TRCR) code of TRCR 18 is assigned.

American River College Course	Equates to	SCU Course Equivalency
ANTH 300/301: Physical Anthro w/ Lab		ANTH 1
ASTR 300/400: Intro to Astronomy/ Lab		TRCR 18: Core Natural Science
ASTR 310/400: The Solar System/ Lab		TRCR 18: Core Natural Science
ASTR 320/400: Stars, Galaxies and Cosmology/ Lab		TRCR 18: Core Natural Science
BIOL 303: Survey of Biology		TRCR 18: Core Natural Science
BIOL 305: Natural History		TRCR 18: Core Natural Science
BIOL 310: General Biology		TRCR 18: Core Natural Science
BIOL 370: Intro to Marine Environment		TRCR 18: Core Natural Science
BIOL 400: Principles of Biology		BIOL 21
BIOL 410: Principles of Botany		BIOL 22/23
BIOL 420: Principles of Zoology		BIOL 23/24 (If BIOL 400, 410 & 420 completed, equates to SCU's BIOL 21, 22, 23, 24)
BIOL 430: Anatomy and Physiology		TRCR 18: Core Natural Science
BIOL 431: Anatomy and Physiology		TRCR 18: Core Natural Science
BIOL 440: General Microbiology		TRCR 18: Core Natural Science
BIOL 442: General Bacteriology		TRCR 18: Core Natural Science
BIOL 482: Honors Marine Biology		TRCR 18: Core Natural Science
CHEM 305: Intro to Chemistry		TRCR 18: Core Natural Science
CHEM 306: Intro to Chemistry		TRCR 18: Core Natural Science
CHEM 325: Pollution, Poisons and Planet Earth		TRCR 18: Core Natural Science
CHEM 400: General Chemistry		CHEM 11
CHEM 401: General Chemistry		CHEM 13
CHEM 410: Quantitative Analysis		TRCR 18: Core Natural Science
CHEM 420: Organic Chemistry		CHEM 31
CHEM 421: Organic Chemistry		CHEM 32
CHEM 423: Organic Chemistry		CHEM 33
GEOG 300/301: Physical Geography:		TRCR 18: Core Natural Science

Exploring Earth's Environmental Systems w/ Lab		
GEOG 308/309: Intro to Oceanography w/ Lab		TRCR 18: Core Natural Science
GEOL 300/301: Physical Geol w/ Lab		CENG 20/20L
GEOL 305/306: Earth Science w/ Lab		TRCR 18: Core Natural Science
GEOL 310/311: Historical Geology w/ Lab		TRCR 18: Core Natural Science
GEOL 330/331: Intro to Oceanography w/ Lab		TRCR 18: Core Natural Science
PS 300/301: Intro to Phys Sci w/ Lab		TRCR 18: Core Natural Science
PHYS 310/312: Conc Physics w/ Lab		TRCR 18: Core Natural Science
PHYS 350: General Physics		PHYS 11
PHYS 360: General Physics		PHYS 13 (If PHYS 350 & 360 completed, equates to SCU's PHYS 11, 12 & 13)
PHYS 410: Mechanics of Solids and Fluids		PHYS 31
PHYS 421: Electricity and Magnetism		PHYS 33 (If PHYS 410 & 421 completed, equates to PHYS 31, 32 & 33)
PHYS 431: Heat, Waves, Light and Modern Physics		PHYS 32 (If PHYS 410 & 421 completed, equates to SCU's PHYS 31, 32, 33 & 34)

SOCIAL SCIENCE: Complete one course from list below.

Note: Students accepted in the Leavey School of Business take ECON 302 or ECON 304 to satisfy the Social Science requirement. Refer to Leavey 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.

American River College Course
ANTH 310: Cultural Anthropology
ANTH 320: Intro to Archaeology and World Prehistory
ANTH 330: Magic, Witchcraft, and Religion
ANTH 333: American Indians of California
ECON 302: Principles of Macroeconomics
ECON 304: Principles of Microeconomics
GERON 300: Sociology of Aging (same as SOC 335)
POLS 302: Intro to Government: Foreign
POLS 310: Intro to International Relations
PSYC 300: General Principles
PSYC 320: Social Psychology
PSYC 361: Psychology of Women in a Multicultural Society
PSYC 480: Honors General Principles
SOC 300: Intro Sociology

SOC 301: Social Problems
SOC 335: Sociology of Aging (same as GERON 300)
SOC 350: Sociology of Popular Culture

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.

American River College Course
ANTH 310: Cultural Anthropology
ANTH 315: Cultures in Focus
ANTH 320: Intro to Archaeology and World Prehistory
ANTH 330: Magic, Witchcraft and Religion
ANTH 481: Honors Cultural Anthropology
ARTH 322: Art History of the Non-Western World
ARTH 333: Intro to Islamic Art
ARTH 334: International Contemporary Art
ENGLT 340: World Literature
ENGLT 341: World Literature
ENGLT 345: Mythologies of the World
GEOG 310: Human Geography: Exploring Earth's Cultural Landscapes
GEOG 320: World Regional Geography
HIST 307: History of World Civilizations to 1500
HIST 308: History of World Civilizations, 1500 to Present
HIST 364: Asian Civilization
HIST 365: Asian Civilization
HUM 302: Global Humanities:
HUM 320: Asian Humanities
HUM 326: Middle Eastern Humanities
MUFHL 330: World Music
NUTRI 310: Cultural Foods of the World
PHIL 353: Religions of the Far East
POLS 302: Intro to Government: Foreign
POLS 310: Intro to International Relations

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) 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

American River College Course	SCU course equivalency
Natural Science:	
BIOL 400: Principles of Biology	BIOL 21
BIOL 410: Principles of Botany	BIOL 22/23
BIOL 420: Principles of Zoology	BIOL 23/24
<i>No approved ARC course equivalency</i>	BIOL 25
CHEM 400: General Chemistry	CHEM 11
CHEM 401: General Chemistry	CHEM 13 (If CHEM 400 & 401 completed, equates to SCU's CHEM 11,12, 13 sequence)
CHEM 420: Organic Chemistry	CHEM 31
CHEM 421: Organic Chemistry	CHEM 32

CHEM 423: Organic Chemistry	CHEM 33
PHYS 410: Engineering Physics	PHYS 31
PHYS 421: Engineering Physics	PHYS 33 (If PHYS 410 & 421 completed, equates to SCU PHYS 31,32,33 sequence)
Engineering:	
ENGR 300: Introduction to Engineering	ENGR 1
ENGR 401: Intro to Electrical Circuits & Devices	ELEN 50/50L
ENGR 312: Engineering Graphics	MECH 10/10L
<i>No ARC course equivalency</i>	COEN 44
Mathematics:	
MATH 400: Calculus I	MATH 11
MATH 401: Calculus II	MATH 13 (If Math 400 & 401 completed, equates to SCU's MATH 11, 12, 13)
MATH 402: Calculus III	Math 14
MATH 420: Differential Equations	Math 22

CIVIL ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 400: General Chemistry	CHEM 11
PHYS 410: Engineering Physics	PHYS 31
PHYS 421: Engineering Physics	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
GEOL 300/301: Physical Geology + Lab	GEOL 20/20L
Engineering:	
ENGR 310: Engineering Survey	CENG 10/10L
ENGR 300: Introduction to Engineering	ENGR 1
ENGR 401: Intro to Electrical Circuits & Devices	ELEN 50/50L
ENGR 312: Engineering Graphics	CENG 7/7L
ENGR 420: Statics	CENG 41
Mathematics:	
MATH 400: Calculus I	MATH 11
MATH 401: Calculus II	MATH 13 (If Math 400 & 401 completed, equates to SCU's MATH 11, 12, 13)
MATH 402: Calculus III	MATH 14
MATH 420: Differential Equations	MATH 22

COMPUTER SCIENCE & ENGINEERING

American River College Course	SCU course equivalency
Natural Science:	
CHEM 400: General Chemistry	CHEM 11
PHYS 410: Engineering Physics	PHYS 31
PHYS 421: Engineering Physics	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
Engineering:	
ENGR 300: Introduction to Engineering	ENGR 1
ENGR 401: Intro to Electrical Circuits & Devices	ELEN 50/50L

CISP 400 or 401: Object Oriented Programming	COEN 11/11L
CISP 430: Data Structures	COEN 12/12L
CISP 440: Discrete Structures	COEN 19
Mathematics:	
MATH 400: Calculus I	MATH 11
MATH 401: Calculus II	MATH 13 (If Math 3A & 3B completed, equates to SCU's MATH 11, 12, 13)
MATH 402: Calculus III	MATH 14
MATH 420: Differential Equations	MATH 22
MATH 410: Linear Algebra	MATH 53

ELECTRICAL ENGINEERING

American River College Course	SCU course equivalency
Natural Science:	
BIOL 400: Principles of Biology	BIOL 21
CHEM 400: General Chemistry	CHEM 11
CHEM 401: General Chemistry	CHEM 13 (If CHEM 400 & 401 completed, equates to SCU's CHEM 11,12, 13 sequence)
PHYS 410: Engineering Physics	PHYS 31
PHYS 421: Engineering Physics	PHYS 33 (If PHYS 410 & 421 completed, equates to SCU PHYS 31,32,33 sequence)
PHYS 431: Heat, Waves, Lgt & Modern Physics	PHYS 34
Engineering:	
ENGR 300: Introduction to Engineering	ENGR 1
ENGR 401: Intro to Electrical Circuits & Devices	ELEN 50/50L
ENGR 420: Statics	CENG 41
CISP 400 or 401: Object Oriented Programming	COEN 11/11L
CISP 430: Data Structures	COEN 12/12L
Mathematics:	
MATH 400: Calculus I	MATH 11
MATH 401: Calculus II	MATH 13 (If Math 400 & 401 completed, equates to SCU's MATH 11, 12, 13)
MATH 402: Calculus III	MATH 14
MATH 420: Differential Equations	MATH 22

GENERAL ENGINEERING

American River College Course	SCU course equivalency
Natural Science:	
CHEM 400: General Chemistry	CHEM 11
PHYS 410: Engineering Physics	PHYS 31
PHYS 421: Engineering Physics	PHYS 33 (If PHYS 410 & 421 completed, equates to SCU PHYS 31,32,33 sequence)
Engineering:	
ENGR 300: Introduction to Engineering	ENGR 1
ENGR 401: Intro to Electrical Circuits & Devices	ELEN 50/50L
ENGR 312: Engineering Graphics	MECH 10/10L
ENGR 320: Manufacturing Processes	MECH 11

ENGR 413: Properties of Materials	MECH 15/15L
ENGR 420: Statics	CENG 41
CISP 360: Intro to Structured Programming	COEN 10/10L
Mathematics:	
MATH 400: Calculus I	MATH 11
MATH 401: Calculus II	MATH 13 (If Math 400 & 401 completed, equates to SCU's MATH 11, 12, 13)
MATH 402: Calculus III	MATH 14
MATH 420: Differential Equations	MATH 22

MECHANICAL ENGINEERING

American River College Course	SCU course equivalency
Natural Science:	
CHEM 400: General Chemistry	CHEM 11
PHYS 410: Engineering Physics	PHYS 31
PHYS 421: Engineering Physics	PHYS 33 (If PHYS 410 & 421 completed, equates to SCU PHYS 31,32,33 sequence)
Engineering:	
ENGR 300: Introduction to Engineering	ENGR 1
ENGR 401: Intro to Electrical Circuits & Devices	ELEN 50/50L
ENGR 312: Engineering Graphics	MECH 10/10L
ENGR 320: Manufacturing Processes	MECH 11
ENGR 413: Properties of Materials	MECH 15/15L
ENGR 420: Statics	CENG 41
CISP 360: Intro to Structured Programming	COEN 44/44L
Mathematics:	
MATH 400: Calculus I	MATH 11
MATH 401: Calculus II	MATH 13 (If Math 400 & 401 completed, equates to SCU's MATH 11, 12, 13)
MATH 402: Calculus III	MATH 14
MATH 420: Differential Equations	MATH 22

WEB DESIGN AND ENGINEERING

American River College Course	SCU course equivalency
Natural Science:	
CHEM 400: General Chemistry (<i>Recommended</i>)	CHEM 11
Engineering:	
ENGR 300: Introduction to Engineering	ENGR 1
CISP 400 or 401: Object Oriented Programming	COEN 11/11L
CISP 430: Data Structures	COEN 12/12L
Mathematics:	
MATH 400: Calculus I	MATH 11
MATH 401: Calculus II	MATH 13 (If Math 400 & 401 completed, equates to SCU's MATH 11, 12, 13)
MATH 4A: 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.
- **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
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
Natural Science W/Lab* Satisfied within major requirements
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

- ELSJ 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 on page 12 of 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 - Mech *
Engineering Phys- Electr & Mag*
Modern Physics

ADDITIONAL ENGINEERING MAJOR Requirements

- Intro to Engineering
Intro to Circuit Analysis
Engineering Graphics
Computer Programming I
Computer Programming II

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.