Santa Clara University

School of Engineering

For use by Transfer Applicants

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 30 or more semester units (or 44 or more quarter units) of transfer credit will be exempt from completing one RTC Core 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

- ▪ ***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 School of Engineering website for individual major requirements at: https://www.scu.edu/engineering/undergraduate/degree-programs/

Engineering School Requirement ***Course completed or IP (In Progress)***

MATHEMATICS*

- ☐ **Calculus and Analytic Geometry I*** _____
- ☐ **Calculus and Analytic Geometry II*** _____
- ☐ **Calculus and Analytic Geom III/IV** _____
- ☐ **Differential Equations** _____
- ☐ _____ _____

NATURAL SCIENCE*

- ☐ **General Chemistry*** _____
- ☐ **Physics w/ Calculus *** _____
- ☐ **Physics w/ Calculus *** _____
- ☐ **Physics w/ Calculus *** _____
- ☐ _____ _____

ADDITIONAL ENGINEERING MAJOR Requirements

- ***Bioengineering***
- ***Civil Engineering***
- ***Computer Science and Engineering***
- ***Electrical & Computer Engineering***
- ***Electrical Engineering***
- ***General Engineering***
- ***Mechanical Engineering***
- ***Web Design and Engineering***

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 located on the SCU Undergraduate Admission webpage at: http://www.scu.edu/ugrad/transfer/***

Santa Clara University

Undergraduate

School of Engineering

Las Positas 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 and Computer 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 1 and MATH 2
- One natural science course with a lab: CHEM 1A
- Two Calculus-based Physics courses: PHYS 1A and PHYS 1B
    - Web Design Engineering majors are not required to complete CHEM 1A, PHYS 1A & 1B. Complete one course in the Natural Science list.

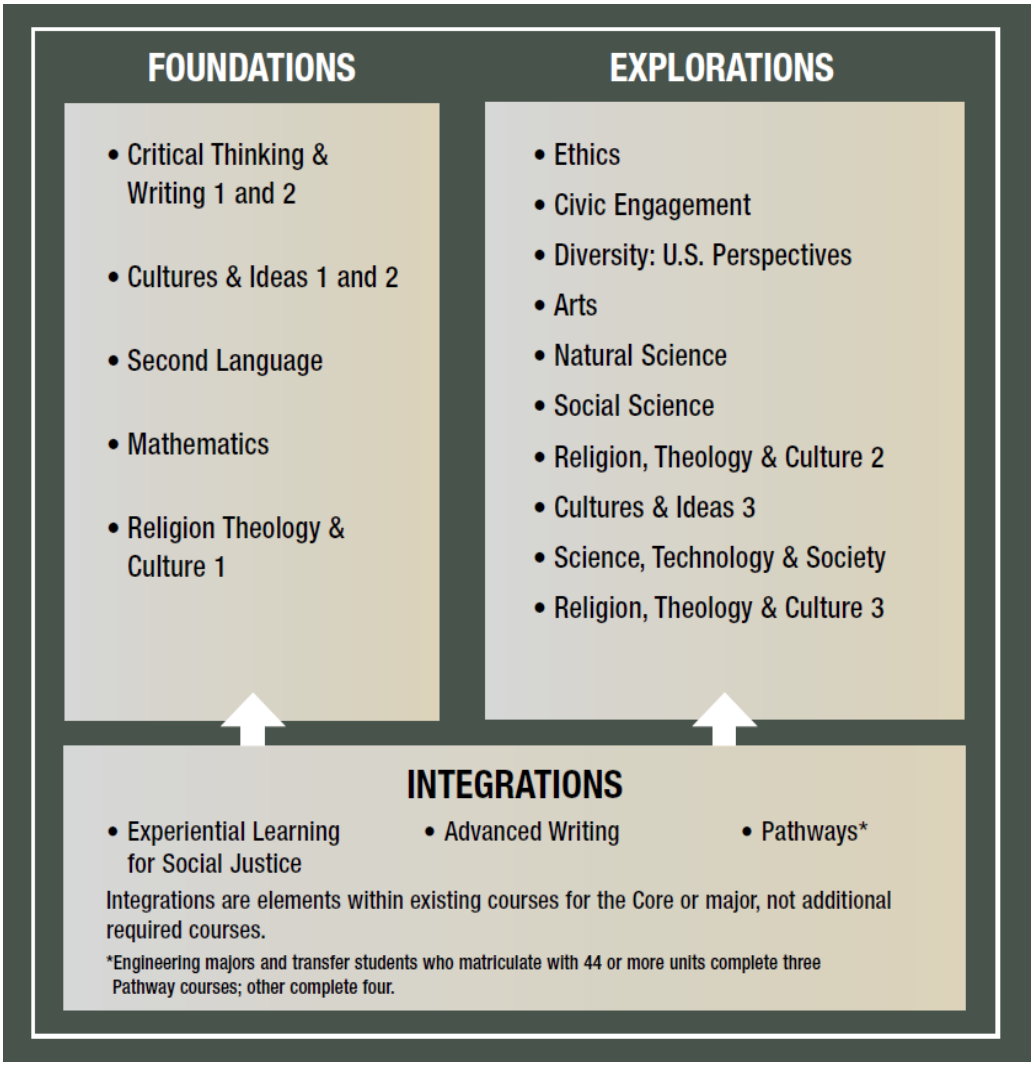
- GPA 3.5

For additional SCU Transfer Admissions information:
https://www.scu.edu/admission/undergraduate/transfer-students/

The following information is provided to help transfer students understand and complete additional Santa Clara University Core Curriculum (General Education) 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 <u>First-Year students may not</u> transfer courses to fulfill Core Critical Thinking & Writing 1 and 2 or Cultures & Ideas 1 and 2, Religion Theology and Culture 1 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 High-Level International Baccalaureate and University of Cambridge A-Level 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
College of Arts and Sciences: *Engineering Physics*	193	96.5	64.33
Leavey School of Business	175	87.5	58.33
School of Engineering:			
Bioengineering	191	95.5	63.66
Civil Engineering	195	97.5	65
Computer Science & Engineering and General Engineering	189	94.5	63
Electrical Engineering and Electrical & Computer Engineering	190	95	63.33
Mechanical Engineering	192	96	64
Web Design and Engineering	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.

The following courses are not transferrable: most first-year seminars, internships, professional development courses, independent study courses, workshops, most physical education 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 UC transferrable courses to transfer for credit: Athletics, English as a Second Language, most Health Education, Kinesiology, and Sport Fitness courses. To view all UC transferable courses, visit www.assist.org. **UC transferrable courses not listed in this guide and not listed above 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 (CTW) 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 official AP CollegeBoard Report at the time of acceptance to receive such credit.

Las Positas College Course
ENG 1A: Critical Reading and Composition

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

Admission recommendation: Complete Critical Thinking and Writing 2 Core requirement

Las Positas College Course
ENG 4: Critical Thinking and Writing About Literature
ENG 7: Critical Thinking and Writing Across Disciplines

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.

Las Positas College Course
AJ 50: Intro to Admin of Justice
ARHS 4: Western Art History - Ancient to Medieval
ARHS 5: Western Art History - Renaissance to Contemporary
ECON 5: Economic History of the United States
ENG 44: Literature of the American West
GEOG 12: Geography of California
HIST 1: Western Civilization to 1600
HIST 2: Western Civilization Since 1600
HIST 7: US History Through Reconstruction
HIST 8: US History Post-Reconstruction
HIST 14: History and American Cultures of California
HIST 25: American Indian History
HIST 28: History of American West
HIST 32: U.S. Women's History
MUS 4: Jazz in American Culture
POLI 7: Introduction to American Government
POLI 12: Introduction to California State and Local Government

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.

Las Positas College Course
ANTR 3: Cultural Anthropology
ANTR 5: Cultures of the U.S. in Global Perspective
ANTR 8: World Prehistory In Archaeological Perspective
ANTR 12: Magic/Religion/Witchcraft/Healing
ANTR 14: Introduction to the Archaeological History of Mesoamerica
ARHS 2: Art of the Ancient Americas
ARHS 8: Asian Art History
BUSN 20: International Business
CMST 11: Intercultural Communication
ENG 41: Modern World Literature
GEOG 2: Cultural Geography
GEOG 5: World Regional Geography
GS 1: Introduction to Global Studies
GS 2: Global Issues
HUMN 3: Introduction to Humanities
HUMN 4: Global Cinemas
HUMN 11: Culture and the Arts I: Ancient World to the Renaissance
HUMN 12: Culture and the Arts II: The Modern World
HUMN 28: World Mythology
MUS 3: World Music
POLI 20: Comparative Government
POLI 30: International Relations
RELS 1: Religions of the World
RELS 2: Bible: History and Literature
RELS 3: Intro to Women's Spirituality
RELS 11: The Nature of Islam
SOC 5: Introduction to Global Studies
WMST 2: Global Perspective of Women
VWT 1: World Wines: New World
VWT 2: World Wines: Old World

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 1 and MATH 2

To fulfill the admission mathematics requirement, complete both MATH 1 and MATH 2 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).***

Las Positas College Course	**SCU course equivalency**
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22
MATH 7: Elementary Linear Algebra	MATH 53
MATH 10: 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.

Las Positas College Course
No approved Las Positas 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.*

Las Positas College Course
PHIL 2: Ethics
PHIL 2H: Honors Philosophy 2: 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.

Las Positas College Course
ANTR 7: Native American Cultures of North America
CMST 11: Intercultural Communication
ECON 5: Economic History of the United States
ENG 32: U.S. Women's Literature
ENG 42: Literature of the African Diaspora in America
HIST 14: History and American Cultures of California
HIST 25: American Indian History and
HIST 32: U.S. Women's History
MUS 4: Jazz in American Culture
MUS 5: American Cultures in Music
PCN 13: Multicultural Issues in Contemporary America
SOC 3: Cultural and Racial Minorities
SOC 6: Social Problems
SOC 11: Sociology of Gender
SOC 12: Popular Culture
SPAN 23: Introduction to Hispanic Literature
THEA 4: American Cultures in Theater

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 1A; PHYS 1A & 1B

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

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 a Las Positas College 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.

Las Positas College Course	SCU Course Equivalency
ANTR 1/1L: Biological Anthropology w/Lab	ANTH 1/1L
ANTR 2: Introduction to Archaeology w/Lab	ANTR 2/2L
ASTR 10/30: Introduction to Astronomy: The Solar System w/Lab	TRCR 18
ASTR 20/30: Introduction to Astronomy: Stars and the Universe w/Lab	TRCR 18
BIO 1A: General Botany	TRCR 18
BIO 1B: General Zoology	TRCR 18
BIO 1C: Cell and Molecular Biology	TRCR 18
BIO 7A: Human Anatomy	TRCR 18
BIO 7B: Human Physiology	TRCR 18
BIO 7C: Microbiology	TRCR 18
BIO 10: Introduction to the Science of Biology	TRCR 18
BIO 30: Introduction to College Biology	TRCR 18
BIO 50: Anatomy and Physiology	TRCR 18
BIO 60: Marine Biology	TRCR 18
CHEM 1A: General College Chemistry I	CHEM 11
CHEM 1B: General College Chemistry II	CHEM 12&50
CHEM 12A: Organic Chemistry I	CHEM 31
CHEM 12B: Organic Chemistry II	CHEM 33 (If CHEM 12A & 12B completed , equates to SCU's CHEM 31, 32 & 33 sequence
CHEM 30A: Intro and Applied Chemistry I	TRCR 18
CHEM 30B: Intro and Applied Chemistry II	TRCR 18
CHEM 31: Intro to College Chemistry	TRCR 18
GEOG 1/1L: Introduction to Physical Geography w/Lab	TRCR 18
GEOL 1/1L: Physical Geology w/ Lab	TRCR 18
GEOL 2: Historical Geology with Lab	TRCR 18
GEOL 12/12L: Introduction to Oceanography w/Lab	TRCR 18
PHYS 1A: General Physics I	PHYS 31

PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
PHYS 1D: General Physics IV	PHYS 34
PHYS 2A: Intro to Physics I	PHYS 11
PHYS 2B: Intro to Physics II	PHYS 13 (If PHYS 2A and PHYS 2B completed, equates to SCU's PHYS 11, 12 & 13 sequence).
PHYS 10/10L: Descriptive Physics w/ Lab	TRCR 18

SOCIAL SCIENCE: *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.

Las Positas College Course
ANTR 2: Introduction to Archaeology
ECON 1: Principles of Microeconomics
ECON 2: Principles of Macroeconomics
ECON 10: General Economics
PSYC 1: General Psychology
PSYC 4: Brain, Mind and Behavior
SOC 1: Principles of Sociology
SOC 7: Sociology of Sexuality
SOC 11: Sociology of Gender
WMST 1: Introduction to Women's Studies

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.

Las Positas College Course
ANTR 3: Cultural Anthropology
ANTR 5: Cultures of the U.S. in Global Perspective

ANTR 8: World Prehistory In Archaeological Perspective
ANTR 12: Magic/Religion/Witchcraft/Healing
ANTR 14: Introduction to the Archaeological History of Mesoamerica
ARHS 2: Art of the Ancient Americas
ARHS 8: Asian Art History
BUSN 20: International Business
CMST 11: Intercultural Communication
ENG 41: Modern World Literature
GEOG 2: Cultural Geography
GEOG 5: World Regional Geography
GS 1: Introduction to Global Studies
GS 2: Global Issues
HUMN 3: Introduction to Humanities
HUMN 4: Global Cinemas
HUMN 11: Culture and the Arts I: Ancient World to the Renaissance
HUMN 12: Culture and the Arts II: The Modern World
HUMN 28: World Mythology
MUS 3: World Music
POLI 20: Comparative Government
POLI 30: International Relations
RELS 1: Religions of the World
RELS 2: Bible: History and Literature
RELS 3: Intro to Women's Spirituality
RELS 11: The Nature of Islam
SOC 5: Introduction to Global Studies
WMST 2: Global Perspective of Women
VWT 1: World Wines: New World
VWT 2: World Wines: Old World

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 44 quarter units (or fewer than 30 semester units) must take 4 courses to fulfill the pathways requirement. However, students transferring in with more than 44 quarter units (or with 30 semester units or more) 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.

SCU COURSE	LPC COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 1	X	X	X	X	X	X	X	X
MATH 12	MATH 2	X	X	X	X	X	X	X	X
MATH 13	MATH 3	X	X	X	X	X	X	X	X
MATH 14	MATH 3	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	MATH 5	X	X	X	X	X	X	X	
MATH 51 or COEN 19	MATH 10			X	X				
MATH 53	MATH 7			X	X				
PHYS 31	PHYS 1A	X	X	X	X	X	X	X	
PHYS 32	PHYS 1C	X	X	X	X	X	X	X	
PHYS 33	PHYS 1B	X	X	X	X	X	X	X	
PHYS 34	PHYS 1D					X			
CHEM 11	CHEM 1A	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	-			X	X	X	X		
ELEN 50/50L	ENGR 44	X		X	X	X	X	X	
CENG 41	ENGR 35		X				X	X	
COEN 10/10L	CS 1 *			X	X	X	X		X
COEN 11/11L	CS 2 *			X	X	X			X
COEN 12/12L	CS 20 *			X	X	X			X
* Student must learn C programming on own									
Abbreviations and Links:									
BIOE = Bioengineering									
CENG = Civil, Environmental, and Sustainable Engineering									
COEN = Computer Science and Engineering									
ECEN = Electrical and Computer Engineering									
ELEN = Electrical Engineering									
ENGR = General Engineering									
MECH = Mechanical Engineering									

WDE = Web Design and Engineering
A "-" indicates that an equivalent course has not been approved at time of publication.

BIOENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I	CHEM 11
CHEM 1B: General College Chemistry II	CHEM 12&50
CHEM 12A: Organic Chemistry I	CHEM 31
CHEM 12B: Organic Chemistry II	CHEM 33 (If CHEM 12A & 12B completed equates to SCU's CHEM 31, 32 & 33 sequence)
PHYS 1A: General Physics I	PHYS 31
PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
Engineering:	
ENGR 44: Introduction to Circuit Analysis	ELEN 50/50L
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22 or AMTH 106

CIVIL ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I	CHEM 11
PHYS 1A: General Physics I	PHYS 31
PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
GEOL 1/1L: Physical Geology w/Lab	CENG 20/20L
Engineering:	
ENGR 22: Engineering Design Graphics	CENG 7/7L
ENGR 35: Statics	CENG 41
ENGR 46: Materials of Engineering	CENG 115/115L
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22 or AMTH 106

COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I	CHEM 11
PHYS 1A: General Physics I	PHYS 31
PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
Engineering:	
ENGR 44: Introduction to Circuit Analysis	ELEN 50/50L
CS 1: Computing Fundamentals I	COEN 10/10L (*Student must learn C programming on own)
CS 2: Computing Fundamentals II	COEN 11/11L (*Student must learn C programming on own)
CS 20: Advanced Programming with Data Structures/C++	COEN 12/12L (*Student must learn C programming on own)
CS 21: Computer Organization and Assembly Language Programming	COEN 20/20L
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22 or AMTH 106
MATH 7: Elementary Linear Algebra	MATH 53
MATH 10: Discrete Mathematics	MATH 51 or COEN 19

ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I	CHEM 11
PHYS 1A: General Physics I	PHYS 31
PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
Engineering:	
ENGR 44: Introduction to Circuit Analysis	ELEN 50/50L
CS 1: Computing Fundamentals I	COEN 10/10L (*Student must learn C programming on own)
CS 2: Computing Fundamentals II	COEN 11/11L (*Student must learn C programming on own)
CS 20: Advanced Programming with Data Structures/C++	COEN 12/12L (*Student must learn C programming on own)
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22 or AMTH 106
MATH 7: Elementary Linear Algebra	MATH 53
MATH 10: Discrete Mathematics	MATH 51 or COEN 19

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I	CHEM 11
PHYS 1A: General Physics I	PHYS 31
PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
PHYS 1D: General Physics IV	PHYS 34
Engineering:	
ENGR 44: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 35: Statics	CENG 41
CS 1: Computing Fundamentals I	COEN 10/10L (*Student must learn C programming on own)
CS 2: Computing Fundamentals II	COEN 11/11L (*Student must learn C programming on own)
CS 20: Advanced Programming with Data Structures/C++	COEN 12/12L (*Student must learn C programming on own)
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22 or AMTH 106

GENERAL ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I	CHEM 11
PHYS 1A: General Physics I	PHYS 31
PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
Engineering:	
ENGR 44: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 35: Statics	CENG 41
CS 1: Computing Fundamentals I	COEN 10/10L (*Student must learn C programming on own)
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22 or AMTH 106

MECHANICAL ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I	CHEM 11
PHYS 1A: General Physics I	PHYS 31
PHYS 1B: General Physics II	PHYS 33
PHYS 1C: General Physics III	PHYS 32
Engineering:	
ENGR 44: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 35: Statics	CENG 41
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14
MATH 5: Ordinary Differential Equations	MATH 22 or AMTH 106

WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
Natural Science:	
CHEM 1A: General College Chemistry I *(Recommended)*	CHEM 11
Engineering:	
CS 1: Computing Fundamentals I	COEN 10/10L (*Student must learn C programming on own)
CS 2: Computing Fundamentals II	COEN 11/11L (*Student must learn C programming on own)
CS 20: Advanced Programming with Data Structures/C++	COEN 12/12L (*Student must learn C programming on own)
Mathematics:	
MATH 1: Calculus I	MATH 11
MATH 2: Calculus II	MATH 12
MATH 3: Multivariable Calculus	MATH 13&14

Additional notes:

- Consult the current Undergraduate Bulletin for Advanced Placement and High-Level International Baccalaureate test credit equivalencies at: https://www.scu.edu/bulletin/undergraduate/chapter-8/AcademicCreditEvaluation.html

- Consult the Santa Clara University Undergraduate Bulletin for additional requirements in a major. The Bulletin can be found at: https://www.scu.edu/academics/course-catalogs/undergraduate-bulletin/

- 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.

- This guide is to be used by transfer applicants, not First-Year (aka: freshmen) applicants. Admitted First-Year students must complete the following Core requirements at SCU: Critical Thinking & Writing 1 and 2; Cultures & Ideas 1 and 2; Religion Theology & Culture 1, 2 and 3 (taken in sequence order at SCU); Civic Engagement; Science, Technology & Society; Experiential Learning for Social Justice; Advanced Writing; and four Pathway courses.

For questions regarding transfer credit or test credit, contact the Transfer Record Analyst at: Registrar@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.