

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 \*
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**

# **Los Angeles City 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 261 and MATH 262
- One natural science course with a lab: CHEM 101
- Two Calculus-based Physics courses: PHYSICS 101 and PHYSICS 102
  - Web Design Engineering majors are not required to complete CHEM 101, PHYSICS 101 & 102. 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 First-Year students may not 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
<b>College of Arts and Sciences</b>	175	87.5	58.33
<b>College of Arts and Sciences: <i>Engineering Physics</i></b>	193	96.5	64.33
<b>Leavey School of Business</b>	175	87.5	58.33
<b>School of Engineering:</b>			
<i>Bioengineering</i>	191	95.5	63.66
<i>Civil Engineering</i>	195	97.5	65
<i>Computer Science &amp; Engineering and General Engineering</i>	189	94.5	63
<i>Electrical Engineering and Electrical &amp; Computer Engineering</i>	190	95	63.33
<i>Mechanical Engineering</i>	192	96	64
<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.

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 Los Angeles City College UC transferable courses to transfer for credit: English as a Second Language, most Kinesiology. To view all Los Angeles City College's UC transferable courses, visit [www.assist.org](http://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 (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 2<sup>nd</sup> 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.

<b>Los Angeles City College Course</b>
ENGLISH 101: College Reading and Composition I

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

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

<b>Los Angeles City College Course</b>
ENGLISH 102: College Reading and Composition II
ENGLISH 103: Critical Thinking, Reading and Writing
PHILOS 5: Critical Thinking and Composition

## 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.

Los Angeles City College Course
ADM JUS 1: Intro to Admin of Justice
ADM JUS 004: Principles and Procedures of the Justice System
ANTHRO 151: Visual Anthropology
ARTHIST 110: Survey of Western Art History I
ARTHIST 120: Survey of Western Art History II
CHICANO 44: Mexican Civilization
ENGLISH 207: American Lit I
ENGLISH 208: American Literature II
FRENCH 10: French Civilization
HISTORY 1: Intro to Western Civilization I
HISTORY 2: Intro to Western Civilization II
HISTORY 3: History of England and Great Britain I
HISTORY 4: History of England and Great Britain II
HISTORY 005: History of the Americas I
HISTORY 006: History of the Americas II
HISTORY 11: Political and Social History of the United States I
HISTORY 12: Political and Social History of the United States II
HISTORY 040: American History in Film
HISTORY 73: Race and Racism in United States History
HISTORY 81: A History of Working People in the United States I
HISTORY 82: A History of Working People in the United States II
HUMAN 31: People in Contemporary Society
MUSIC 111: Music Apprec I
MUSIC 121: Music History and Lit I
MUSIC 122: Music History and Lit II

PHILOS 14: History of Modern European Philosophy
POL SCI 1: The Government of the United States
POL SCI 5: The History of Western Political Thought
POL SCI 19: Women in Politics
RUSSIAN 10: Russian Civilization
SPANISH 9: Civilization of Spain

## **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.

<b>Los Angeles City College Course</b>
ANIMATN 118: History of Animation
ANTHRO 102: Human Ways of Life: Cultural
ANTHRO 121: Anthropology of Religion, Magic and
ARTHIST 130: Survey of Asian Art History
ARTHIST 139: Intro to Islamic Art
ARTHIST 140: Survey of Arts of Africa, Oceania and Ancient America
ARTHIST 171: Intro to Global Contemporary Art
CHINESE 10: Chinese Civilization
COMM 122: Communication Across Cultures
ENGLISH 203: World Literature I
ENGLISH 204: World Literature II
GEOG 2: Cultural Elements of Geography
GEOLOGY 2: Earth History
HISTORY 7: The World's Greatest Religions
HISTORY 59: Comparative History of Genocide and War Crimes
HISTORY 86: Intro to World Civilization I
HISTORY 87: Intro to World Civilization II
HUMAN 6: Great People, Great Eras
HUMAN 8: Great Women, Great Eras
HUMAN 30: The Beginnings of Civilization
HUMAN 61: People in Their World:
KOREAN 10: Korean Civilization
PHILOS 30: Asian Philosophy
POL SCI 2: Modern World Governments
POL SCI 7: Contemporary World Affairs
POL SCI 14: Government and Politics in the Middle East
RUSSIAN 10: Russian Civilization from the Beginning to 1900
SPANISH 10: Latin-American Civilization
THEATER 110: History of the World Theater

## 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 261 and MATH 262**

To fulfill the admission mathematics requirement, complete both MATH 261 and MATH 262 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).

Los Angeles City College Course	SCU course equivalency
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14

**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.

Los Angeles City College Course
No approved Los Angeles City College 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.

Los Angeles City College Course
ADDICST 004: CLINICAL COUNSELING LAWS AND ETHICS
PHILOS 20: 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.

Los Angeles City College Course
ADM JUS 67: Community Relations I
AFRO AM 4: The African-American in the History of the United States I
AFRO AM 5: The African-American in the History of the United States II
AFRO AM 7: African Americans and the Political System
AFRO AM 20: African-American Literature I
AFRO AM 60: African-American Music
A S L 040: Introduction To Deaf Culture
ARMEN 011: 19th and 20th Century Armenian Literature
ARMEN 012: 20th and 21st Century Armenian Literature
ARTHIST 151: Intro to Latin American Art
CHICANO 7: The Mexican American in the History of the United States I
CHICANO 8: The Mexican American in the History of the United States II
ENGLISH 219: The Literature of American Ethnic Groups
ENGLISH 239: Women in Literature
ENGLISH 255: Latin American Literature
HISTORY 73: Race and Racism in United States History
HISTORY 81: A History of Working People in the United States I
HISTORY 82: A History of Working People in the United States II
HUMAN 8: Great Women, Great Eras
JAPAN 009: Japanese Civilization
KOREAN 013: Korean Popular Culture
KOREAN 026: UNDERSTANDING KOREA THROUGH FILM
MUSIC 135: African-American Music
POL SCI 19: Women in Politics
SOC 2: American Social Problems
SOC 11: Race and Ethnic Relations

## 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 101; PHYS 101& 102*

*(Note: Web Design & Engineering major completes one course to satisfy Natural Science core requirement. It is recommended to complete CHEM 101.)*

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 Los Angeles City 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.*

Los Angeles City College Course	SCU course equivalency
ANATOMY 1: Intro to Human Anatomy w/Lab	TRCR 18
ANTHRO 101: Human Biological Evolution w/Lab	TRCR 18
ASTRON 1&5: Elementary Astronomy w/ Fundamentals of Astronomy Lab	TRCR 18
BIOLOGY 3: Introduction to Biology w/Lab	TRCR 18
BIOLOGY 6: General Biology I w/Lab	TRCR 18
BIOLOGY 7: General Biology II w/Lab	TRCR 18
BIOLOGY 25: Human Biology w/Lab	TRCR 18
CHEM 60: Introduction to General Chemistry w/Lab	TRCR 18
CHEM 101: General Chemistry I w/Lab	CHEM 11
CHEM 102: General Chemistry II w/Lab	CHEM 12&50
CHEM 211: Organic Chemistry for Science Majors I w/Lab	CHEM 31

CHEM 212: Organic Chemistry for Science Majors II w/Lab	CHEM 33 (If CHEM 211 & 212 completed, equates to SCU's CHEM 31, 32 & 33 sequence)
CHEM 221: Biochemistry for Science Majors w/Lab	TRCR 18
GEOG 1&15: Physical Geography w/Lab	TRCR 18
GEOLOGY 1&6: Physical Geology w/Lab	TRCR 18
GEOLOGY 2&7: Earth History w/Lab	TRCR 18
MICRO 1: Introductory Microbiology w/Lab	TRCR 18
MICRO 20: General Microbiology w/Lab	TRCR 18
PHYSICS 6: General Physics I w/Lab	TRCR 18
PHYSICS 7: General Physics II w/Lab	TRCR 18
PHYSICS 11: Introductory Physics w/Lab	TRCR 18
PHYSICS 12/14: Physics Fundamentals w/ Lab w/Lab	TRCR 18
PHYSICS 21: Gen Physics I w/Calc w/Lab	PHYS 11
PHYSICS 22: Gen Physics II w/Calc w/Lab	PHYS 13 (If PHYS 21 & 22 completed, equates to SCU's PHYS 11, 12 & 13 sequence)
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33
PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
PHYSIOL 1: Intro to Human Physiology 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.

Los Angeles City College Course
ANTHRO 102: Human Ways of Life: Cultural Anthropology
ANTHRO 103: Archaeology: Reconstructing the Human Past
ECON 1: Principles of Economics I
ECON 2: Principles of Economics II
POL SCI 2: Modern World Governments
PSYCH 1: General Psychology I
PSYCH 2: Biological Psychology
PSYCH 74: Research Methods in the Behavioral Sciences
SOC 1: Intro to Sociology
SOC 2: American Social Problems

**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.

<b>Los Angeles City College Course</b>
ANIMATN 118: History of Animation
ANTHRO 102: Human Ways of Life: Cultural
ANTHRO 121: Anthropology of Religion, Magic and
ARTHIST 130: Survey of Asian Art History
ARTHIST 139: Intro to Islamic Art
ARTHIST 140: Survey of Arts of Africa, Oceania and Ancient America
ARTHIST 171: Intro to Global Contemporary Art
CHINESE 10: Chinese Civilization
COMM 122: Communication Across Cultures
ENGLISH 203: World Literature I
ENGLISH 204: World Literature II
GEOG 2: Cultural Elements of Geography
GEOLOGY 2: Earth History
HISTORY 7: The World's Greatest Religions
HISTORY 59: Comparative History of Genocide and War Crimes
HISTORY 86: Intro to World Civilization I
HISTORY 87: Intro to World Civilization II
HUMAN 6: Great People, Great Eras
HUMAN 8: Great Women, Great Eras
HUMAN 30: The Beginnings of Civilization
HUMAN 61: People in Their World:
KOREAN 10: Korean Civilization
PHILOS 30: Asian Philosophy
POL SCI 2: Modern World Governments
POL SCI 7: Contemporary World Affairs
POL SCI 14: Government and Politics in the Middle East
RUSSIAN 10: Russian Civilization from the Beginning to 1900
SPANISH 10: Latin-American Civilization
THEATER 110: History of the World Theater

**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	LACC COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 261	X	X	X	X	X	X	X	X
MATH 12	MATH 262	X	X	X	X	X	X	X	X
MATH 13	MATH 263	X	X	X	X	X	X	X	X
MATH 14	MATH 263	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	MATH 275	X	X	X	X	X	X	X	
MATH 51 or COEN 19	MATH 272			X	X				
MATH 53	MATH 270			X	X				
PHYS 31	PHYSICS 101	X	X	X	X	X	X	X	
PHYS 32	PHYSICS 103	X	X	X	X	X	X	X	
PHYS 33	PHYSICS 102	X	X	X	X	X	X	X	
PHYS 34	-					X			
CHEM 11	CHEM 101	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	-			X	X	X	X		
ELEN 50/50L	ENG ELC 220	X		X	X	X	X	X	
CENG 41	ENG GEN 131		X				X	X	
COEN 10/10L	-			X	X	X	X		X
COEN 11/11L	-			X	X	X			X
COEN 12/12L	-			X	X	X			X

### 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
<b>Natural Science:</b>	
CHEM 101: General Chemistry I w/Lab	CHEM 11
CHEM 102: General Chemistry II w/Lab	CHEM 12&50
CHEM 211: Organic Chemistry for Science Majors I w/Lab	CHEM 31
CHEM 212: Organic Chemistry for Science Majors II w/Lab	CHEM 33 (If CHEM 211 & 212 completed, equates to SCU's CHEM 31, 32 & 33 sequence)
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33
PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
<b>Engineering:</b>	
ENG ELC 220: Electrical Circuits	ELEN 50/50L
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14
MATH 275: Ordinary Differential Equations	MATH 22 or AMTH 106

**CIVIL ENGINEERING MAJOR REQUIREMENTS**

American River College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 101: General Chemistry I w/Lab	CHEM 11
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33
PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
GEOLOGY 001 & 007: Physical Geology w/Lab	CENG 20/20L
<b>Engineering:</b>	
ENG GEN 131: Statics	CENG 41
ENG GEN 151&153: Materials of Engineering w/Lab	CENG 115/115L
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14
MATH 275: Ordinary Differential Equations	MATH 22 or AMTH 106

**COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS**

American River College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 101: General Chemistry I w/Lab	CHEM 11
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33
PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
<b>Engineering:</b>	
ENG ELC 220: Electrical Circuits	ELEN 50/50L
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14
MATH 275: Ordinary Differential Equations	MATH 22 or AMTH 106
MATH 270: Linear Algebra	MATH 53
MATH 272: Methods of Discrete Mathematics	MATH 51 or COEN 19

**ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS**

American River College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 101: General Chemistry I w/Lab	CHEM 11
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33
PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
<b>Engineering:</b>	
ENG ELC 220: Electrical Circuits	ELEN 50/50L
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14
MATH 275: Ordinary Differential Equations	MATH 22 or AMTH 106
MATH 270: Linear Algebra	MATH 53
MATH 272: Methods of Discrete Mathematics	MATH 51 or COEN 19

**ELECTRICAL ENGINEERING MAJOR REQUIREMENTS**

American River College Course	SCU course equivalency
<b>Natural Science:</b>	



CHEM 101: General Chemistry I w/Lab	CHEM 11
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33
PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
<b>Engineering:</b>	
ENG ELC 220: Electrical Circuits	ELEN 50/50L
ENG GEN 131: Statics	CENG 41
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14
MATH 275: Ordinary Differential Equations	MATH 22 or AMTH 106

### GENERAL ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 101: General Chemistry I w/Lab	CHEM 11
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33
PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
<b>Engineering:</b>	
ENG ELC 220: Electrical Circuits	ELEN 50/50L
ENG GEN 131: Statics	CENG 41
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14
MATH 275: Ordinary Differential Equations	MATH 22 or AMTH 106

### MECHANICAL ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 101: General Chemistry I w/Lab	CHEM 11
PHYSICS 101: Physics for Engineers and Scientists I w/Lab	PHYS 31
PHYSICS 102: Physics for Engineers and Scientists II w/Lab	PHYS 33

PHYSICS 103: Physics for Engineers and Scientists III w/Lab	PHYS 32
<b>Engineering:</b>	
ENG ELC 220: Electrical Circuits	ELEN 50/50L
ENG GEN 131: Statics	CENG 41
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	MATH 13&14
MATH 275: Ordinary Differential Equations	MATH 22 or AMTH 106

## WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

American River College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 101: General Chemistry I w/Lab (Recommended)	CHEM 11
<b>Engineering:</b>	
<b>Mathematics:</b>	
MATH 261: Calculus I	MATH 11
MATH 262: Calculus II	MATH 12
MATH 263: Calculus III	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](mailto: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.