

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

City College of San Francisco 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 110A and MATH 110B
- One natural science course with a lab: CHEM 103A
- Two Calculus-based Physics courses: PHYS 4A/4AL and PHYS 4B/4BL
 - Web Design Engineering majors are not required to complete CHEM 103A, PHYS 4A/4AL & 4B/4BL. Complete one course in the Natural Science list.

- GPA 3.5

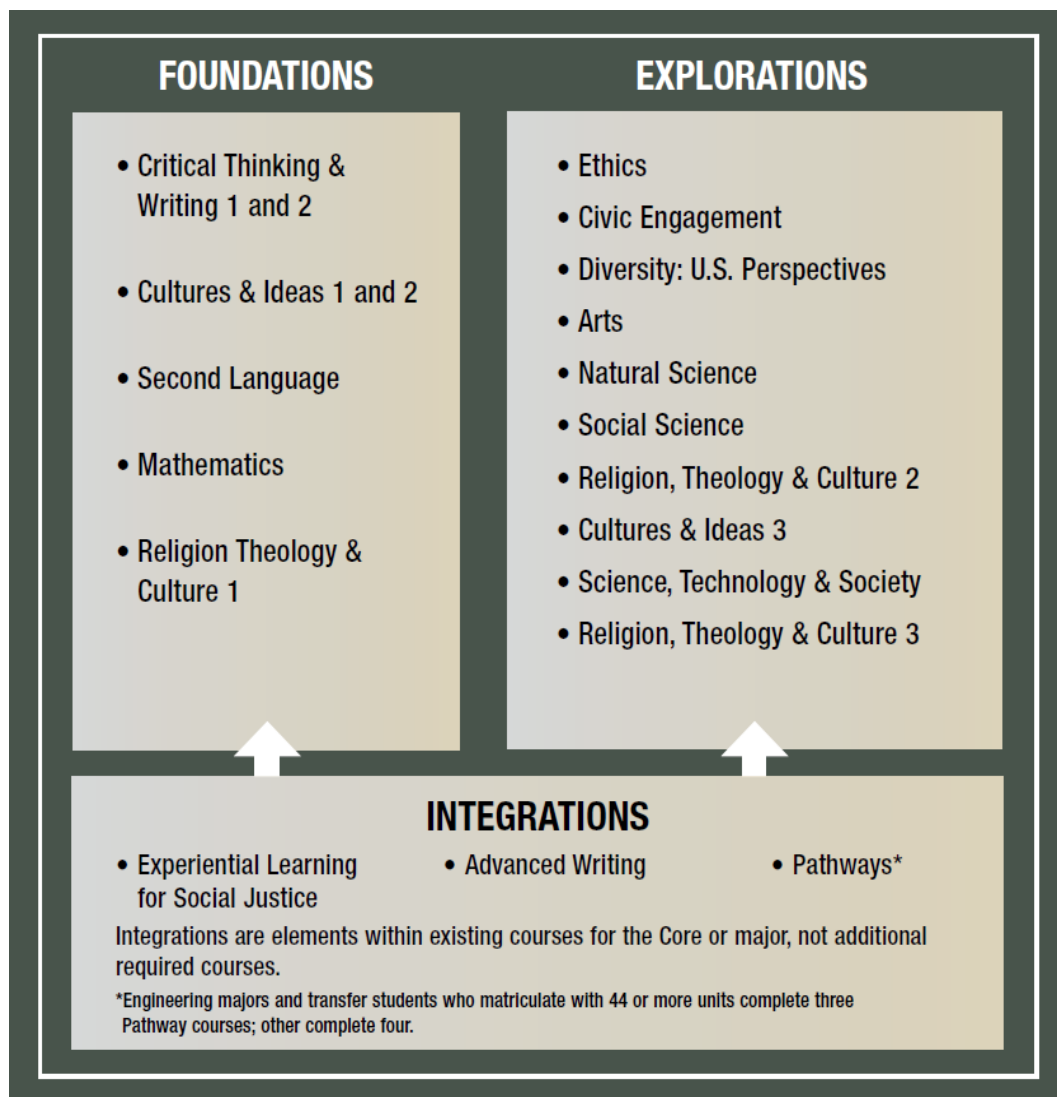
For additional SCU Transfer Admissions information:

<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
College of Arts and Sciences	175	87.5	58.33
College of Arts and Sciences: <i>Engineering Physics</i>	193	96.5	64.33
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 and Electrical & 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 City College of San Francisco UC transferable courses to transfer for credit: English as a Second Language, Intercollegiate Athletics, most Kinesiology, and Ornamental Horticulture courses. To view all City College of San Francisco's UC transferable courses, visit www.assist.org. **UC transferrable 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 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.

City College of San Francisco Course
ENGL 1A: College Reading and Composition

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

Admission recommendation: Complete Critical Thinking and Writing 2 Core requirement

City College of San Francisco Course
ENGL 1B Writing about Literature

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.

City College of San Francisco Course
ADMJ 52 Concepts of Criminal Law
ADMJ 57 Introduction to Administration of Justice
ART 101: Western Art History I
ART 102: Western Art History II
ART 103: History of Modern Art
ART 118: American Art
CINE 18: American Cinema
CINE 124A: Film Production Workshop
CINE 124B: Film Production Workshop
HIST 1: The United States Since 1900
HIST 4A: Western Civilization
HIST 4B: Western Civilization
HIST 5: Europe since 1900
HIST 17A: United States History to 1877
HIST 17B: The United States
HUM 41A: Western Cultural Values: Pre-history to the Middle Ages
HUM 41B: Western Cultural Values
LBCS 70A Who Built America? 1492-1877
LBCS 70B Who Built America? From Reconstruction to the Present
LBCS 88 California Labor History
MUS 22A: History of Music in Western Culture: Medieval and Renaissance Music
MUS 22B: History of Music in Western Culture: Baroque and Classical Music
MUS 22C: History of Music in Western Culture: 19th Century Romanticism
MUS 26: Music in American Culture
POLS 1: American 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.

City College of San Francisco Course
ANTH 11: Latin American Cultures and Societies
ANTH 15: Philippine Culture and Society
ANTH 20: LGBT Anthropology
ANTH 25: Culture, Gender and Sexuality
ART 104: Asian Art History
ART 105: Ancient Art and Architecture of Latin America
ART 106: Latin-American Art History
ART 107 African-American Art History
ART 122A Russian Art at the Legion
ART 123Q Baroque Masters of Light
ART 123U 18th C. French Art at the Legion
ART 123V Renaissance Art at the Legion
ART 123W 19th Century Painting at the Legion
ASIA 11: East Asian Calligraphy: An Introduction
CHIN 39: Major Achievements of Chinese Thought and Culture
CINE 20A International Film History (1880s-1930s)
CINE 20B International Film History (1930s-1960s)
CINE 20C International Film History (1960s-Present)
CLAS 35 Tragic Dramas of Greece
ECON 6: International Economics
ENGL 44A: Survey of World Literature, Part I: Ancient, Medieval, and Early Modern
ENGL 44B: Survey of World Literature, Part II: Early Modern to the Present
GEOG 3: World Regional Geography
GEOG 4: Cultural Geography
GEOG 7: Economic Geography
HIST 18A: The Colonial History of Latin America
HIST 18B: History of Latin America Since Independence
HIST 20: History of Mexico
HIST 21 History of the Mexican-American/Chicano
HIST 35A: History of China
HIST 35B: History of China
HIST 37: History of the Philippines
HUM 7: Comparative Religions
HUM 8: Philosophies of Religion
IDST 4: Ways of Faith
IDST 7 Introduction to the United Nations
IDST 27B: Asian Humanities: Contemporary
IDST 29: Islam: Identity & Culture
IDST 27B: Asian Humanities: Contemporary
IDST 29: Islam: Identity & Culture
IDST 30: Demystifying the Middle East

IDST 42: Philippine Humanities
JAPA 39: Japanese Culture and Civilization
MUS 21: Traditional African Music
MUS 24: Music of East Asia
MUS 25: Music of Latin America and the Caribbean
POLS 2: Comparative Government
POLS 4: The Politics of Globalization
POLS 5: International Relations
POLS 18: Government and Politics of Latin America
POLS 45: Government and Politics in the Middle East

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 110A and MATH 110B

To fulfill the admission mathematics requirement, complete both MATH 110A and 110B 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).

City College of San Francisco Course	SCU Course equivalency
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: 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.

City College of San Francisco Course
HUM 7: Comparative Religions

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.

City College of San Francisco Course
GNBS 120: Business Ethics and Social Responsibility

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.

City College of San Francisco Course
AFAM 30: African-American Consciousness
AFAM 40: The Black Experience in California, 1500 to the Present
AFAM 42 The Origins and History of Race Theory and Modern Racism
AFAM 55: From Funk to Hip Hop
AFAM 60: African American Women in the US
ANTH 3C: Introduction to Cultural Anthropology: Focus on American Cultures
ANTH 12: Indigenous Peoples of North America
ANTH 15 Philippine Culture and Society
ANTH 20 Queer Anthropology

ANTH 25 Culture, Gender and Sexuality
ART 106: Latin American Art History
ART 107: African American Art History
ART 108: Women through Art History
ART 109 History of Contemporary Art
ASAM 1 Introduction to Asian American Studies
ASAM 6: Asian American Issues through Literature
ASAM 8: Filipino American Community
ASAM 10: Asian American Popular Culture
ASAM 20: Asian American Experience: 1820 to Present
ASAM 22: Community Issues & Leadership
ASAM 23: Asian Americans and American Ideals and Institutions
ASAM 27: Asian American Race Relations
ASAM 30: Asian American Issues through Film
ASAM 35: Asian American Women
ASAM 40: The Chinese American Community
ASAM 42: Southeast Asians in the U.S.: Experience and Culture
ASIA 15: Asian Societies and Cultures through Film
ASIA 30 Manga and Anime
CAHS 247: Food and Culture
CHIN 33 Chinese Culture for Heritage Learners
CHIN 39 Major Achievements of Chinese Thought and Culture
CMST 5: Intercultural Communication
DANC 30: Dance History - Dance in Cultural Context
DANC 32: Black Tradition in American Dance
ECON 25: Women in the Economy
ECON 30: Economics of the African-American Community
ETHN 37 Introduction to Ethnic Studies
ETHN 45 Pacific Islanders in the United States
FREN 41: Culture and Civilization of France
FREN 42: Contemporary French Culture and Civilization
HIST 9: Immigrants in U.S. History
HIST 12A: United States Women's History: Pre-colonial Through 1880s
HIST 12B: United States Women's History: 1890-Present
HIST 15A: History of the American Indian: Eastern Tribes
HIST 15B: History of the American Indian: Western Tribes
HIST 21: History of the Mexican-American/Chicano
HIST 41A: African American History From Ancestral West Africa to the Civil War
HIST 41B: 20th Century African American History from the Reconstruction to 21st Century
HIST 45: LGBT American History
HUM 25: Women in the Arts
HUM 48: African American Music, Art, and Literature
IDST 14: American Cultures in Literature & Film
IDST 31: Women and Gender in the Middle East
IDST 37: Introduction to Ethnic Studies
IDST 45: Pacific Islanders in the United States
IDST 46: Fa 'a Pasefika: Interdisciplinary Cultural Expressions of Oceania
LALS 1: Latinx Diaspora: The Impact of Latinxs Living in the United States
LALS 2: Critical Thinking in Latinx Studies

LALS 9: The Latinx LGBTQ+ Experience
LALS 10: Latinas in the U.S.: Voces
LALS 13: Latin American Social Movements
LALS 14: Diego Rivera: Art and Social Change in Latin America
LALS 15: Latin American Workers in Americas
LBCS 15: Latin American Workers in the Americas
LGBT 5: Introduction to Lesbian, Bisexual, Gay and Transgender Studies
LGBT 9: The Latinx LGBTQ+ Experience
LGBT 10: LGBT Culture & Society
LGBT 11 History of LGBTQ+ Film: Silent Era to 1969
LGBT 12 Contemporary LGBTQ Film
LGBT 15: From Greece to Stonewall: Global LGBTQ+ Literature, Art and Culture
LGBT 18: Transgender Lives, Culture and Art
LGBT 20: LGBT U.S. Art and Culture
LGBT 50: LGBT Communities of Color in the U.S.
LGBT 55: Contemporary Global Art and Culture
LGBT 75 LGBTQ+ Film: in the 1970s and 1980s
MUS 23: Jazz History, Musical Traditions of the African-American
MUS 24 Music of East Asia
MUS 25 Music of Latin America and the Caribbean
MUS 27Q Music and Queer Identity
PHST 20: The Filipino Family
PHST 30: Philippine Society and Culture Through Film
PHST 40: Contemporary Issues in the Filipino Diaspora
PHST 42: Introduction to Philippine Arts
PHST 50 Filipinx LGBTQ+ Identities and Culture
POLS 12: Ethnic Politics in the United States
RUSS 41: Russian Culture and Civilization
SOC 3: Social Problems
SOC 25: Sex and Gender in American Society
SPAN 41: Culture and Civilization of Spain
SPAN 42: LGBT Voices in Hispanic Society
WGST 10: Women and Film
WGST 25: Introduction to Women's Studies: Feminism Demystified
WGST 35: Introduction to Masculinity Studies

ARTS

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

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

Admission recommendation: *Complete CHEM 103A and PHYC 4A/4AL & 4B/4BL*

(Note: Web Design & Engineering major completes one course to satisfy Natural Science core requirement. It is recommended to complete CHEM 103A)

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 CCSF 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.

City College of San Francisco Course	SCU Course Equivalency
ANTH 1/1L: Biological Anthropology w/Lab	TRCR 18: Core Natural Science
ASTR 1/16: Cosmic Evolution w/ Observational Astronomy	TRCR 18: Core Natural Science
ASTR 4/16: Life in the Universe w/ Observational Astronomy	TRCR 18: Core Natural Science
ASTR 17/16: Planets w/ Observational Astronomy	TRCR 18: Core Natural Science
ASTR 18/16: Stars w/ Observational Astronomy	TRCR 18: Core Natural Science
ASTR 19/16: Galaxies and the Universe w/ Observational Astronomy	TRCR 18: Core Natural Science
BIO 9: Human Biology w/Lab	TRCR 18: Core Natural Science
BIO 10: Animal Biology w/Lab	TRCR 18: Core Natural Science
BIO 11: Science of Living Organisms w/Lab	TRCR 18: Core Natural Science
BIO 12: Plant Biology w/Lab	TRCR 18: Core Natural Science
BIO 14: Plant Ecology w/Lab	TRCR 18: Core Natural Science
BIO 19: Ecology w/Lab	TRCR 18: Core Natural Science
BIO 32/32L: Marine Biology w/ Lab	TRCR 18: Core Natural Science
BIO 51/51L: Introduction to Genetics w/Lab	TRCR 18: Core Natural Science
BIO 100A: General Biology w/Lab	TRCR 18: Core Natural Science
BIO 100B: General Biology w/Lab	TRCR 18: Core Natural Science
BIO 106: Introduction to Human Anatomy and Physiology w/Lab	TRCR 18: Core Natural Science
BIO 108: General Human Anatomy w/Lab	TRCR 18: Core Natural Science
BIO 111: Human Physiology w/Lab	TRCR 18: Core Natural Science
BIO 112: Introduction to Human Physiology w/Lab	TRCR 18: Core Natural Science
BIO 118: Introduction to Entomology	TRCR 18: Core Natural Science
BIO 120: Introduction to Microbiology w/Lab	TRCR 18: Core Natural Science
CHEM 40: Introduction to Chemical Principles w/Lab	TRCR 18: Core Natural Science
CHEM 101A: General College Chemistry w/Lab	CHEM 11
CHEM 101B: General College Chemistry w/Lab	CHEM 12&50

CHEM 103A: General Chemistry for Engineering w/Lab	TRCR 18: Core Natural Science
CHEM 208A: Chemical Structure and Reactivity I w/Lab	CHEM 31
CHEM 208B: Chemical Structure/Reactivity II w/Lab	CHEM 33 (If CHEM 208A & 208B completed, equates to SCU's CHEM 31, 32 & 33)
CHEM 212A: Organic Chemistry w/Lab	CHEM 31
CHEM 212B: Organic Chemistry II w/Lab	CHEM 33 (If CHEM 212A & 212B completed, equates to SCU's CHEM 31, 32 & 33)
ENRG 3/3L: Introduction to Alternative Energy w/Lab	TRCR 18: Core Natural Science
ENVS 31/31L: Introduction to Environmental Science w/Lab	
GEOG 1/1L: Physical Geography w/Lab	TRCR 18: Core Natural Science
GEOG 31/31L: Introduction to Environmental Science w/Lab	TRCR 18: Core Natural Science
GEOL 10/10L: Physical Geology w/Lab	TRCR 18: Core Natural Science
GEOL 11/11L: Historical Geology w/Lab	TRCR 18: Core Natural Science
GEOL 30/30L: Environmental Geology w/Lab	TRCR 18: Core Natural Science
GEOL 111: Historical Geology with Lab	TRCR 18: Core Natural Science
OCAN 1/1L: Oceanography w/ Lab	TRCR 18: Core Natural Science
PHYC 2A or 2AC/2AL: Introductory Physics I w/Lab	PHYS 11
PHYC 2B or 2BC/2BL: Introductory Physics II w/Lab	PHYS 13 (If PHYC 2A/2AL & 2B/2BL completed, equates to SCU's PHYS 11, 12, & 13)
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
PHYC 4D/4DL: Modern Physics for Scientists and Engineers w/Lab	PHYS 34
PHYC 10/10L: Conceptual Physics w/Lab	TRCR 18: Core Natural Science
P SC 11/11L: Conceptual Physical Science w/Lab	TRCR 18: Core Natural Science
SUST 31/31L: Introduction to Environmental Science w/Lab	TRCR 18: Core Natural Science

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.

City College of San Francisco Course
ANTH 2: Archaeology and Prehistory
ANTH 3: Introduction to Social and Cultural Anthropology
ANTH 3C Introduction to Cultural Anthropology: Focus on U.S. Cultures
ECON 1: Principles of Macroeconomics
ECON 3: Principles of Microeconomics
GEOG 4: Cultural Geography
GEOG 7: Economic Geography
POLS 2: Comparative Government
POLS 5: International Relations
PSYC 1: General Psychology
PSYC 1B Biological Psychology
PSYC 23: Psychology of Race and Ethnic Relations
SOC 1: Introduction to Sociology
SOC 2: Social Deviance and Social Issues

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.

City College of San Francisco Course
ANTH 11: Latin American Cultures and Societies
ANTH 15: Philippine Culture and Society
ANTH 20: LGBT Anthropology
ANTH 25: Culture, Gender and Sexuality
ART 104: Asian Art History
ART 105: Ancient Art and Architecture of Latin America
ART 106: Latin-American Art History
ART 107 African-American Art History
ART 122A Russian Art at the Legion
ART 123Q Baroque Masters of Light
ART 123U 18th C. French Art at the Legion
ART 123V Renaissance Art at the Legion
ART 123W 19th Century Painting at the Legion
ASIA 11: East Asian Calligraphy: An Introduction
CHIN 39: Major Achievements of Chinese Thought and Culture
CINE 20A International Film History (1880s-1930s)
CINE 20B International Film History (1930s-1960s)

CINE 20C International Film History (1960s-Present)
CLAS 35 Tragic Dramas of Greece
ECON 6: International Economics
ENGL 44A: Survey of World Literature, Part I: Ancient, Medieval, and Early Modern
ENGL 44B: Survey of World Literature, Part II: Early Modern to the Present
GEOG 3: World Regional Geography
GEOG 4: Cultural Geography
GEOG 7: Economic Geography
HIST 18A: The Colonial History of Latin America
HIST 18B: History of Latin America Since Independence
HIST 20: History of Mexico
HIST 21 History of the Mexican-American/Chicano
HIST 35A: History of China
HIST 35B: History of China
HIST 37: History of the Philippines
HUM 7: Comparative Religions
HUM 8: Philosophies of Religion
IDST 4: Ways of Faith
IDST 7 Introduction to the United Nations
IDST 27B: Asian Humanities: Contemporary
IDST 29: Islam: Identity & Culture
IDST 27B: Asian Humanities: Contemporary
IDST 29: Islam: Identity & Culture
IDST 30: Demystifying the Middle East
IDST 42: Philippine Humanities
JAPA 39: Japanese Culture and Civilization
MUS 21: Traditional African Music
MUS 24: Music of East Asia
MUS 25: Music of Latin America and the Caribbean
POLS 2: Comparative Government
POLS 4: The Politics of Globalization
POLS 5: International Relations
POLS 18: Government and Politics of Latin America
POLS 45: Government and Politics in the Middle East

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	CCSF COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 110A	X	X	X	X	X	X	X	X
MATH 12	MATH 110B	X	X	X	X	X	X	X	X
MATH 13	MATH 110C	X	X	X	X	X	X	X	X
MATH 14	MATH 110C	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	MATH 125 or MATH 130	X	X	X	X	X	X	X	
MATH 51 or COEN 19	MATH 115			X	X				
MATH 53	MATH 120 or MATH 130			X	X				
PHYS 31	PHYC 4A/4AL	X	X	X	X	X	X	X	
PHYS 32	PHYC 4C/4CL	X	X	X	X	X	X	X	
PHYS 33	PHYC 4B/4BL	X	X	X	X	X	X	X	
PHYS 34	PHYC 4D/4DL					X			
CHEM 11	CHEM 103A or 101A	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	-			X	X	X	X		
ELEN 50/50L	ENGN 20/20L	X		X	X	X	X	X	
CENG 41	ENGN 36		X				X	X	
COEN 10/10L	CS 110A			X	X	X	X		X
COEN 11/11L	CS 110B			X	X	X			X
COEN 12/12L	CS 110C			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

City College of San Francisco Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry	CHEM 11
CHEM 101B: General Chemistry	CHEM 12&50
CHEM 208A or 212A: Organic Chemistry	CHEM 31
CHEM 208B or 212B: Organic Chemistry	CHEM 33 (If CHEM 208A or 212A & 208B or 212B completed, equates to SCU's CHEM 31, 32 & 33)
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
Engineering:	
ENGN 20/20L: Introduction to Circuit Analysis w/Lab	ELEN 50/50L
ENGN 24: Design Graphics	MECH 10/10L (*Medical Device track)
Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: Calculus III	MATH 13&14
MATH 125: Differential Equations or MATH 130: Linear Algebra and Differential Equations	MATH 22 or AMTH 106

CIVIL ENGINEERING MAJOR REQUIREMENTS

City College of San Francisco Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry	CHEM 11
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
GEOL 10/10L: Physical Geology w/Lab	GEOL 20/20L
Engineering:	
ENGN 20/20L: Introduction to Circuit Analysis w/Lab	ELEN 50/50L
ENGN 1A: Engineering Survey	CENG 10/10L
ENGN 24: Design Graphics	CENG 7/7L
ENGN 36: Engineering Mech - Statics	CENG 41
Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: Calculus III	MATH 13&14

MATH 125: Differential Equations or MATH 130: Linear Algebra and Differential Equations	MATH 22 or AMTH 106
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COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS

City College of San Francisco College Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry	CHEM 11
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
Engineering:	
ENGN 20/20L: Introduction to Circuit Analysis w/Lab	ELEN 50/50L
CS 110A: Intro to Programming	COEN 10/10L
CS 110B: Programming Fundamentals: C++	COEN 11/11L
CS 110C: Data Structures and Algorithms: C++	COEN 12/12L
CS 270: Computer Architecture with Assembly Language	COEN 20/20L
Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: Calculus III	MATH 13&14
MATH 125: Differential Equations or MATH 130: Linear Algebra and Differential Equations	MATH 22 or AMTH 106
MATH 120: Linear Algebra or MATH 130: Linear Algebra and Differential Equations	MATH 53
MATH 115: Discrete Structures	COEN 19 or MATH 51

ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS

City College of San Francisco College Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry	CHEM 11
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
Engineering:	
ENGN 20/20L: Introduction to Circuit Analysis w/Lab	ELEN 50/50L
CS 110A: Intro to Programming	COEN 10/10L
CS 110B: Programming Fundamentals: C++	COEN 11/11L
CS 110C: Data Structures and Algorithms: C++	COEN 12/12L

Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: Calculus III	MATH 13&14
MATH 125: Differential Equations or MATH 130: Linear Algebra and Differential Equations	MATH 22 or AMTH 106
MATH 120: Linear Algebra or MATH 130: Linear Algebra and Differential Equations	MATH 53
MATH 115: Discrete Structures	COEN 19 or MATH 51

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

City College of San Francisco Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry	CHEM 11
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
PHYC 4D/4DL: Modern Physics for Scientists and Engineers w/Lab	PHYS 34
Engineering:	
ENGN 20/20L: Introduction to Circuit Analysis w/Lab	ELEN 50/50L
ENGN 36: Engineering Mech - Statics	CENG 41
CS 110A: Intro to Programming	COEN 10/10L
CS 110B: Programming Fundamentals: C++	COEN 11/11L
CS 110C: Data Structures and Algorithms: C++	COEN 12/12L
Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: Calculus III	MATH 13&14
MATH 125: Differential Equations or MATH 130: Linear Algebra and Differential Equations	MATH 22 or AMTH 106

GENERAL ENGINEERING MAJOR REQUIREMENTS

City College of San Francisco Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry	CHEM 11
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
Engineering:	

ENGN 20/20L: Introduction to Circuit Analysis w/Lab	ELEN 50/50L
ENGN 24: Design Graphics	MECH 10/10L
ENGN 45: Materials Science	MECH 15/15L
ENGN 36: Engineering Mech - Statics	CENG 41
CS 110A: Intro to Programming	COEN 10/10L
Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: Calculus III	MATH 13&14
MATH 125: Differential Equations or MATH 130: Linear Algebra and Differential Equations	MATH 22 or AMTH 106

MECHANICAL ENGINEERING MAJOR REQUIREMENTS

City College of San Francisco Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry	CHEM 11
PHYC 4A/4AL: Classical Mechanics for Scientists and Engineers w/Lab	PHYS 31
PHYC 4B/4BL: Electromagnetism for Scientists and Engineers w/Lab	PHYS 33
PHYC 4C/4CL: Waves and Thermodynamics for Scientists and Engineers w/Lab	PHYS 32
Engineering:	
ENGN 20/20L: Introduction to Circuit Analysis w/Lab	ELEN 50/50L
ENGN 24: Design Graphics	MECH 10/10L
ENGN 45: Materials Science	MECH 15/15L
ENGN 36: Engineering Mech - Statics	CENG 41
Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12
MATH 110C: Calculus III	MATH 13&14
MATH 125: Differential Equations or MATH 130: Linear Algebra and Differential Equations	MATH 22 or AMTH 106

WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

City College Course	SCU course equivalency
Natural Science:	
CHEM 103A or 101A: General Chemistry (Recommended)	CHEM 11
Engineering:	
CS 110A: Intro to Programming	COEN 10/10L
CS 110B: Programming Fundamentals: C++	COEN 11/11L
CS 110C: Data Structures and Algorithms: C++	COEN 12/12L
Mathematics:	
MATH 110A: Calculus I	MATH 11
MATH 110B: Calculus II	MATH 12

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: Transfercredit@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.