

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

San Jose 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 71/71H and MATH 72
- One natural science course with a lab: CHEM 1A/1AH
- Two Calculus-based Physics courses: PHYS 4A and PHYS 4B
 - Web Design Engineering majors are not required to complete CHEM 1A/1AH, PHYS 4A & 4B. Complete one course in the Natural Science list.

- GPA 3.5

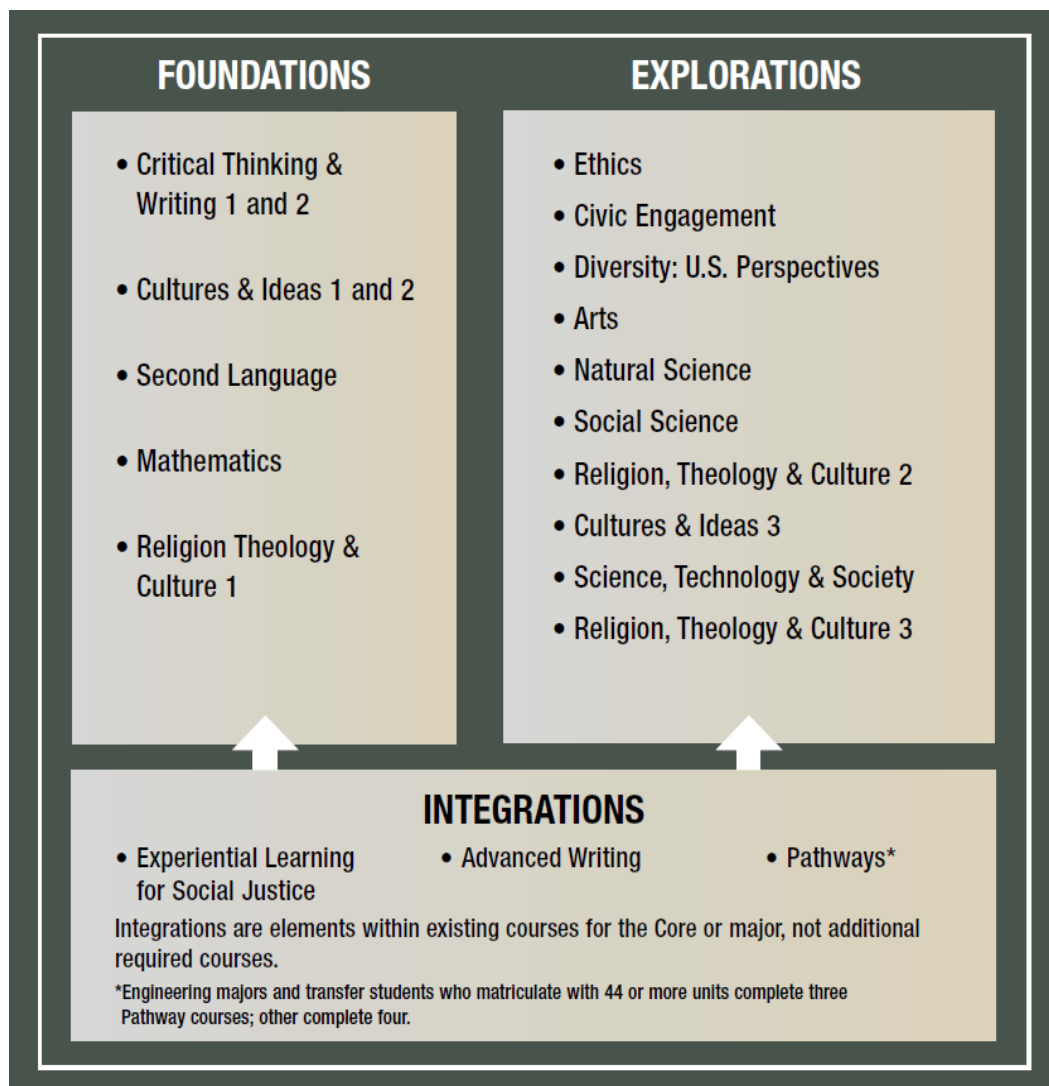
For additional SCU Transfer Admissions information:

<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 San Jose City College UC transferable courses to transfer for credit: Adapted Physical Education, some Guidance, most Kinesiology, Kinesiology Athletics, and Kinesiology Athletics Men and Women courses. To view all San Jose City College's UC transferable courses, visit www.assist.org. **UC transferable courses not listed in this guide and not listed above as excluded will be accepted as elective units. After acceptance, students may petition a course that received elective credit to be evaluated, and if approved, fulfill a Core and/or major requirement.** Transfer credit evaluations for individual students are completed after admission to SCU. However, the following information will help students evaluate their own course work.

FOUNDATIONS Core requirements

Critical Thinking & Writing 1 and 2 Core Requirement:

To fulfill the Critical Thinking & Writing (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.

San Jose City College Course
ENGL 1A: English Composition

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

Admission recommendation: Complete Critical Thinking and Writing 2 Core requirement

San Jose City College Course
ENGL 1B: English Composition
ENGL 1C: Critical Thinking/ Composition
PHIL 60: Logic and Critical Thinking
READ 10: Critical Reading

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.

San Jose City College Course
AJ 10: Intro to Admin of Justice
ART 91: Survey of Art History- Prehistoric through Gothic
ART 92: Survey of Art History- Renaissance to the Present
ART 93: Art of the Americas
ETH 27: Intro to Race & Ethnicity in American History
HIST 1/1H: Survey of American History
HIST 10A: Development of Western Culture
HIST 10B: Development of Western Culture
HIST 17A/17AH: History of the United States
HIST 17B/17BH: History of the United States
MUSIC 91: Music Appreciation: Western Civilization
POLSC 1/1H: Politics and Government in America

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.

San Jose City College Course
AJ 114: Terrorism
ANTH 63: Introduction to Social and Cultural Anthropology
ART 96: Asian Art Appreciation

DANCE 2: Dance Appreciation
GEOG 10: Introduction to Physical Geography
GEOG 11: Introduction to Cultural Geography
GEOG 12: World Regions in Global Context
GLOBL 1: Introduction to Global Studies
GLOBL 2: Global Issues
GLOBL 7: Global Citizenship/Civics
GLOBL 12: World Regions in Global Context
HIST 11A: World History to 1500
HIST 11B: World History from 1500
HUMNT 2: Introduction to World Literature
MUSIC 83/83H: Exploring The World of Music
PHIL 51: Intro to Asian Philosophy
PHIL 70: Comparative Religions
POLSC 2: Comparative Politics
POLSC 4: International Relations

SECOND LANGUAGE

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

MATHEMATICS:

Admission recommendation: Complete MATH 71/71H and MATH 72

To fulfill the admission mathematics requirement, complete both MATH 71/71H and MATH 72 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).

San Jose City College Course	SCU course equivalency
MATH 70: Discrete Mathematics	MATH 51 or COEN 19
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106
MATH 79: Linear Algebra	MATH 53

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.

San Jose City College Course
PHIL 70: 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.

San Jose City College Course
PHIL 65: Introduction to 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.

San Jose City College Course
COMS 35: Intercultural Communication
EDUC 10: Introduction to Education in a Multicultural Society
ENGL 33: Women in Literature
ENGL 80: Mexican-American Literature
ENGL 81: Introduction to African-American Literature
ETH 11: Ethnic Film: Reel Studies

ETH 18: The African American Male Identity
ETH 19: The African American Family
ETH 20: African American Culture
ETH 22: African American Cinema
ETH 26: Vietnamese Women in the U.S.
ETH 27/27H: Introduction to Race & Ethnicity in American History
ETH 28: Introduction to Critical Race & Social Justice
ETH 29: Women of Color in the United States
ETH 30: Chicana/o Culture
ETH 31: Social Justice Issues in Mexican American Communities
ETH 32: Introduction to Chicax/Latinx Music in the U.S.
ETH 37A/37AH: Mexican American History I
ETH 37B/37BH: Mexican American History II
ETH 41: Vietnamese American Culture
ETH 42: Asian Pacific American Culture
GEOG 11: Introduction to Cultural Geography
HIST 9: Women in American History
HIST 21: African American History
HIST 24: History and Culture of the American Indian
HUMNT 3: Introduction to Women's, Gender, and Sexuality Studies
MUSIC 32: Introduction to Chicax/Latinx Music in the U.S.
SL 15: Deaf Culture
SOC 11: Social Problems
SPAN 32: Introduction to Spanish and Latin American Literature
THEAT 55: Chicax/Latinx Theatre

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/1AH; PHYS 4A & 4B

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

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 San Jose 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.

San Jose City College Course	SCU course equivalency
ASTRO 10/10L: Introduction to Astronomy w/ Lab	TRCR 18
BIOL 4A: General Principles and Cell Biology w/Lab	TRCR 18
BIOL 4B: Biodiversity and Organismal Biology w/Lab	TRCR 18
BIOL 20: Human Biology w/Lab	TRCR 18
BIOL 21: General Biology w/Lab	TRCR 18
BIOL 64: Marine Biology w/Lab	TRCR 18
BIOL 71: Human Anatomy w/Lab	TRCR 18
BIOL 72: Human Physiology w/Lab	TRCR 18
BIOL 74: General Microbiology w/Lab	TRCR 18
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
CHEM 1B: General Chemistry w/Lab	CHEM 12&50
CHEM 12A: Organic Chemistry w/Lab	CHEM 31
CHEM 12B: Organic Chemistry w/Lab	CHEM 33 (If CHEM 12A & 12B completed, equates to SCU's CHEM 31, 32 & 33)
CHEM 15/15H: Fundamentals of Chemistry w/Lab	TRCR 18
CHEM 32A: Intro to General, Organic and Biological Chemistry w/Lab	TRCR 18
CHEM 32B: Intro to General, Organic and Biological Chemistry w/Lab	TRCR 18
CHEM 65: Quantitative Analysis w/Lab	TRCR 18
ENVIR 10: Environmental Science w/Lab	ENVS 21 or TRCR 18
GEOL 10/10L: Physical Geology w/Lab	CENG 20/20L or TRCR 18
GEOL 15/15L: Earth Science w/Lab	TRCR 18
PHYS 2A: Algebra/Trigonometry-Based Physics I w/Lab	PHYS 11
PHYS 2B: Algebra/Trigonometry-Based Physics II w/Lab	PHYS 13 (If PHYS 2A & 2B completed, equates to SCU's PHYS 11, 12 & 13)
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32

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.

San Jose City College Course
ANTH 63: Intro to Social and Cultural Anthropology
ECON 10A: Principles of Macroeconomic Theory
ECON 10B: Principles of Microeconomics Theory
POLSC 2: Comparative Politics
POLSC 4: International Relations
PSYCH 10/10H: General Psychology
PSYCH 12: Intro to Social Psychology
SOC 10/10H: Introduction to Sociology
SOC 11: 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.

San Jose City College Course
AJ 114: Terrorism
ANTH 63: Introduction to Social and Cultural Anthropology
ART 96: Asian Art Appreciation
DANCE 2: Dance Appreciation
GEOG 10: Introduction to Physical Geography
GEOG 11: Introduction to Cultural Geography
GEOG 12: World Regions in Global Context
GLOBL 1: Introduction to Global Studies
GLOBL 2: Global Issues
GLOBL 7: Global Citizenship/Civics
GLOBL 12: World Regions in Global Context
HIST 11A: World History to 1500
HIST 11B: World History from 1500
HUMNT 2: Introduction to World Literature
MUSIC 83/83H: Exploring The World of Music
PHIL 51: Intro to Asian Philosophy
PHIL 70: Comparative Religions
POLSC 2: Comparative Politics

POLSC 4: International Relations

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

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

INTEGRATIONS Core requirements

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

ADVANCED WRITING: Must be completed at Santa Clara University.

PATHWAYS: Must be completed at Santa Clara University.

Transfer students who matriculate with fewer than 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	SJCC COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 71/71H	X	X	X	X	X	X	X	X
MATH 12	MATH 72	X	X	X	X	X	X	X	X
MATH 13	MATH 73	X	X	X	X	X	X	X	X
MATH 14	MATH 73	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	MATH 78	X	X	X	X	X	X	X	
MATH 51 or COEN 19	MATH 70			X	X				
MATH 53	MATH 79			X	X				
PHYS 31	PHYS 4A	X	X	X	X	X	X	X	
PHYS 32	PHYS 4C	X	X	X	X	X	X	X	
PHYS 33	PHYS 4B	X	X	X	X	X	X	X	
PHYS 34	-					X			
CHEM 11	CHEM 1A/1AH	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	-			X	X	X	X		
ELEN 50/50L	ENGR 33	X		X	X	X	X	X	
CENG 41	ENGR 32		X				X	X	
COEN 10/10L	CIS 24C OR CIS 54 OR CIS 84			X	X	X	X		X
COEN 11/11L	CIS 59			X	X	X			X
COEN 12/12L	CIS 55			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

San Jose City College Course	SCU course equivalency
Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
CHEM 1B: General Chemistry w/Lab	CHEM 12&50
CHEM 12A: Organic Chemistry w/Lab	CHEM 31
CHEM 12B: Organic Chemistry w/Lab	CHEM 33 (If CHEM 12A & 12B completed, equates to SCU's CHEM 31, 32 & 33)
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32
Engineering:	
ENGR 33: Circuit Analysis	ELEN 50/50L
ENGR 6: Engineering Graphics	MECH 10L (*Medical Device track)
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106

CIVIL ENGINEERING MAJOR REQUIREMENTS

San Jose City College Course	SCU course equivalency
Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32
GEOL 10/10L: Physical Geology w/Lab	CENG 20/20L
Engineering:	
ENGR 6: Engineering Graphics	CENG 7/7L
ENGR 32: Statics	CENG 41
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106

COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS

San Jose City College Course	SCU course equivalency
Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32
Engineering:	
ENGR 33: Circuit Analysis	ELEN 50/50L
CIS 24C: Python Programming OR CIS 54: C/C++ Programming OR CIS 84: Java Programming	COEN 10/10L
CIS 59: Object Oriented Design and Programming	COEN 11/11L
CIS 55: Data Structures	COEN 12/12L
MATH 70: Discrete Mathematics	COEN 19 or MATH 51
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106
MATH 79: Linear Algebra	MATH 53

ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS

San Jose City College Course	SCU course equivalency
Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32
Engineering:	
ENGR 33: Circuit Analysis	ELEN 50/50L
CIS 24C: Python Programming OR CIS 54: C/C++ Programming OR CIS 84: Java Programming	COEN 10/10L
CIS 59: Object Oriented Design and Programming	COEN 11/11L
CIS 55: Data Structures	COEN 12/12L
MATH 70: Discrete Mathematics	COEN 19 or MATH 51
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106
MATH 79: Linear Algebra	MATH 53

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

San Jose City College Course	SCU course equivalency
Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32
Engineering:	
ENGR 33: Circuit Analysis	ELEN 50/50L
ENGR 32: Statics	CENG 41
CIS 24C: Python Programming OR CIS 54: C/C++ Programming OR CIS 84: Java Programming	COEN 10/10L
CIS 59: Object Oriented Design and Programming	COEN 11/11L
CIS 55: Data Structures	COEN 12/12L
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106

GENERAL ENGINEERING MAJOR REQUIREMENTS

San Jose City College Course	SCU course equivalency
Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32
Engineering:	
ENGR 33: Circuit Analysis	ELEN 50/50L
ENGR 6: Engineering Graphics	MECH 10L
ENGR 32: Statics	CENG 41
CIS 24C: Python Programming OR CIS 54: C/C++ Programming OR CIS 84: Java Programming	COEN 10/10L
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106

MECHANICAL ENGINEERING MAJOR REQUIREMENTS

San Jose City College Course	SCU course equivalency
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Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab	CHEM 11
PHYS 4A: General Physics w/Lab	PHYS 31
PHYS 4B: General Physics w/Lab	PHYS 33
PHYS 4C: General Physics w/Lab	PHYS 32
Engineering:	
ENGR 6: Engineering Graphics	MECH 10L & 12L
ENGR 8: Programming and Problem-Solving in MATLAB	MECH 45/45L
ENGR 32: Statics	CENG 41
ENGR 33: Circuit Analysis	ELEN 50/50L
ENGR 38/38L: Materials Science and Engineering w/Lab	MECH 15/15L
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: Multivariable Calculus	MATH 13&14
MATH 78: Differential Equations	MATH 22 or AMTH 106

WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

San Jose City College Course	SCU course equivalency
Natural Science:	
CHEM 1A/1AH: General Chemistry w/Lab (Recommended)	CHEM 11
Engineering:	
CIS 24C: Python Programming OR CIS 54: C/C++ Programming OR CIS 84: Java Programming	COEN 10/10L
CIS 59: Object Oriented Design and Programming	COEN 11/11L
CIS 55: Data Structures	COEN 12/12L
Mathematics:	
MATH 71/71H: Calculus I with Analytic Geometry	MATH 11
MATH 72: Calculus II with Analytic Geometry	MATH 12
MATH 73: 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.