

# *Santa Clara University*

*Undergraduate*

## **School of Engineering**

### **De Anza College Transfer Guide**

*For use by Transfer Applicants*

Use the **TRANSFER CREDIT PLANNER** to map out your transfer credit.

Thank you for your interest in Santa Clara University! This guide has been designed to help make the course-planning process easier for students who wish to transfer to the School of Engineering at Santa Clara University.

#### **Admission Recommendations for Transfer Students:**

##### **School of Engineering:**

**Bachelor of Science** majors: Bioengineering, Civil Engineering, Computer Science & Engineering, Electrical Engineering, General Engineering, Mechanical Engineering, and Web Design & Engineering

##### ***Courses strongly recommended for admission:***

- Two English composition courses ( *aka: Critical Thinking & Writing 1 & 2*)
- Mathematics: MATH 1A and MATH 1B
- One natural science: CHEM 1A
- Two calculus-based physics courses: PHYS 4A and PHYS 4C and/or 4B
  - Web Design Engineering majors are not required to complete CHEM 1A, PHYS 4A & 4C and/or 4B. Complete one course in the Natural Science list.
- GPA 3.5

For additional SCU Transfer Admissions information:

<http://www.scu.edu/ugrad/transfer/>

The following information is provided to help transfer students understand and complete additional Santa Clara University Core Curriculum (General Education) and some major requirements.

## STRUCTURE OF SANTA CLARA UNIVERSITY GENERAL CORE

Below is a visual representation of Santa Clara University Core Curriculum Requirements. Some Core requirements must be met at SCU: Civic Engagement, Religion, Theology & Culture 2, Science, Technology & Society, Religion, Theology & Culture 3, Experiential Learning for Social Justice, Advanced Writing, and Pathways. Moreover, no courses listed in this guide can fulfill more than one Core requirement.



To learn more about Santa Clara University's Core Curriculum learning goals and objectives, [click here](#).

**Note:** Current high school students applying as freshmen may not transfer courses to fulfill Core Critical Thinking & Writing 1 and 2 or Cultures & Ideas 1 and 2 in addition to the Core requirements listed above that must be met at SCU.

**MAXIMUM NUMBER OF TRANSFER UNITS ACCEPTED:**

- Santa Clara University is on a quarter system
  - 1 semester unit is equivalent to 1.5 quarter units
- It is recommended to transfer with 44 or more quarter units of transfer credit (not including AP/IB test credit).
- Students are allowed to transfer in a maximum of one-half of the total quarter units required to graduate in their specific program. The maximum number includes credit transferred from another institution and Advanced Placement and International Baccalaureate test credits.

Academic Division	Minimum number of units required for graduation	Maximum transferrable <b>quarter</b> units	Maximum transferrable <b>Semester</b> Unit equivalency
<b>College of Arts and Sciences</b>	175	87.5	58.33
<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</i>	190	95	63.33
<i>Mechanical Engineering</i>	192	96	96
<i>Web Design and Engineering</i>	175	87.5	58.33

**TRANSFER CREDIT ACCEPTED:**

SCU does not give transfer credit for P/NP, CR, or courses with a grade of C- or lower. Grades are not transferable to SCU, only units. However, awarding of degrees with Latin honors is based on all graded undergraduate courses attempted at SCU and courses taken elsewhere that are used towards the fulfillment of a student's degree. Honors will not be awarded above those merited by the student's record at SCU.

The following courses are not transferrable: most first-year seminars, internships, professional development courses, independent study courses, workshops, most physical education courses, most criminal/administration of justice courses, remedial English and remedial mathematics courses.

Santa Clara University only accepts University of California transferable courses. In addition, SCU does not allow the following De Anza College UC transferrable courses to transfer for credit: some Administration of Justice courses, English as a Second Language, Library, Physical Education, and Physical Education (Adaptive) courses. To view all De Anza College's UC transferable courses, visit [www.assist.org](http://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. The following information will help students evaluate their own course work.

# FOUNDATIONS Core requirements

## Critical Thinking & Writing 1 and 2 Core Requirement:

To fulfill the Critical Thinking & Writing 1 and 2 Santa Clara University Core requirements, a student must complete one course from the Critical Thinking & Writing 1 course list, and one course from the Critical Thinking & Writing 2 course list below. If both requirements are not satisfied prior to enrollment at SCU, students who have completed fewer than 44 quarter units of transfer credit will be required to take the 2 quarter course sequence at SCU. Students who transfer with 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 (any course listed under CTW 2), or who scored a 4 or 5 on the AP English Language exam, may substitute the course placement or the test credit for CTW 1. Students are responsible for submitting the appropriate AP CollegeBoard Report at the time of acceptance to receive such credit.

<b>De Anza College Course</b>
EWRT 1A: Composition and Reading

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

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

<b>De Anza College Course</b>
EWRT 1B: Reading, Writing and Research
EWRT 1C: Literature and Composition
EWRT 2: Critical Reading, Writing and Thinking
PHIL 3: Critical Thinking and Writing
SPCH 9: Argumentation Analysis of Oral and Written

## 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 44 quarter units of transfer credit will be required to take the 2 quarter course sequence at SCU. Students who transfer with 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.

<b>De Anza College Course</b>
ADMJ 1: Intro to Administration of Justice
ADMJ 3: Concepts of Criminal Law
ADMJ 11: Federal Courts and Constitutional Law
ADMJ 29: Cultural Pluralism and American Law and Justice
ARTS 2A: History of Art (Europe from Prehistory- Early Christianity)
ARTS 2B: History of Art (Europe during the Middle Ages and the Renaissance)
ARTS 2C: History of Art (Europe from the Baroque Period – Impressionism)
ARTS 2D: History of Art (Europe and the United States from Post Impressionism to Present)
ARTS 2F: History of Art (Multicultural Arts in the United States)
ARTS 3TD: American Art (Public and Private)
BUS 18: Business Law I
ELIT 48A: Major American Writers (Colonial and Romantic 1620-1865)
ELIT 48B: Major American Writers (The Advent of Realism, 1865- 1914)
ELIT 48C: Major American Writers (The Modern Age, 1914- The Present)
HIST 2: Intro to California Studies
HIST 4A: History of Western Civilization
HIST 4B: History of Western Civilization
HIST 4C: History of Western Civilization
HIST 4D: History of Western Civilization
HIST 9: Women in American History
HIST 10: History of California
HIST 17A: History of the United States to Early National Era
HIST 17B: History of the United States From 1800-1900
HIST 17C: History of the United States From 1900- the Present
HUMI 18: History as Mystery: Western Perspectives in Global Contexts
MUSI 1A: Intro to Music- Music in Western Cultures
MUSI 1C: Intro to Music- World Music in America

PHIL 20A: History of Western Philosophy: Ancient Greece
PHIL 20B: History of Western Philosophy: 1400-1800
PHIL 20C: Philosophy: 1800- the Present
POLI 1: American Government and Politics
POLI 10: Intro to Administration of Justice
POLI 11: Federal Courts and Constitutional Law
POLI 13: Concepts of Criminal Law
ICS 5: History of Art (Multicultural Arts in the United States)
ICS 29: Cultural Pluralism and American Law and Justice
WMST 9: Women in American History

**CULTURES & IDEAS 2:** 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.

<b>De Anza College Course</b>
ANTH 2: Cultural Anthropology
ANTH 4: World Prehistory
ANTH 6: Linguistic Anthropology
ARTS 1B: Architecture Past and Present
ARTS 2G: History of Art (Arts of Asia)
ARTS 2H: History of Art (Native Arts of Mesoamerica and the Andes)
ARTS 2J: History of Art (Africa, Oceania, and...)
ARTS 2K: History of Art (Visual Art of Islam)
ARTS 2L: History of Art (Visual Arts of Africa)
ELIT 22: Mythology and Folklore
ELIT 44: International Literature (Fiction)
F/TV 2CW: Contemporary World Cinema
GEO 10: World Regional Geography
HIST 3A: World History
HIST 3B: World History
HIST 3C: World History
HIST 7A: Colonial Latin American History
HIST 7B: Modern Latin American History
HIST 16A: History of Africa to 1800
HIST 16B: History of Africa from 1800- Present
HIST 19A: History of Asian Civilization: China and Japan (through 18 <sup>th</sup> Century)
HIST 19B: History of Asian Civilization: China and Japan (19 <sup>th</sup> and 21 <sup>st</sup> Centuries)
HIST 28: Social Environmental History
HUMI 9: Intro to Comparative Religion
HUMI 10: Global Religious Perspectives: Judaism, Christianity and Islam
HUMI 13: Intro to Korean Popular Culture
HUMI 14A: Indian Philosophy
HUMI 14B: Chinese Philosophy
HUMI 14C: Japanese Philosophy
ICS 16A: History of Africa to 1800

ICS 16B: History of Africa from 1800- Present
ICS 21: Intro to Pacific Islander History and Culture
ICS 37: Ancient People of Mesoamerica
ICS 38A: Colonial Latin American History
ICS 38B: Modern Latin American History
INTL 5: Global Issues and Perspectives
INTL 8: Sociology of Globalization and Social Change
INTL 10: History of Art (Arts of Asia)
INTL 11: Vietnamese Literature
INTL 13: Intro to Korean Popular Culture
INTL 15: Intro to the Arab World
INTL 19A: History of Asian Civilization: China and Japan (through the 18 <sup>th</sup> C.)
INTL 19B: History of Asian Civilization: China and Japan (19 <sup>th</sup> and 21 <sup>st</sup> Centuries)
INTL 21: History of Art (Native Arts of Mesoamerica and South America)
INTL 22: History of Art (Africa, Oceania, and...)
INTL 23: History of Art (Visual Arts of Islam)
INTL 24: History of Art (Visual Arts of Africa)
INTL 30: Intro to Islamic Studies
PHIL 14A: Indian Philosophy
PHIL 14B: Chinese Philosophy
PHIL 14C: Japanese Philosophy
PHIL 24: Philosophy of Religion
POLI 2: Comparative Politics
POLI 3: International Relations
SOC 5: Sociology of Globalization and Social Change
SOC 8: Sociology of Religion

## 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 1A and MATH 1B***

*To fulfill the admissions mathematics requirement, complete MATH 1A and MATH 1B 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).*

De Anza College Course	Equates to	SCU Course
MATH 1A: Calculus		MATH 11
MATH 1B: Calculus		MATH 12

MATH 1C: Calculus		MATH 13
MATH 1D: Calculus		MATH 14
MATH 2A: Differential Equations		MATH 22
MATH 2B: Linear Algebra		MATH 53
MATH 22: Discrete Mathematics		MATH 51 or COEN 19

*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 44 quarter units of transfer credit. Students transferring with more than 44 quarter units of transfer credit will be exempt from this requirement.*

Students transferring with less than 44 quarter units of transfer credit may choose to 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.

<b>De Anza College Course</b>
HUMI 9: Introduction to Comparative Religions
HUMI 10: Global Religious Perspectives: Judaism, Christianity, and Islam

*Note: The 'transferring with more than 44 quarter unit of transfer credit for the RTC 1 exemption rule does not apply to freshmen applicants.*

## EXPLORATIONS Core requirements

**ETHICS:** Complete one course from the list below.

Note: Students accepted in the Leavey School of Business are required to fulfill the Ethics requirement at SCU. Refer to Leavey School of Business Transfer Guide for specific Core and School requirements.

<b>De Anza College Course</b>
Phil 8: 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.

<b>De Anza College Course</b>
ADMJ 29: Cultural Pluralism and American Law and Justice
ARTS 2F: History of Art (Multicultural Arts in the United States)
EDUC 1: Introduction to Elementary Education in a Diverse Society
ELIT 6: Cinema and the African American (An historical Analysis of African Americans in...)
ELIT 24: Asian American Literature
F/TV48: Cinema and the African American (An historical Analysis of African Americans in...)
HIST 9: Women in American History
HIST 10: History of California
HIST 18A: African American History Before 1865
HIST 18B: African American History Since 1865
ICS 5: History of Art (Multicultural Arts in the United States)
ICS 7: Intercultural Communication
ICS 8: Women of Color in the USA
ICS 9: Exploring Race and Ethnic Relations (Former: Studying Race and Ethnicity...")
ICS 10: Intro to African American Studies
ICS 11: The Roots of the African American Experience
ICS 12: Intro to African American Literature
ICS 14: Cinema and the African American (An historical Analysis of African Americans in...)
ICS 18A: African American History Before 1865
ICS 18B: African American History After 1865
ICS 20: Asian American Experience in History
ICS 24: Asian American Literature
ICS 26: Intro to Lesbian, Gay, Bisexual and Transgender Studies
ICS 29: Cultural Pluralism and America Law and Justice
ICS 30: Intro to Chicano Studies
ICS 31: Chicano Culture
ICS 32: Chicano History
ICS 41: American Indians in Contemporary Society
ICS 43: U.S. History from an American Indian Perspective
ICS 44: American Indian Religions
POLI 15: Grassroots Democracy: Race, Politics and the American Promise
SOC 4: Race, Ethnicity and Inequality
SOC 20: Social Problems
WMST 8: Women of Color in the USA
WMST 9: Women in American History

## 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 Core Arts requirement.*

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

*Admission recommendation: Complete CHEM 1A; PHYS 4A & 4C and/or 4B.*

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

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

*Engineering majors at SCU require the completion of more than one science course (see table at the end of this document for additional courses to complete per major).*

When a De Anza 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.

De Anza College Course	SCU Course Equivalency
ANTH 1/1L: Physical Anthro/ Physical Anthro Lab	ANTH 1
ASTR 4/15L: Solar System Astro/Astro Lab	TRCR 18
ASTR 10/15L: Stellar Astro/Astro Lab	TRCR 18
BIOL 5: Biology of Birds	TRCR 18
BIOL 6A: Form and Function in the Biologic World	BIOL 21
BIOL 6B: Cell and Molecular Biology	BIOL 24 and BIOL 25
BIOL 6C: Evolution and Ecology	BIOL 22 and BIOL 23
BIOL 10: Intro Biology	TRCR 18
BIOL 11: Human Biology	TRCR 18
BIOL 13: Marine Biology	TRCR 18
BIOL 15: California Ecology	TRCR 18
BIOL 26: Intro Microbiology	TRCR 18
BIOL 40A: Human Anatomy and Physiology	BIOL 21
BIOL 40B: Human Anatomy and Physiology	BIOL 21
BIOL 40C: Human Anatomy and Physiology	BIOL 21
CHEM 1A: General Chemistry	CHEM 11
CHEM 1B: General Chemistry	CHEM 12
CHEM 1C: General Chem and Qualitative Analysis	CHEM 13
CHEM 10: Introductory Chemistry	TRCR 18
CHEM 12A: Organic Chemistry	CHEM 31

CHEM 12B: Organic Chemistry	CHEM 32
CHEM 12C: Organic Chemistry	CHEM 33
CHEM 30A: Intro to Genl, Organic and Biochem I	TRCR 18
CHEM 30B: Intro to Gen, Organic and Biochem II	TRCR 18
ESCI 1/1L: Environmental Science/EnvironSci Lab	ENVS 21
ESCI 19: Environmental Biology	TRCR 18
ESCI 20: Intro to Biodiversity	TRCR 18
ESCI 21: Biodiversity 2	TRCR 18
ESCI 30: Conservation Biology	TRCR 18
GEOL 10: Intro Geology	CENG 20/20L
MET 10 and 10L or 20L: Weather and Climate Processes/ Meteorology Lab or Climate Stud Lab	TRCR 18
PHYS 2A: General Intro Physics	PHYS 11
PHYS 2B: General Intro Physics	PHYS 12
PHYS 2C: General Intro Physics	PHYS 13
PHYS 4A: Physics for Sci and Enginrs: Mechanics	PHYS 31
PHYS 4B: Physics for Sci and Enginrs: Elect/ Magn	PHYS 33
PHYS 4C: Physics for Sci and Enginrs: Fluids, Wav, Opt & Ther	PHYS 32
PHYS 4D: Physics for Sci and Enginrs: Mod Phys	PHYS 34

**SOCIAL SCIENCE:** Complete one course from list below.

*Note: Students accepted in the Leavey School of Business take ECON 1 or ECON 2 to satisfy the Social Science requirement. Refer to Leavey School of Business Transfer Guide for specific core and school requirements.*

Transfer courses cannot fulfill more than one Santa Clara Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

<b>De Anza College Course</b>
ADMJ 25 Law and Social Change
ANTH 2: Cultural Anthropology
ANTH 3: Intro to Archaeology
ECON 1: Principles of Macroeconomics
ECON 2: Principles of Microeconomics
EDUC 1: Intro to Elem Educ in a Diverse Society
ICS 28: Social Environmental History
INTL 8: Sociology of Globalization and Social Change
POLI 2: Comparative Politics
PSYC 1: General Psychology
PSYC 8: Introduction to Social Psychology
SOC 1: Introduction to Sociology
SOC 5: Sociology of Globalization and Social Change
SOC 8: Sociology of Religion

SOC 20: Social Problems
SOC 25: Law and Social Change
SOC 28: Sociology of Women and Men
SOC 35: Marriage, Family and Intimate Relationships
WMST 28: Sociology of Women and Men

**RELIGION, THEOLOGY & CULTURE 2:** Must be completed at Santa Clara University.

**CULTURES & IDEAS 3:** Complete one course from the list below.

Transfer courses cannot fulfill more than one Santa Clara Core requirement. If you already took a course listed below to satisfy a different requirement, you will want to choose a different course to complete.

Note: Students accepted in the Leavey School of Business fulfill the Cultures and Ideas 3 requirement at SCU. Refer to Leavey School of Business Transfer Guide for specific core and school requirements.

De Anza College Course
ANTH 2: Cultural Anthropology
ANTH 4: World Prehistory
ANTH 6: Linguistic Anthropology
ARTS 1B: Architecture Past and Present
ARTS 2G: History of Art (Arts of Asia)
ARTS 2H: History of Art (Native Arts of Mesoamerica and the Andes)
ARTS 2J: History of Art (Africa, Oceania, and...)
ARTS 2K: History of Art (Visual Art of Islam)
ARTS 2L: History of Art (Visual Arts of Africa)
ELIT 22: Mythology and Folklore
ELIT 44: International Literature (Fiction)
F/TV 2CW: Contemporary World Cinema
GEO 10: World Regional Geography
HIST 3A: World History
HIST 3B: World History
HIST 3C: World History
HIST 7A: Colonial Latin American History
HIST 7B: Modern Latin American History
HIST 16A: History of Africa to 1800
HIST 16B: History of Africa from 1800- Present
HIST 19A: History of Asian Civilization: China and Japan (through 18 <sup>th</sup> Century)
HIST 19B: History of Asian Civilization: China and Japan (19 <sup>th</sup> and 21 <sup>st</sup> Centuries)
HIST 28: Social Environmental History
HUMI 9: Intro to Comparative Religion
HUMI 10: Global Religious Perspectives: Judaism, Christianity and Islam
HUMI 13: Intro to Korean Popular Culture

HUMI 14A: Indian Philosophy
HUMI 14B: Chinese Philosophy
HUMI 14C: Japanese Philosophy
ICS 16A: History of Africa to 1800
ICS 16B: History of Africa from 1800- Present
ICS 21: Intro to Pacific Islander History and Culture
ICS 37: Ancient People of Mesoamerica
ICS 38A: Colonial Latin American History
ICS 38B: Modern Latin American History
INTL 5: Global Issues and Perspectives
INTL 8: Sociology of Globalization and Social Change
INTL 10: History of Art (Arts of Asia)
INTL 11: Vietnamese Literature
INTL 13: Intro to Korean Popular Culture
INTL 15: Intro to the Arab World
INTL 19A: History of Asian Civilization: China and Japan (through the 18 <sup>th</sup> C.)
INTL 19B: History of Asian Civilization: China and Japan (19 <sup>th</sup> and 21 <sup>st</sup> Centuries)
INTL 21: History of Art (Native Arts of Mesoamerica and South America)
INTL 22: History of Art (Africa, Oceania, and...)
INTL 23: History of Art (Visual Arts of Islam)
INTL 24: History of Art (Visual Arts of Africa)
INTL 30: Intro to Islamic Studies
PHIL 14A: Indian Philosophy
PHIL 14B: Chinese Philosophy
PHIL 14C: Japanese Philosophy
PHIL 24: Philosophy of Religion
POLI 2: Comparative Politics
POLI 3: International Relations
SOC 5: Sociology of Globalization and Social Change
SOC 8: Sociology of Religion

**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 less than 44 quarter units of transfer credit must take 4 courses to fulfill the pathways requirement. However, students transferring in with more than 44 quarter units will complete 3 courses to fulfill the Core Pathways requirement.*

## ADDITIONAL SCHOOL OF ENGINEERING REQUIREMENTS PER MAJOR

The following courses allow students to complete additional School of Engineering requirements.

### BIOENGINEERING MAJOR REQUIREMENTS

De Anza College Course	SCU course equivalency
<b>Natural Science:</b>	
BIOL 6A: Form and Function in the Biol Wrld	BIOL 21
BIOL 6C: Evolution and Ecology	BIOL 22/23
BIOL 6B: Cell and Molecular Biology	BIOL 24/25
CHEM 1A: General Chemistry	CHEM 11
CHEM 1B: General Chemistry	CHEM 12
CHEM 1C: General Chemistry	CHEM 13
CHEM 12A: Organic Chemistry	CHEM 31
CHEM 12B: Organic Chemistry	CHEM 32
CHEM 12C: Organic Chemistry	CHEM 33
PHYS 4A: Physics for Scientists and Engineers	PHYS 31
PHYS 4C: Physics for Scientists and Engineers	PHYS 32
PHYS 4B: Physics for Scientists and Engineers	PHYS 33
<b>Engineering:</b>	
ENGR 10: Introduction to Engineering	ENGR 1
ENGR 37: Intro to Circuit Analysis	ELEN 50/50L
<i>No course equivalency determined</i>	MECH 10/10L
CIS 15AG : Computer Program Using C	COEN 44/44L
<b>Mathematics:</b>	
MATH 1A: Calculus	MATH 11
MATH 1B: Calculus	MATH 12
MATH 1C: Calculus	MATH 13
MATH 1D: Calculus	MATH 14

MATH 2A: Differential Equations	MATH 22
---------------------------------	---------

### CIVIL ENGINEERING MAJOR REQUIREMENTS

De Anza College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Physics for Scientists and Engineers	PHYS 31
PHYS 4C: Physics for Scientists and Engineers	PHYS 32
PHYS 4B: Physics for Scientists and Engineers	PHYS 33
GEOL 10: Intro Geology	CENG 20/20L
<b>Engineering:</b>	
ENGR 10: Introduction to Engineering	ENGR 1
ENGR 37: Intro to Circuit Analysis	ELEN 50/50L
ENGR 35: Statics	CENG 41
<b>Mathematics:</b>	
MATH 1A: Calculus	MATH 11
MATH 1B: Calculus	MATH 12
MATH 1C: Calculus	MATH 13
MATH 1D: Calculus	MATH 14
MATH 2A: Differential Equations	MATH 22

### COMPUTER SCIENCE & ENGINEERING

De Anza College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Physics for Scientists and Engineers	PHYS 31
PHYS 4C: Physics for Scientists and Engineers	PHYS 32
PHYS 4B: Physics for Scientists and Engineers	PHYS 33
<b>Engineering:</b>	
ENGR10: Introduction to Engineering	ENGR 1
ENGR 37: Intro to Circuit Analysis	ELEN 50/50L
CIS 15AG: Intro to Comp Program Using C	COEN 10/10L (or CSCI 10)
CIS 15BG: Interm Problem Solving in C	COEN 11/11L (or CSCI 60)
CIS 15C: Data Structures	COEN 12/12L (or CSCI 61)
MATH 22: Discrete Mathematics	COEN 19
<b>Mathematics:</b>	
MATH 1A: Calculus	MATH 11
MATH 1B: Calculus	MATH 12
MATH 1C: Calculus	MATH 13
MATH 1D: Calculus	MATH 14
MATH 2A: Differential Equations	MATH 22
MATH 2B: Linear Algebra	MATH 53

**ELECTRICAL ENGINEERING**

<b>De Anza College Course</b>	<b>SCU course equivalency</b>
<b>Natural Science:</b>	
BIOL 6A: Form and Function in the Biol Wrld	BIOL 21
CHEM 1A: General Chemistry	CHEM 11
CHEM 1B: General Chemistry	CHEM 12
CHEM 1C: General Chemistry	CHEM 13
PHYS 4A: Physics for Scientists and Engineers	PHYS 31
PHYS 4C: Physics for Scientists and Engineers	PHYS 32
PHYS 4B: Physics for Scientists and Engineers	PHYS 33
PHYS 4D: Physics for Sci and Enginrs: Mod	PHYS 34
<b>Engineering:</b>	
ENGR 10: Introduction to Engineering	ENGR 1
ENGR 35: Statics	CENG 41
ENGR 37: Intro to Circuit Analysis	ELEN 50/50L
CIS 15BG: Interm Problem Solving in C	COEN 11/11L
CIS 15C: Data Structures	COEN 12/12L
<b>Mathematics:</b>	
MATH 1A: Calculus	MATH 11
MATH 1B: Calculus	MATH 12
MATH 1C: Calculus	MATH 13
MATH 1D: Calculus	MATH 14
MATH 2A: Differential Equations	MATH 22

**GENERAL ENGINEERING**

<b>De Anza College Course</b>	<b>SCU course equivalency</b>
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Physics for Scientists and Engineers	PHYS 31
PHYS 4C: Physics for Scientists and Engineers	PHYS 32
PHYS 4B: Physics for Scientists and Engineers	PHYS 33
<b>Engineering:</b>	
ENGR 10: Introduction to Engineering	ENGR 1
ENGR 35: Statics	CENG 41
ENGR 37: Intro to Circuit Analysis	ELEN 50/50L
CIS 15AG: Intro to Comp Program Using C	COEN 10/10L
<i>No approved De Anza course equivalency</i>	MECH 10/10L
<i>No approved De Anza course equivalency</i>	MECH 11
<i>No approved De Anza course equivalency</i>	MECH 15/15L
<b>Mathematics:</b>	
MATH 1A: Calculus	MATH 11
MATH 1B: Calculus	MATH 12
MATH 1C: Calculus	MATH 13
MATH 1D: Calculus	MATH 14
MATH 2A: Differential Equations	MATH 22



**MECHANICAL ENGINEERING**

De Anza College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Physics for Scientists and Engineers	PHYS 31
PHYS 4C: Physics for Scientists and Engineers	PHYS 32
PHYS 4B: Physics for Scientists and Engineers	PHYS 33
<b>Engineering:</b>	
ENGR 10: Introduction to Engineering	ENGR 1
ENGR 37: Intro to Circuit Analysis	ELEN 50/50L
ENGR 35: Statics	CENG 41
CIS 15AG : Computer Program Using C	COEN 44/44L
<i>No approved De Anza course equivalency</i>	MECH 10/10L
<i>No approved De Anza course equivalency</i>	MECH 11
<i>No approved De Anza course equivalency</i>	MECH 15/15L
<b>Mathematics:</b>	
MATH 1A: Calculus	MATH 11
MATH 1B: Calculus	MATH 12
MATH 1C: Calculus	MATH 13
MATH 1D: Calculus	MATH 14
MATH 2A: Differential Equations	MATH 22

**WEB DESIGN AND ENGINEERING**

De Anza College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry ( <i>Recommended</i> )	CHEM 11
<b>Engineering:</b>	
ENGR 10 : Introduction to Engineering	ENGR 1
CIS 15BG: Interm Problem Solving in C	COEN 11/11L
CIS 15C: Data Structures	COEN 12/12L
<b>Mathematics:</b>	
MATH 1A: Calculus	MATH 11
MATH 1B: Calculus	MATH 12
MATH 1C: Calculus	MATH 13
MATH 1D: Calculus	MATH 14

**Additional notes:**

- Consult the current Undergraduate Bulletin for Advanced Placement and International Baccalaureate test credit equivalencies at: <http://www.scu.edu/academics/bulletins/undergraduate/>
- Consult the Santa Clara University Undergraduate Bulletin for additional requirements in a major. The Bulletin can be found at: <http://www.scu.edu/academics/bulletins/undergraduate/>

- Once students are admitted to Santa Clara University, they must abide by the policies, regulations and other requirements outlined in the Undergraduate Bulletin for their cohort year.
- **Per policy, transfer credit earned after enrollment at SCU cannot satisfy University Core, major or minor requirements.** Refer to the SCU Undergraduate Bulletin for additional transfer credit restrictions at:  
<http://www.scu.edu/academics/bulletins/undergraduate/>
- This guide is to be used by transfer applicants, not freshmen applicants. Admitted freshmen must complete the following Core requirements at SCU: Critical Thinking & Writing 1 and 2; Cultures & Ideas 1 and 2; Religion Theology & Culture 1 (unless transfer credit for a course was preapproved to fulfill the Core RTC 1 requirement); Civic Engagement; Religion, Theology & Culture 2 and 3 (taken in sequence order after RTC 1 is completed); Science, Technology & Society; Experiential Learning for Social Justice; Advanced Writing; and four Pathway courses.

For questions regarding transfer credit or AP/IB test Credit, contact Sheli Whiting, Transfer Record Analyst at: [swhiting@scu.edu](mailto:swhiting@scu.edu).

Disclosure: The information contained in this document is to be used as a guide for the purpose of admissions into Santa Clara University. This information is reviewed periodically and the date of the most recent update is noted in the bottom right-hand corner of this guide. Students are responsible to make sure that any courses taken are listed on this guide at the time of actual enrollment. Transferability is not guaranteed and is up to our discretion, largely based upon the Santa Clara University core curriculum in effect at the time of admission.

Santa Clara University

School of Engineering

TRANSFER CREDIT PLANNER CHECK-SHEET

\*Admission recommendations

University Core Requirement Course Completed or IP (In Progress)

FOUNDATIONS

- Critical Thinking & Writing 1\*
Critical Thinking & Writing 2\*
Cultures & Ideas 1
Cultures & Ideas 2
Mathematics\*
Religion Theology & Culture 1

(Students transferring with more than 44 quarter units of transfer credit will be exempt from this requirement.)

EXPLORATIONS

- Ethics
Civic Engagement
Diversity: U.S. Perspectives
Arts
Natural Science w/Lab\*
Social Science
Religion, Theology & Culture 2
Cultures & Ideas 3
Science, Technology & Society
Religion, Theology & Culture 3

INTEGRATIONS

- E LSJ
Advanced Writing
Pathways

SCHOOL OF ENGINEERING REQUIREMENTS

(Refer to the individual major charts on pages 14-17 of transfer guide)

Engineering School Requirement Course completed or IP (In Progress)

MATHEMATICS\*

- Calculus (1st Qtr)\*
Calculus (2nd Qtr)\*
Calculus (3rd Qtr)
Calculus (4th Qtr)
Differential Equations

NATURAL SCIENCE\*

- General Chemistry\*
General Chemistry
Physics for Scientists\*
Physics for Scientists\*
Physics for Scientists
Modern Physics

ADDITIONAL ENGINEERING MAJOR Requirements

- Intro to Engineering
Intro to Circuit Analysis
Engineering Graphics
Programming
Programming

Total Quarter UNITS

Note: Refer to the chart listing the maximum number of units allowed to transfer (including AP/IB test credit) per major.