

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**

# **Diablo Valley 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 192 and MATH 193
- One natural science course with a lab: CHEM 120
- Two Calculus-based Physics courses: PHYS 130 and PHYS 230
  - Web Design Engineering majors are not required to complete CHEM 120, PHYS 130 & 230. Complete one course in the Natural Science list.
- GPA 3.5

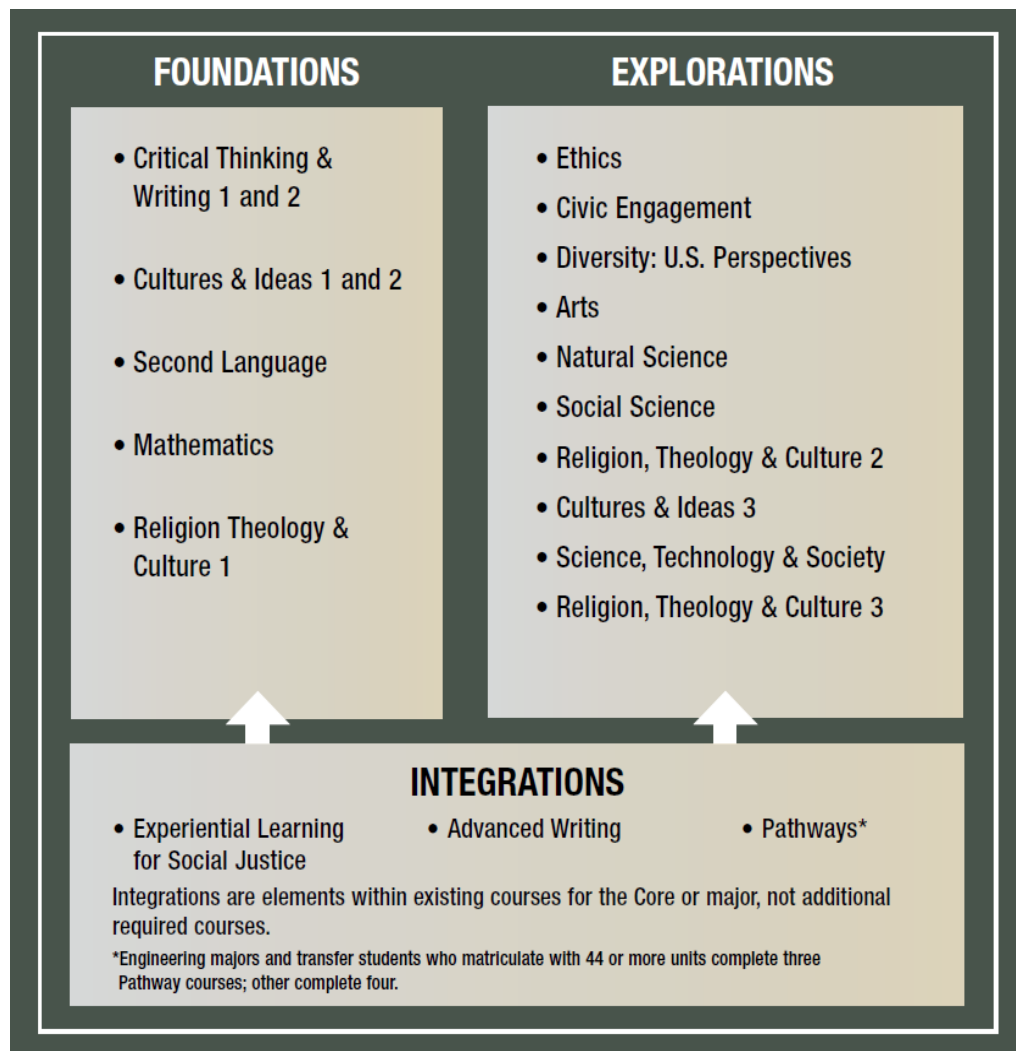
For additional SCU Transfer Admissions information:

<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 <b>Quarter</b> units	Maximum transferrable <b>Semester</b> unit equivalency
<b>College of Arts and Sciences</b>	175	87.5	58.33
<b>College of Arts and Sciences:</b> <i>Engineering Physics</i>	193	96.5	64.33
<b>Leavey School of Business</b>	175	87.5	58.33
<b>School of Engineering:</b>			
<i>Bioengineering</i>	191	95.5	63.66
<i>Civil Engineering</i>	195	97.5	65
<i>Computer Science &amp; Engineering and General Engineering</i>	189	94.5	63
<i>Electrical Engineering and Electrical &amp; Computer Engineering</i>	190	95	63.33
<i>Mechanical Engineering</i>	192	96	64
<i>Web Design and Engineering</i>	175	87.5	58.33

**TRANSFER CREDIT ACCEPTED:**

SCU does not give transfer credit for P/NP, CR, or courses with a grade of C- or lower. Grades are not transferable to SCU, only units.

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

Santa Clara University only accepts University of California transferable courses. In addition, SCU does not allow the following Diablo Valley College UC transferable courses to transfer for credit: most Architecture, Construction, some Counseling, some Health Science, Horticulture, most Kinesiology, Kinesiology–Activity, Combative, and Intercollegiate courses. To view all Diablo Valley 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. However, the following information will help students evaluate their own course work.

# FOUNDATIONS Core requirements

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

To fulfill the Critical Thinking & Writing (CTW) 1 and 2 Santa Clara University Core requirements, a student must complete one course from the Critical Thinking & Writing 1 course list, and one course from the Critical Thinking & Writing 2 course list below. If both requirements are not satisfied prior to enrollment at SCU, students who have completed fewer than 30 semester units (or 44 quarter units) of transfer credit will be required to take the 2-quarter course sequence at SCU. Students who transfer with 30 or more semester units (or 44 or more quarter units) of transfer credit and have fulfilled the CTW 1 but not the CTW 2 requirement will be required to complete an additional course at SCU to satisfy the CTW 2 requirement.

### CRITICAL THINKING & WRITING 1: Complete one course from list below.

*Admission recommendation: Complete Critical Thinking and Writing 1 Core requirement*

Exceptions for taking a course listed below to satisfy CTW 1: Students placed into the 2<sup>nd</sup> college level English, or who scored a 4 or 5 on the AP English Language exam, may substitute the course placement or the test credit for CTW 1. Students are responsible for submitting the appropriate official AP CollegeBoard Report at the time of acceptance to receive such credit.

Diablo Valley College Course
ENGL 122: First-year College Composition and Reading

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

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

Diablo Valley College Course
COMM 121: Persuasion and Critical Thinking
ENGL 123: Critical Thinking: Composition and Literature
ENGL 126: Critical Thinking: The Shaping of Meaning in Language

## 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.

Diablo Valley College Course
ADJUS 120: Introduction to the Administration of Justice
ARCHI 160: History of American Architecture
ARTHS 195: History of Prehistoric and Ancient Art
ARTHS 196: History of Medieval and Renaissance Art
ARTHS 197: History of Baroque to Early 20 <sup>th</sup> Century Art
DANCE 201: Western Culture Dance History: 20th Century to Present
DRAMA 142: Multi-cultural Perspective in American Theater
ENGL 168: The Literatures of America
ENGL 262: Survey of Early American Literature
ENGL 263: Survey of Late American Literature
FTVE 280: American Cinema 1900-1950
FTVE 282: American Cinema 1950 to the Present
HIST 120: History of the United States before 1865
HIST 121: History of the United States after 1865
HIST 124: History of California
HIST 125: History of the United States: A Mexican American Perspective
HIST 126: The American West
HIST 127: African American Perspective History of the US to 1865
HIST 128: African American Perspective History of the US after 1865
HIST 140: History of Western Civilization to the Renaissance
HIST 141: History of Western Civilization since the Renaissance
HIST 142: Contemporary European History
HIST 170: History of Women in the United States
HIST 171: History of Women in the United States

HUMAN 110: Humanities: Ancient Civilizations
HUMAN 111: Humanities: The Middle Ages and Renaissance
HUMAN 115: Intro to Humanities- The American Multicultural Experience
MUSIC 110: Music Appreciation
PHILO 224: History of Western Philosophy: Pre-Socratic to Medieval Period
PHILO 225: History of Western Philosophy: Descartes to Present
POLSC 120: Introduction to Politics
POLSC 121: Introduction to United States Government
POLSC 122: Latinx Politics and American Government
POLSC 123: Black Politics and American Government
POLSC 151: California Politics
SOCSC 110: The American Soc Experience
SOCSC 111: Money, Power and Politics in the United States
SOCIO 121: Intro to Social Problems

**CULTURES & IDEAS 2:** Complete one course from list below.

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

<b>Diablo Valley College Course</b>
ANTHR 130: Cultural Anthropology
ARCHI 156: History of World Architecture- Early Civilizations to Middle Ages
ARCHI 157: History of World Architecture- Middle Ages to 18 <sup>th</sup> Century
ARCHI 158: History of World Architecture- 18 <sup>th</sup> Century to Present
ARTHS 193: History of Asian Art
ARTHS 199: Contemporary Art History
ENGL 167: Latin American Literature
ENGL 170: World Mythology
ENGL 272: Survey of Early World Literature
ENGL 273: Survey of Late World Literature
FTVE 281: World Cinema 1900-1960
FTVE 283: World Cinema 1960 to the Present
GEOG 130: Cultural Geography
GEOG 135: World Regional Geography
HIST 135: History of Latin America
HIST 136: History of Latin America – The National Period
HIST 150: History of East Asia (to 1600)
HIST 151: History of East Asia (from 1600 to Present)
HIST 180: World History to 1500
HIST 181: World History since 1500
HUMAN 112: Humanities: The Modern World
HUMAN 116: The Arts and Culture of Asia

MUSIC 114: World Music
MUSIC 115: Music of the Middle East, North Africa and South Asia
MUSX 110: History of Electronic Music
PHILO 220: Comparative Religion
POLSC 220: Comparative Politics
POLSC 250: 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 192 and MATH 193**

To fulfill the admission mathematics requirement, complete both MATH 192 and MATH 193 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).

Diablo Valley College Course	SCU Course Equivalency
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 194: Linear Algebra	MATH 53
MATH 195: Discrete Mathematics	MATH 51 or COEN 19
MATH 292: Analytic Geometry and Calculus III	MATH 13&14
MATH 294: Differential Equations	MATH 22 or AMTH 106

**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.

<b>Diablo Valley College Course</b>
<i>No approved Diablo Valley College Course at time of publication</i>

*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.

<b>Diablo Valley College Course</b>
ADJUS 126: Leadership and Ethics
PHILO 122: 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.

<b>Diablo Valley College Course</b>
ADJUS 130: Cultural Diversity in Criminal Justice
ANTHR 135: Native Americans
COMM 125: Intercultural Communication
DRAMA 142: Multi-Cultural Perspective in American Theater

ENGL 163: Asian American Literature
ENGL 164: Native American Literatures
ENGL 166: African American Literature
ENGL 167: Latin American Literature
ENGL 173: Queer Literature Across Cultures
ENGL 190: Multicultural Literature by American Women
ENGL 225: Creative Nonfiction Writing
FTVE 200: American Cinema/American Culture
FTVE 210: American Ethnic Cultures in Film
FTVE 260: Ethnic Images in United States (U.S.) Television
HIST 125: History of the United States- A Mexican American Perspective
HIST 127: African American Perspective History of the US to 1865
HIST 128: African American Perspective History of the US after 1865
HIST 129: History of Asian and Pacific Islanders in the United States
HIST 170: History of Women in the United States before 1877
HIST 171: History of Women in the United States after 1865
HUMAN 115: Humanities: The Multicultural American Experience
HUMAN 123: Humanities: American Popular Culture
MUSIC 112: America's Music: A Multicultural Perspective
PSYCH 140: Psychology of African-Americans in a Multicultural Society
PSYCH 141: Psychology of Latinos/Chicanos in the U.S.
SOCSC 110: The American Social Experience
SOCSC 111: Money, Power and Politics in the United States
SOCSC 120: Women and Social Change in the United States 1890-Present
SOCSC 123: American Popular Culture
SOCSC 220: Women in United States Society
SOCIO 121: Intro to Social Problems
SOCIO 135: Introduction to Race and Ethnicity

## 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 120; PHYS 130 & 230**

*(Note: Web Design & Engineering major completes one course to satisfy Natural Science core requirement. It is recommended to complete CHEM 120.)*

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 Diablo Valley 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.*

<b>Diablo Valley College Course</b>	<b>SCU Course Equivalency</b>
ANTHR 126: Introduction to Archaeological Field Methods w/Lab	TRCR 18
ANTHR 140/141L: Biological Anthropology w/Lab	TRCR 18
ASTRO 110/130: The Visible Universe w/Lab	TRCR 18
ASTRO 120/130: Elementary Astronomy w/Lab	TRCR 18
ASTRO 128: The Universe for Beginners w/Lab	TRCR 18
BIOSC 102: Fundamentals of Biological Science w/Lab	TRCR 18
BIOSC 107: Genetics and Evolution w/Lab	TRCR 18
BIOSC 117: Human Biology w/Lab	TRCR 18
BIOSC 119: Fundamentals of Microbiology w/Lab	TRCR 18
BIOSC 120: Introduction to Human Anatomy and Physiology w/Lab	TRCR 18
BIOSC 126: Ecology and Field Biology w/Lab	TRCR 18
BIOSC 130: Principles of Cellular and Molecular Biology w/Lab	TRCR 18
BIOSC 131: Principles of Organismal Biology, Evolution and Ecology w/Lab	TRCR 18
BIOSC 139: Human Anatomy w/Lab	TRCR 18
BIOSC 140: Human Physiology w/Lab	TRCR 18
BIOSC 146: Principles of Microbiology w/Lab	TRCR 18
BIOSC 162: Fundamentals of Marine Biology with Laboratory	TRCR 18
BIOSC 171: Environmental Science with Laboratory	ENVS 21
CHEM 106: Chemistry for Non-Science Majors w/Lab	TRCR 18
CHEM 107: Integrated Inorganic, Organic, and Biological Chemistry	TRCR 18
CHEM 108: Introductory Chemistry w/Lab	TRCR 18
CHEM 109: Introduction to Organic and Biochemistry w/Lab	CHEM 8
CHEM 120: General College Chemistry I w/Lab	CHEM 11
CHEM 121: General College Chemistry II w/Lab	CHEM 12&50
CHEM 226: Organic Chemistry I w/Lab	CHEM 31
CHEM 227: Organic Chemistry II w/Lab	CHEM 33 (If CHEM 226 & 227 completed, equates to SCU's CHEM 31, 32 & 33)
GEOG 120/121: Physical Geography w/Lab	TRCR 18

GEOG 140/141: Introduction to Weather w/Lab	TRCR 18
GEOL 120/122: Physical Geology w/Lab	TRCR 18 or CENG 20/20L
GEOL 121/124: Earth and Life Through Time w/Lab	TRCR 18
GEOL 130: Earth Science w/Lab	TRCR 18
OCEAN 102: Fundamentals of Oceanography w/Lab	TRCR 18
PHYS 110/111: Elementary Physics w/Lab	TRCR 18
PHYS 120: General College Physics I w/Lab	PHYS 11
PHYS 121: General College Physics II w/Lab	PHYS 13 (If PHYS 120 & 121 completed, equates to SCU's PHYS 11,12 & 13)
PHYS 129: Introductory Physics for Engineers w/Lab	TRCR 18
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion w/Lab	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism w/Lab	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
PHYS 231: Physics for Engineers and Scientists C: Optics and Modern Physics w/Lab	PHYS 34

**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.

<b>Diablo Valley College Course</b>
ANTHR 125: Introduction to Archaeology and Prehistory
ANTHR 130: Cultural Anthropology
ECON 101: Economics of Public Issues
ECON 220: Principles of Macroeconomics
ECON 221: Principles of Microeconomics
POLSC 220: Comparative Politics
PSYCH 101: Introduction to Psychology
PSYCH 225: Social Psychology
SOCIO 120: Introduction to Sociology

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

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

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

<b>Diablo Valley College Course</b>
ANTHR 130: Cultural Anthropology
ARCHI 156: History of World Architecture- Early Civilizations to Middle Ages
ARCHI 157: History of World Architecture- Middle Ages to 18 <sup>th</sup> Century
ARCHI 158: History of World Architecture- 18 <sup>th</sup> Century to Present
ARTHS 193: History of Asian Art
ARTHS 199: Contemporary Art History
ENGL 167: Latin American Literature
ENGL 170: World Mythology
ENGL 272: Survey of Early World Literature
ENGL 273: Survey of Late World Literature
FTVE 281: World Cinema 1900-1960
FTVE 283: World Cinema 1960 to the Present
GEOG 130: Cultural Geography
GEOG 135: World Regional Geography
HIST 135: History of Latin America
HIST 136: History of Latin America – The National Period
HIST 150: History of East Asia (to 1600)
HIST 151: History of East Asia (from 1600 to Present)
HIST 180: World History to 1500
HIST 181: World History since 1500
HUMAN 112: Humanities: The Modern World
HUMAN 116: The Arts and Culture of Asia
MUSIC 114: World Music
MUSIC 115: Music of the Middle East, North Africa and South Asia
MUSX 110: History of Electronic Music
PHILO 220: Comparative Religion
POLSC 220: Comparative Politics
POLSC 250: 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	DVC COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 192	X	X	X	X	X	X	X	X
MATH 12	MATH 193	X	X	X	X	X	X	X	X
MATH 13	MATH 292	X	X	X	X	X	X	X	X
MATH 14	MATH 292	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	MATH 294	X	X	X	X	X	X	X	
MATH 51 or COEN 19	MATH 195			X	X				
MATH 53	MATH 194			X	X				
PHYS 31	PHYS 130	X	X	X	X	X	X	X	
PHYS 32	PHYS 230	X	X	X	X	X	X	X	
PHYS 33	PHYS 230	X	X	X	X	X	X	X	
PHYS 34	PHYS 231					X			
CHEM 11	CHEM 120	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	-			X	X	X	X		
ELEN 50/50L	ENGIN 230	X		X	X	X	X	X	
CENG 41	ENGIN 255		X				X	X	
COEN 10/10L	ENGIN 135 OR COMSC 110			X	X	X	X		X
COEN 11/11L	COMSC 165 OR COMSC 200			X	X	X			X
COEN 12/12L	COMSC 210			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

Diablo Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 120: General College Chemistry I	CHEM 11
CHEM 121: General College Chemistry II	CHEM 12&50
CHEM 226: Organic Chemistry I	CHEM 31
CHEM 227: Organic Chemistry II	CHEM 33 (If CHEM 226 & 227 completed, equates to SCU's CHEM 31, 32 & 33)
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
<b>Engineering:</b>	
ENGIN 230: Introduction to Circuits and Devices	ELEN 50/50L
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14
MATH 294: Differential Equations	MATH 22 or AMTH 106

## CIVIL ENGINEERING MAJOR REQUIREMENTS

Diablo Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 120: General College Chemistry I	CHEM 11
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
GEOL 120/122: Physical Geology w/Lab	CENG 20/20L
<b>Engineering:</b>	
ENGIN 230: Introduction to Circuits and Devices	ELEN 50/50L
ENGIN 140: Plane Surveying	CENG 10/10L
ENGIN 255: Statics	CENG 41
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14
MATH 294: Differential Equations	MATH 22 or AMTH 106

## COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS

Diablo Valley College Course	SCU course equivalency
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<b>Natural Science:</b>	
CHEM 120: General College Chemistry I	CHEM 11
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
<b>Engineering:</b>	
ENGIN 230: Introduction to Circuits and Devices	ELEN 50/50L
ENGIN 135: Programming for Scientists and Engineers OR COMSC 110: Introduction to Programming	COEN 10/10L
COMSC 165: Advanced Programming with C and C++ OR COMSC 200: Object Oriented Programming C++	COEN 11/11L
COMSC 210: Program Design and Data Structures	COEN 12/12L
COMSC 260: Assembly Language Programming/Computer Organization	COEN 20/20L
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14
MATH 294: Differential Equations	MATH 22 or AMTH 106
MATH 194: Linear Algebra	MATH 53
MATH 195: Discrete Mathematics	COEN 19 or MATH 51

## ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS

<b>Diablo Valley College Course</b>	<b>SCU course equivalency</b>
<b>Natural Science:</b>	
CHEM 120: General College Chemistry I	CHEM 11
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
<b>Engineering:</b>	
ENGIN 230: Introduction to Circuits and Devices	ELEN 50/50L
ENGIN 135: Programming for Scientists and Engineers OR COMSC 110: Introduction to Programming	COEN 10/10L
COMSC 165: Advanced Programming with C and C++ OR COMSC 200: Object Oriented Programming C++	COEN 11/11L
COMSC 210: Program Design and Data Structures	COEN 12/12L
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14

MATH 294: Differential Equations	MATH 22 or AMTH 106
MATH 194: Linear Algebra	MATH 53
MATH 195: Discrete Mathematics	COEN 19 or MATH 51

### ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

Diablo Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 120: General College Chemistry I	CHEM 11
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
PHYS 231: Physics for Engineers and Scientists C: Optics and Modern Physics	PHYS 34
<b>Engineering:</b>	
ENGIN 230: Introduction to Circuits and Devices	ELEN 50/50L
ENGIN 255: Statics	CENG 41
ENGIN 135: Programming for Scientists and Engineers OR COMSC 110: Introduction to Programming	COEN 10/10L
COMSC 165: Advanced Programming with C and C++ OR COMSC 200: Object Oriented Programming C++	COEN 11/11L
COMSC 210: Program Design and Data Structures	COEN 12/12L
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14
MATH 294: Differential Equations	MATH 22 or AMTH 106

### GENERAL ENGINEERING MAJOR REQUIREMENTS

Diablo Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 120: General College Chemistry I	CHEM 11
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
<b>Engineering:</b>	
ENGIN 230: Introduction to Circuits and Devices	ELEN 50/50L
ENGIN 255: Statics	CENG 41
ENGIN 135: Programming for Scientists and Engineers OR COMSC 110: Introduction to Programming	COEN 10/10L
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11

MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14
MATH 294: Differential Equations	MATH 22 or AMTH 106

### MECHANICAL ENGINEERING MAJOR REQUIREMENTS

Diablo Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 120: General College Chemistry I	CHEM 11
PHYS 130: Physics for Engineers and Scientists A: Mechanics and Wave Motion	PHYS 31
PHYS 230: Physics for Engineers and Scientists B: Heat and Electro-Magnetism	PHYS 33 (If PHYS 130 & 230 completed, equates to PHYS 31, 32 & 33)
<b>Engineering:</b>	
ENGIN 230: Introduction to Circuits and Devices	ELEN 50/50L
ENGIN 255: Statics	CENG 41
ENGIN 136: Computer Programming for Engineers Using MATLAB	MECH 45/45L
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14
MATH 294: Differential Equations	MATH 22 or AMTH 106

### WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

Diablo Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 120: General College Chemistry I (Recommended)	CHEM 11
<b>Engineering:</b>	
ENGIN 135: Programming for Scientists and Engineers OR COMSC 110: Introduction to Programming	COEN 10/10L
COMSC 165: Advanced Programming with C and C++ OR COMSC 200: Object Oriented Programming C++	COEN 11/11L
COMSC 210: Program Design and Data Structures	COEN 12/12L
<b>Mathematics:</b>	
MATH 192: Analytic Geometry and Calculus I	MATH 11
MATH 193: Analytic Geometry and Calculus II	MATH 12
MATH 292: Analytic Geometry and Calculus III	MATH 13&14

## Additional notes:

- Consult the current Undergraduate Bulletin for Advanced Placement and High-Level International Baccalaureate test credit equivalencies at:  
<https://www.scu.edu/bulletin/undergraduate/chapter-8/AcademicCreditEvaluation.html>
- Consult the Santa Clara University Undergraduate Bulletin for additional requirements in a major. The Bulletin can be found at:  
<https://www.scu.edu/academics/course-catalogs/undergraduate-bulletin/>
- Once students are admitted to Santa Clara University, they must abide by the policies, regulations and other requirements outlined in the Undergraduate Bulletin for their cohort year.
- **Per SCU policy, transfer credit earned after enrollment cannot satisfy University Core, major or minor requirements.** Refer to the SCU Undergraduate Bulletin for additional transfer credit restrictions.
- This guide is to be used by transfer applicants, not First-Year (aka: freshmen) applicants. Admitted First-Year students must complete the following Core requirements at SCU: Critical Thinking & Writing 1 and 2; Cultures & Ideas 1 and 2; Religion Theology & Culture 1, 2 and 3 (taken in sequence order at SCU); Civic Engagement; Science, Technology & Society; Experiential Learning for Social Justice; Advanced Writing; and four Pathway courses.

For questions regarding transfer credit or test credit, contact the Transfer Record Analyst at:  
[Registrar@scu.edu](mailto:Registrar@scu.edu).

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