

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

Antelope 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 150 and MATH 160
- One natural science course with a lab: CHEM 110
- Two Calculus-based Physics courses: PHYS 120 and PHYS 211
 - Web Design Engineering majors are not required to complete CHEM 110, PHYS 120 & 211. 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 Antelope Valley College UC transferable courses to transfer for credit: Kinesiology courses. To view all Antelope Valley 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.

Antelope Valley College Course
ENGL 101: Academic Composition

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

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

Antelope Valley College Course
ENGL 102: Critical Thinking and Literature
ENGL 103: Critical Thinking and Research
PHIL 201: Critical Thinking

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.

Antelope Valley College Course
AJ 101: Introduction to Administration of Justice
ANTH 112: Native North Americans
ART 101: History of Art, Prehistoric to Gothic
ART 102: History of Art, Renaissance to Modern
ART 104: Survey of 20 th Century Art
ENGL 221: American Literature 1400-1865
ENGL 222: American Literature 1865- Present
ENGL 225: English Literature 800-1750
HIST 101: Western Civilization from Human Beginnings until 1750
HIST 102: Western Civilization 1750- Present
HIST 107: US History 1607-1877
HIST 108: US History 1877- Present
HIST 115: Cultural History of Mexico
HIST 116: Contemporary U.S. History: From Vietnam to Iraq
HIST 118: American West History 1806- Present
POLS 101: American Political Institutions
POLS 202: Ethnic Politics 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.

Antelope Valley College Course
ANTH 102: Intro to Cultural Anthropology
ANTH 103: Archaeology and World Prehistory
ART 103: History of Non-Western Art
ART 104: Survey of 20 th Century Art
ART 106: History of Art: Asia
COMM 219: Intro to Intercultural Communication
ENGL 230: World Literature 1
ENGL 231: World Literature 2
GEOG 105: Cultural Geography
GEOG 110: World Regional Geography
HIST 104: Intro to World Civilizations from Human Beginnings until 1500
HIST 105: Intro to World Civilizations from 1500 until Present
HIST 119: History of Latin America and the Caribbean
MUS 105: World Music
PHIL 109: World Religions
POLS 103: Comparative Government
POLS 201: Contemporary 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 150 and MATH 160

To fulfill the admissions mathematics requirement, complete MATH 150 and 160 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).

Antelope Valley College Course	SCU course equivalency
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 220: Linear Algebra	MATH 53
MATH 230: Intro to Ordinary 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 (44 quarter units) of transfer credit. Students transferring with more than 30 semester units (44 quarter units) of transfer credit will be exempt from this requirement.

Students transferring with less than 30 semester units (44 quarter 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.

Antelope Valley College Course
No approved Antelope Valley College course equivalencies at time of publication

Note: The transferring with more than 30 semester units (or more than 44 quarter units) of transfer credit for the RTC 1 exemption rule does not apply to freshmen applicants.

EXPLORATIONS Core requirements

ETHICS: Complete one course from the list below.

Antelope Valley College Course
PHIL 105: Ethics- Moral Issues in Contemporary Society

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.

Antelope Valley College Course
ANTH 110: Latin American Cultures
BUS 212: Women and Minorities in Business
COMM 217: Gender and Communication
ENGL 253: African American Literature
ENGL 256: Hispanic and Latin Studies Literatures
ENGL 257: Native American Literature
FTV 203: African- American Cinema
GEOG 106: California Geography
HIST 110: African American History 1450-1877
HIST 111: African American History 1877- Present
HIST 113: Women in American History
HIST 114: History of California
MUSC 107: History of Women in Rock Music
NF 150: Food and Culture
POLS 202: Ethnic Politics in America
SOC 105: The Mexican American in Contemporary Society
SOC 110: Ethnic Relations
SOC 112: American Social Issues- Problems and Challenges
THA 239: Intercultural and Women's 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 110; PHYS 120 & 120

(Note: Web Design & Engineering major completes one course to satisfy Natural Science core requirement. It is recommended to complete CHEM 110)

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).

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

Antelope Valley College Course	SCU course equivalency
ANTH 101/101L: Intro to Physical Anth w/ Lab	TRCR 18
ASTR 101/101L: Astronomy w/ Lab	TRCR 18
BIOL 101/101L: General Biology with Lab	TRCR 18
BIOL 102: Human Biology with Lab	TRCR 18
BIOL 103: Intro to Botany with Lab	TRCR 18
BIOL 110: General Molecular Cell Biology	TRCR 18
BIOL 120: General Organismal, Ecological and Evolutionary Biology	TRCR 18
BIOL 201: General Human Anatomy	TRCR 18
BIOL 202: General Human Physiology	TRCR 18
BIOL 204: General Microbiology	TRCR 18
BIOL 205: Intro to Biotechnology	TRCR 18
CHEM 101: Intro Chemistry with Lab	TRCR 18
CHEM 102: Intro Chemistry (Organic and Biochemistry) with Lab	TRCR 18
CHEM 110: General Chemistry with Lab	CHEM 11
CHEM 120: General Chemistry with Lab	CHEM 12&50
CHEM 210: Organic Chemistry with Lab	CHEM 31
CHEM 220: Organic Chemistry with Lab	CHEM 33 (If CHEM 210 & 220 completed, equates to SCU's CHEM 31, 32 & 33 sequence)
ERSC 101: Intro to Earth Science	TRCR 18
GEOG 101/101L: Physical Geography- Earth's Surface Landscapes w/ Lab	TRCR 18
GEOG 102/102L: Physical Geography: Earth's Weather Surface Landscapes w/ Lab	TRCR 18
GEOL 101/101L: Physical Geology w/ Lab	TRCR 18
GEOL 102/102L: Historical Geology	TRCR 18
PSCI 101: Physical Science	TRCR 18
PHYS 101: Introductory Physics	PHYS 11
PHYS 102: Introductory Physics	PHYS 13 (If PHYS 101 & 102 completed, equates to SCU's PHYS 11, 12 & 13 sequence)
PHYS 110: General Physics	PHYS 31 or PHYS 11
PHYS 120: General Physics	TRCR 18
PHYS 211: General Physics	TRCR 18 (If PHYS 110, 120, & 211 completed, equates to SCU's PHYS 11, 12, & 13 sequence)

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.

Antelope Valley College Course
ANTH 102: Intro to Cultural Anthropology
ECON 100: Survey of Economics
ECON 101: Principles of Macroeconomics
ECON 102: Principles of Microeconomics
ECON 110: Economics of the Underclass
POLS 103: Comparative Government
PSY 101: General Psychology
PSY 201: Intro to Physiological Psychology
SOC 101: Intro to Sociology
SOC 200: Research Methods for Social Sciences

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.

Antelope Valley College Course
ANTH 102: Intro to Cultural Anthropology
ANTH 103: Archaeology and World Prehistory
ART 103: History of Non-Western Art
ART 104: Survey of 20 th Century Art
ART 106: History of Art: Asia
COMM 219: Intro to Intercultural Communication
ENGL 230: World Literature 1
ENGL 231: World Literature 2
GEOG 105: Cultural Geography

GEOG 110: World Regional Geography
HIST 104: Intro to World Civilizations from Human Beginnings until 1500
HIST 105: Intro to World Civilizations from 1500 until Present
HIST 119: History of Latin America and the Caribbean
MUS 105: World Music
PHIL 109: World Religions
POLS 103: Comparative Government
POLS 201: Contemporary 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	AVC COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 150	X	X	X	X	X	X	X	X
MATH 12	MATH 160	X	X	X	X	X	X	X	X
MATH 13	MATH 250	X	X	X	X	X	X	X	X
MATH 14	MATH 250	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	MATH 230	X	X	X	X	X	X	X	
MATH 51 or COEN 19	-			X	X				
MATH 53	MATH 220			X	X				
PHYS 31	PHYS 110	X	X	X	X	X	X	X	
PHYS 32	-	X	X	X	X	X	X	X	
PHYS 33	PHYS 120	X	X	X	X	X	X	X	
PHYS 34	-					X			
CHEM 11	CHEM 110	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	ENGR 185			X	X	X	X		
ELEN 50/50L	ENGR 230	X		X	X	X	X	X	
CENG 41	ENGR 210		X				X	X	
COEN 10/10L	CIS 111 or 175			X	X	X	X		X
COEN 11/11L	CIS 161 or 173			X	X	X			X
COEN 12/12L	CIS 113			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

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11
CHEM 120: General Chemistry w/ Lab	CHEM 12 & 50
CHEM 210: Organic Chemistry w/ Lab	CHEM 31
CHEM 220: Organic Chemistry w/ Lab	CHEM 33 (If CHEM 210 & 220 completed, equates to SCU's CHEM 31, 32 & 33 sequence)
PHYS 110: General Physics	PHYS 31
PHYS 120: General Physics	PHYS 33
Engineering:	
ENGR 230: Circuit Analysis	ELEN 50/50L
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 230: Intro to Ordinary Differential Equations	MATH 22 or AMTH 106

CIVIL ENGINEERING MAJOR REQUIREMENTS

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11
PHYS 110: General Physics	PHYS 31
PHYS 120: General Physics	PHYS 33
GEOL 101: Physical Geology w/Lab	CENG 20/20L
Engineering:	
ENGR 140: Engineering 3D Graphics	CENG 7/7L
<i>No approved course equivalencies at time of publication</i>	CENG 10/10L
ENGR 210: Statics	CENG 41
ENGR 220: Strength of Materials	CENG 44A & 44B (Must take lab)
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 230: Intro to Ordinary Differential Equations	MATH 22 or AMTH 106

COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11
PHYS 110: General Physics	PHYS 31
PHYS 120: General Physics	PHYS 33
Engineering:	

ENGR 230: Circuit Analysis	ELEN 50/50L
CIS 111: Introduction to Programming and Algorithms or CIS 175: JAVA Programming	COEN 10/10L
CIS 161: Introduction to C Programming or CIS 173: Introduction to C++ Programming	COEN 11/11L
CIS 113: Data Structures	COEN 12/12L
<i>No approved course equivalencies at time of publication</i>	COEN 19 or MATH 51
CIS 123: Assembly Language and Computer Architecture	COEN 20/20L
ENGR 185: Digital Logic and Design	COEN 21/21L
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 230: Intro to Ordinary Differential Equations	MATH 22 or AMTH 106
MATH 220: Linear Algebra	MATH 53

ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11
PHYS 110: General Physics	PHYS 31
PHYS 120: General Physics	PHYS 33
Engineering:	
ENGR 230: Circuit Analysis	ELEN 50/50L
CIS 111: Introduction to Programming and Algorithms or CIS 175: JAVA Programming	COEN 10/10L
CIS 161: Introduction to C Programming or CIS 173: Introduction to C++ Programming	COEN 11/11L
CIS 113: Data Structures	COEN 12/12L
<i>No approved course equivalencies at time of publication</i>	COEN 19 or MATH 51
ENGR 185: Digital Logic and Design	ELEN 21/21L
ENGR 230: Circuit Analysis	ELEN 50/50L
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 230: Intro to Ordinary Differential Equations	MATH 22 or AMTH 106
MATH 220: Linear Algebra	MATH 53

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11

PHYS 110: General Physics	PHYS 31
PHYS 120: General Physics	PHYS 33
Engineering:	
ENGR 185: Digital Logic and Design	ELEN 21/21L
ENGR 230: Circuit Analysis	ELEN 50/50L
CIS 111: Introduction to Programming and Algorithms or CIS 175: JAVA Programming	COEN 10/10L
CIS 161: Introduction to C Programming or CIS 173: Introduction to C++ Programming	COEN 11/11L
CIS 113: Data Structures	COEN 12/12L
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 230: Intro to Ordinary Differential Equations	MATH 22 or AMTH 106

GENERAL ENGINEERING MAJOR REQUIREMENTS

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11
PHYS 110: General Physics	PHYS 31
PHYS 120: General Physics	PHYS 33
Engineering:	
ENGR 185: Digital Logic and Design	ELEN 21/21L
ENGR 230: Circuit Analysis	ELEN 50/50L
<i>No approved course equivalencies at time of publication</i>	MECH 10/10L
<i>No approved course equivalencies at time of publication</i>	MECH 11
ENGR 130: Materials Science	MECH 15 (not 15L)
ENGR 210: Statics	CENG 41
CIS 111: Introduction to Programming and Algorithms or CIS 175: JAVA Programming	COEN 10/10L
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 230: Intro to Ordinary Differential Equations	MATH 22 or AMTH 106

MECHANICAL ENGINEERING MAJOR REQUIREMENTS

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11
PHYS 110: General Physics	PHYS 31
PHYS 120: General Physics	PHYS 33
Engineering:	
ENGR 230: Circuit Analysis	ELEN 50/50L

	MECH 10/10L
<i>No approved course equivalencies at time of publication</i>	MECH 11
ENGR 130: Materials Science	MECH 15 (not 15L)
ENGR 125: Programming and Problem-Solving in MATLAB	MECH 45/45L
ENGR 210: Statics	CENG 41
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	MATH 13&14
MATH 230: Intro to Ordinary Differential Equations	MATH 22 or AMTH 106

WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

Antelope Valley College Course	SCU course equivalency
Natural Science:	
CHEM 110: General Chemistry w/ Lab	CHEM 11
Engineering:	
CIS 111: Introduction to Programming and Algorithms or CIS 175: JAVA Programming	COEN 10/10L
CIS 161: Introduction to C Programming or CIS 173: Introduction to C++ Programming	COEN 11/11L
CIS 113: Data Structures	COEN 12/12L
Mathematics:	
MATH 150: Calculus and Analytic Geometry	MATH 11
MATH 160: Calculus and Analytic Geometry	MATH 12
MATH 250: Calculus and Analytic Geometry	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.