

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**

### **College of the Sequoias 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 65 and MATH 66
- One natural science course with a lab: CHEM 1
- Two Calculus-based Physics courses: PHYS 55 and PHYS 57
  - Web Design Engineering majors are not required to complete CHEM 1, PHYS 55 & 57. 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
<b>College of Arts and Sciences</b>	175	87.5	58.33
<b>College of Arts and Sciences: <i>Engineering Physics</i></b>	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 College of the Sequoias UC transferable courses to transfer for credit: Some Health and Wellness, Intercollegiate Athletics, some Kinesiology, and Physical Education courses. To view all College of the Sequoias 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.

<b>College of the Sequoias Course</b>
ENGL 1: College Reading and Composition

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

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

<b>College of the Sequoias Course</b>
ENGL 2: Logic and Composition
ENGL 4: Composition and Literature
PHIL 25: 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.

College of the Sequoias Course
AJ 11: Intro to Criminal Justice
AJ 13: Community Relations
ART 2: Art History/Ancient
ART 3: Art History- Gothic to Modern
ARCH 70: Architecture History I
ARCH 71: Architecture History II
CINA 31: Film Appreciation- American
ENGL 15: Survey of British Literature 1
ENGL 16: Survey of British Literature 2
ENGL 30: American Lit 1
ENGL 31: American Lit 2
ETHN 5: American Ethnic Orig
HIST 4: Western Civilization to 1648
HIST 5: Western Civilization since 1648
HIST 17: People of the United States to 1877
HIST 18: People of the United States from 1865
HIST 23: Mexican-American History
POLS 5: Federal, State and Local Govt
POLS 10: California Government and Politics
POLS 112: Intro to Political Science

## **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>College of the Sequoias Course</b>
ANTH 10: Cultural Anthropology
ANTH 113: Magic, Witchcraft, and Religion
ART 4: Pre-Columbian Art and Culture of the Americas: Meso-America
ART 5: Pre-Columbian Art and Culture of
CINA 32: Film Appreciation- International
COMM 9: Intercultural Communication
ENGL 44: World Literature 1
ENGL 45: World Literature 2
GEOG 2: World Regional Geography
HIST 25: World History to 1500
MUS 13: Music of the World
NUTR 20: Cultural Foods
PHIL 12: Comparative Religion
POLS 6: Comparative Politics
POLS 8: 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 65 and MATH 66**

*To fulfill the admission mathematics requirement, complete both MATH 65 and 66 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).*

<b>College of the Sequoias Course</b>	<b>SCU Course equivalency</b>
MATH 21: Intro to Statistics	MATH 8 or OMIS 40&41
MATH 65: Calculus 1	MATH 11

MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 80: Linear Algebra	MATH 53
MATH 81: 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>College of the Sequoias Course</b>
<i>No approved College of the Sequoias course equivalencies 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>College of the Sequoias Course</b>
PHIL 5: 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.

College of the Sequoias Course
AJ 13: Community Relations
ASL 105: Deaf Culture
ENGL 10: Chicano Literature
ENGL 18: African American Literature
ENGL 19: Women in Literature
ETHN 1: Black American Studies
ETHN 2: American Indian Studies
ETHN 3: Mexican American Studies
ETHN 4: Asian American Studies
ETHN 5: American Ethnic Origins
ETHN 10: Intro Social Justice Studies
HIST 23: Mexican-American History
JOUR 20: Cultural Issues in Film/TV/Web
SOC 2: Social Problems
SOC 10: Sociology of Gender
SPAN 12: Hispanic Literature

## 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 1; PHYS 55 & 57**

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

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 College of the Sequoias 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.

College of the Sequoias Course	SCU course equivalency
ANTH 11: Biological Anthro w/Lab	ANTH 1
BIOL 1: Principles of Biology 1 w/Lab	TRCR 18: Core Natural Science
BIOL 2: Principles of Biology 2 w/Lab	TRCR 18: Core Natural Science
BIOL 20: Frontiers of Biology w/Lab	TRCR 18: Core Natural Science
BIOL 21: Plant Biology w/Lab	TRCR 18: Core Natural Science
BIOL 22: Animal Biology w/Lab	TRCR 18: Core Natural Science
BIOL 30: Human Anatomy w/Lab	TRCR 18: Core Natural Science
BIOL 31: Human Physiology w/Lab	TRCR 18: Core Natural Science
BIOL 40: General Microbiology w/Lab	TRCR 18: Core Natural Science
CHEM 1: General Chemistry 1 w/Lab	CHEM 11
CHEM 2: General Chemistry 2 w/Lab	CHEM 12&50
CHEM 12: Organic Chemistry 1 w/Lab	CHEM 31
CHEM 13: Organic Chemistry 2 w/Lab	CHEM 33 (If CHEM 12 & CHEM 13 completed, equates to SCU's CHEM 31, 32 & 33)
CHEM 20: Intro to General Chemistry w/Lab	TRCR 18: Core Natural Science
CHEM 21: Organic and Biological Chemistry w/Lab	TRCR 18: Core Natural Science
ESCI 1: Intro to Earth Science w/Lab	TRCR 18: Core Natural Science
GEOG 1/1L: Physical Geography w/ Lab	TRCR 18: Core Natural Science
GEO 1: Physical Geology w/Lab	TRCR 18: Core Natural Science
GEO 5: Earth History w/Lab	TRCR 18: Core Natural Science
PSCI 20: Physical Science w/Lab	TRCR 18: Core Natural Science
PHYS 20: General Physics 1 w/Lab	PHYS 11
PHYS 21: General Physics 2 w/Lab	PHYS 13 (If PHYS 20 & 21 completed, equates to SCU's PHYS 11,12 & 13)
PHYS 55: Physics for Sci and Engr 1 w/Lab	PHYS 31
PHYS 56: Physics for Sci and Engr 2 w/Lab	PHYS 32
PHYS 57: Physics for Sci and Engr 3 w/Lab	PHYS 33

**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.

College of the Sequoias Course
ANTH 10: Cultural Anthropology
ANTH 12: Archaeology
ECON 25: Intro to Economics

ECON 40: Principles of Microeconomics
ECON 50: Principles of Macroeconomics
POLS 6: Comparative Politics
PSY 1: General Psychology
PSY 5: Social Psychology
PSY 29: Research Methods
SOC 1: Intro to Sociology
SSCI 25: Statistics-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.

<b>College of the Sequoias Course</b>
ANTH 10: Cultural Anthropology
ANTH 113: Magic, Witchcraft, and Religion
ART 4: Pre-Columbian Art and Culture of the Americas: Meso-America
ART 5: Pre-Columbian Art and Culture of
CINA 32: Film Appreciation- International
COMM 9: Intercultural Communication
ENGL 44: World Literature 1
ENGL 45: World Literature 2
GEOG 2: World Regional Geography
HIST 25: World History to 1500
MUS 13: Music of the World
NUTR 20: Cultural Foods
PHIL 12: Comparative Religion
POLS 6: Comparative Politics
POLS 8: 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	CotS COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 65	X	X	X	X	X	X	X	X
MATH 12	MATH 66	X	X	X	X	X	X	X	X
MATH 13	MATH 67	X	X	X	X	X	X	X	X
MATH 14	MATH 67	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	MATH 81	X	X	X	X	X	X	X	
MATH 51 or COEN 19	CSCI 6			X	X				
MATH 53	MATH 80			X	X				
PHYS 31	PHYS 55	X	X	X	X	X	X	X	
PHYS 32	PHYS 56	X	X	X	X	X	X	X	
PHYS 33	PHYS 57	X	X	X	X	X	X	X	
PHYS 34	-					X			
CHEM 11	CHEM 1	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	-			X	X	X	X		
ELEN 50/50L	ENGR 4	X		X	X	X	X	X	
CENG 41	ENGR 2		X				X	X	
COEN 10/10L	COMP 8/CSCI 1			X	X	X	X		X
COEN 11/11L	CSCI 2**			X	X	X			X
COEN 12/12L	-			X	X	X			X

**\*\*If the student can pick up C programming**

**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

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1	CHEM 11
CHEM 2: General Chemistry 2	CHEM 12&50
CHEM 12: Organic Chemistry 1	CHEM 31
CHEM 13: Organic Chemistry 2	CHEM 33 (If CHEM 12 & CHEM 13 completed, equates to SCU CHEM 31, 32, 33 sequence)
PHYS 55: Physics 1: Mechanics & Waves	PHYS 31
PHYS 56: Physics 2: E&M and Heat	PHYS 32
PHYS 57: Physics 3: Modern Physics	PHYS 33
<b>Engineering:</b>	
ENGR 4: Circuit Analysis	ELEN 50/50L
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 81: Differential Equations	MATH 22 or AMTH 106

## CIVIL ENGINEERING MAJOR REQUIREMENTS

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1	CHEM 11
PHYS 55: Physics 1: Mechanics & Waves	PHYS 31
PHYS 56: Physics 2: E&M and Heat	PHYS 32
PHYS 57: Physics 3: Modern Physics	PHYS 33
GEOL 1: Physical Geology w/Lab	CENG 20/20L
<b>Engineering:</b>	
<i>No approved course equivalency at time of publication</i>	CENG 7/7L
<i>No approved course equivalency at time of publication</i>	CENG 10/10L
ENGR 2: Statics	CENG 41
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 81: Differential Equations	MATH 22 or AMTH 106

## COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1	CHEM 11
PHYS 55: Physics 1: Mechanics & Waves	PHYS 31
PHYS 56: Physics 2: E&M and Heat	PHYS 32
PHYS 57: Physics 3: Modern Physics	PHYS 33

<b>Engineering:</b>	
ENGR 4: Circuit Analysis	ELEN 50/50L
CSCI 1: Programming Concepts/Method 1 OR COMP 8: Programming Concepts (Java)	COEN 10/10L
CSCI 2: Programming Concepts/Method 2	COEN 11/11L
<i>No approved course equivalency at time of publication</i>	COEN 12/12L
CSCI 6: Discrete Structures	COEN 19 or MATH 51
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 81: Differential Equations	MATH 22 or AMTH 106
MATH 80: Linear Algebra	MATH 53

### ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1	CHEM 11
PHYS 55: Physics 1: Mechanics & Waves	PHYS 31
PHYS 56: Physics 2: E&M and Heat	PHYS 32
PHYS 57: Physics 3: Modern Physics	PHYS 33
<b>Engineering:</b>	
ENGR 4: Circuit Analysis	ELEN 50/50L
CSCI 1: Programming Concepts/Method 1 OR COMP 8: Programming Concepts (Java)	COEN 10/10L
CSCI 2: Programming Concepts/Method 2	COEN 11/11L
<i>No approved course equivalency at time of publication</i>	COEN 12/12L
CSCI 6: Discrete Structures	COEN 19 or MATH 51
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 81: Differential Equations	MATH 22 or AMTH 106
MATH 80: Linear Algebra	MATH 53

### ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1	CHEM 11
PHYS 55: Physics 1: Mechanics & Waves	PHYS 31
PHYS 56: Physics 2: E&M and Heat	PHYS 32
PHYS 57: Physics 3: Modern Physics	PHYS 33
PHYS 57: Physics 3: Modern Physics	PHYS 34 (If PHYS 55, 56, 57 completed, equates to SCU's PHYS 31, 32, 33, 34)
<b>Engineering:</b>	

ENGR 4: Circuit Analysis	ELEN 50/50L
ENGR 2: Statics	CENG 41
CSCI 1: Programming Concepts/Method 1 OR COMP 8: Programming Concepts (Java)	COEN 10/10L
CSCI 2: Programming Concepts/Method 2	COEN 11/11L
<i>No approved course equivalency at time of publication</i>	COEN 12/12L
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 81: Differential Equations	MATH 22 or AMTH 106

## GENERAL ENGINEERING MAJOR REQUIREMENTS

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1	CHEM 11
PHYS 55: Physics 1: Mechanics & Waves	PHYS 31
PHYS 56: Physics 2: E&M and Heat	PHYS 32
PHYS 57: Physics 3: Modern Physics	PHYS 33
<b>Engineering:</b>	
ENGR 4: Circuit Analysis	ELEN 50/50L
<i>No approved course equivalency at time of publication</i>	MECH 10/10L
<i>No approved course equivalency at time of publication</i>	MECH 11
<i>No approved course equivalency at time of publication</i>	MECH 15/15L
ENGR 2: Statics	CENG 41
CSCI 1: Programming Concepts/Method 1 OR COMP 8: Programming Concepts (Java)	COEN 10/10L
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 81: Differential Equations	MATH 22 or AMTH 106

## MECHANICAL ENGINEERING MAJOR REQUIREMENTS

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1	CHEM 11
PHYS 55: Physics 1: Mechanics & Waves	PHYS 31
PHYS 56: Physics 2: E&M and Heat	PHYS 32
PHYS 57: Physics 3: Modern Physics	PHYS 33
<b>Engineering:</b>	
ENGR 4: Circuit Analysis	ELEN 50/50L
<i>No approved course equivalency at time of publication</i>	MECH 10/10L
<i>No approved course equivalency at time of publication</i>	MECH 11



<i>publication</i>	
<i>No approved course equivalency at time of publication</i>	MECH 15/15L
CSCI 20: MATLAB Programming	MECH 45/45L
ENGR 2: Statics	CENG 41
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	MATH 13&14
MATH 81: Differential Equations	MATH 22 or AMTH 106

## WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

College of the Sequoias Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1: General Chemistry 1 ( <i>Recommended</i> )	CHEM 11
<b>Engineering:</b>	
CSCI 1: Programming Concepts/Method 1 OR COMP 8: Programming Concepts (Java)	COEN 10/10L
CSCI 2: Programming Concepts/Method 2	COEN 11/11L
<i>No approved course equivalency at time of publication</i>	COEN 12/12L
<b>Mathematics:</b>	
MATH 65: Calculus 1	MATH 11
MATH 66: Calculus 2	MATH 12
MATH 67: Calculus 3	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.