

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**

# **Cuesta 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 265A and MATH 265B
- One natural science course with a lab: CHEM 201A
- Two Calculus-based Physics courses: PHYS 208A and PHYS 208B
  - Web Design Engineering majors are not required to complete CHEM 201A, PHYS 208A & 208B. 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: <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 Cuesta College UC transferable courses to transfer for credit: most Architecture, Athletics, some Health Education, most Kinesiology, Kinesiology Athletics, some Mathematics, and Physical Education – Adaptive courses. To view all Cuesta College's UC transferable courses, visit [www.assist.org](http://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 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.

Cuesta College Course
ENGL 201A: English Composition

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

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

Cuesta College Course
ENGL 201B: English Composition- Intro to Literature and Critical Thinking
ENGL 201C: English Composition- 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.

<b>Cuesta College Course</b>
ANTH 220: California Indians
ANTH 221: North American Indians
ART 203: Survey of Western Art History- Prehistory through the Middle Ages
ART 204: Survey of Western Art History- Renaissance to Contemporary
ART 205: Survey of Art History- Modernism through Contemporary
ART 207: Survey of Mexican Art History I: Pre-Columbian
ART 208: Survey of Mexican Art History II: Colonial to Contemporary
CJ 202: Intro to Criminal Justice
ENGL 212A: American Literature
ENGL 212B: American Literature
HIST 204A: History of Western Civilization
HIST 204B: History of Western Civilization
HIST 207A: History of the United States
HIST 207B: History of the United States
HIST 210: History of California
POLS 201: Intro to Political Science
POLS 202: Government and Politics of the United States

## **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>Cuesta College Course</b>
ANTH 203: Cultural Anthropology
ANTH 225: Contemporary Cultures of the World
ARCH 217: History of World Architecture I
ARCH 218: History of World Architecture II
ART 209: Art of Africa, Oceania, and Indigenous North America
ART 210: Survey of Asian Art History
COMM 212: Intercultural Communication
ENGL 245A: Survey of World Literature 1
ENGL 245B: Survey of World Literature 2
GEOG 202: Cultural Geography
GEOG 225: World Regional Geography
GLST 210: Introduction to Global Studies
GLST 220: Global Problems and Issues
HIST 203A: History of World Civilizations
HIST 203B: History of World Civilizations
PHIL 209: World Religions
POLS 204: World Politics
POLS 206: Comparative Government

## **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 265A and MATH 265B**

*To fulfill the admission mathematics requirement, complete both MATH 265A and 265B 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).

Cuesta College Course	SCU Course Equivalency
MATH 230: College Mathematics for the Humanities	MATH 4
MATH 247: Introduction to Statistics	MATH 8
MATH 255: Calculus for Business and Management	MATH 30
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14
MATH 287: Ordinary Differential Equations and Linear Algebra	MATH 53
CIS 241: Discrete Structures	MATH 51 OR COEN 19

*Note: SCU does not accept remedial mathematics courses. Although a pre-Calculus course is transferrable, it will not fulfill any general core, major or minor requirements.*

**RELIGION, THEOLOGY & CULTURE 1:** Only needed if transferring with less than 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.

Cuesta College Course
PHIL 205: Intro to the Bible

*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.

Cuesta College Course
PHIL 213: Philosophical Classics in Ethics and Social Philosophy

**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.

Cuesta College Course
ENGL 213: Multicultural Voices in American Literature
ENGL 217: Literature by Women
HIST 210: History of California
HIST 212: History of the Mexican-American
HIST 233: History of the Afro-American
HIST 237: History of American Women
SOC 202: Social Problems
SOC 206: Race and Ethnic Relations
SOC 208: Intro to Women's Studies

## 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 201A; PHYS 208A & 208B*

*(Note: Web Design & Engineering major completes one course to satisfy Natural Science core requirement. It is recommended to complete CHEM 201A.)*

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 Cuesta 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>Cuesta College Course</b>	<b>SCU Course Equivalency</b>
ANTH 201/201L: Physical Anthro w/Lab	TRCR 18
ASTR 210/210L: Astronomy w/Lab	TRCR 18
BIO 201A: Biology w/Lab	TRCR 18
BIO 201B: Biology w/Lab	TRCR 18
BIO 202: General Botany w/Lab	TRCR 18
BIO 204: Microbiology w/Lab	TRCR 18
BIO 205: Human Anatomy w/Lab	TRCR 18
BIO 206: General Human Physiology w/Lab	TRCR 18
BIO 211: Life Science w/Lab	TRCR 18
BIO 212/212L: Human Biology w/ Lab	TRCR 18
BIO 216: Plants and People w/Lab	TRCR 18
BIO 220/220L: Environmental Biol w/ Lab	TRCR 18
BIO 221: General Ecology w/Lab	TRCR 18
BIO 222/222L: Marine Biology w/ Lab	TRCR 18
BIO 224: Principles of Natural History w/Lab	TRCR 18
CHEM 200: Introductory Chemistry with Facilitator Assisted Learning w/Lab	TRCR 18
CHEM 201A: General College Chemistry w/Lab	CHEM 11
CHEM 201B: General College Chemistry w/Lab	CHEM 12&50
CHEM 211: Intro Organic/Biochemistry w/Lab	TRCR 18
CHEM 212A: Organic Chemistry w/Lab	CHEM 31
CHEM 212B: Organic Chemistry w/Lab	CHEM 33 (If CHEM 212A & 212B completed, equates to SCU's CHEM 31, 32, & 33)
GEOL 210: Physical Geology w/Lab	CENG 20/20L
GEOL 211: Historical Geology w/Lab	TRCR 18

OCEN 210/210L: Oceanography w/ Lab	TRCR 18
PHYS 205A: General Physics w/Lab	PHYS 11
PHYS 205B: General Physics w/Lab	PHYS 13 (If PHYS 205A & 205B completed, equates to SCU's PHYS 11, 12 & 13)
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)
PSCI 210: Energy and Matter	TRCR 18
PSCI 211: Earth Science	TRCR 18

**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.

Cuesta College Course
ANTH 202: Archaeology
ANTH 203: Cultural Anthropology
ECON 201A: Principles of Economics
ECON 201B: Principles of Economics
POLS 206: Comparative Government
PSYC 201: Introductory Psychology
PSYC 202: Intro to Biological Psychology
PSYC 206: Intro to Social Psychology
SOC 201A: Intro 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>Cuesta College Course</b>
ANTH 203: Cultural Anthropology
ANTH 225: Contemporary Cultures of the World
ARCH 217: History of World Architecture I
ARCH 218: History of World Architecture II
ART 209: Art of Africa, Oceania, and Indigenous North America
ART 210: Survey of Asian Art History
COMM 212: Intercultural Communication
ENGL 245A: Survey of World Literature 1
ENGL 245B: Survey of World Literature 2
GEOG 202: Cultural Geography
GEOG 225: World Regional Geography
GLST 210: Introduction to Global Studies
GLST 220: Global Problems and Issues
HIST 203A: History of World Civilizations
HIST 203B: History of World Civilizations
PHIL 209: World Religions
POLS 204: World Politics
POLS 206: Comparative Government

**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	CUESTA COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 265A	X	X	X	X	X	X	X	X
MATH 12	MATH 265B	X	X	X	X	X	X	X	X
MATH 13	MATH 283	X	X	X	X	X	X	X	X
MATH 14	MATH 283	X	X	X	X	X	X	X	X
MATH 22 or AMTH 106	-	X	X	X	X	X	X	X	
MATH 51 or COEN 19	CIS 241			X	X				
MATH 53	MATH 287			X	X				
PHYS 31	PHYS 208A	X	X	X	X	X	X	X	
PHYS 32	PHYS 208B	X	X	X	X	X	X	X	
PHYS 33	PHYS 208B	X	X	X	X	X	X	X	
PHYS 34	-					X			
CHEM 11	CHEM 201A	X	X	X	X	X	X	X	
ELEN/COEN 21/21L	-			X	X	X	X		
ELEN 50/50L	ENGR 217	X		X	X	X	X	X	
CENG 41	ENGR 250		X				X	X	
COEN 10/10L	CIS 217 OR CIS 231			X	X	X	X		X
COEN 11/11L	COEN 11 *			X	X	X			X
COEN 12/12L	COEN 12 *			X	X	X			X

\* Student must take lab component at SCU

#### Abbreviations and Links:

[BIOE = Bioengineering](#)

[CENG = Civil, Environmental, and Sustainable Engineering](#)

[COEN = Computer Science and Engineering](#)

[ECEN = Electrical and Computer Engineering](#)

[ELEN = Electrical Engineering](#)

<a href="#">ENGR = General Engineering</a>
<a href="#">MECH = Mechanical Engineering</a>
<a href="#">WDE = Web Design and Engineering</a>
A "-" indicates that an equivalent course has not been approved at time of publication.

## BIOENGINEERING MAJOR REQUIREMENTS

Cuesta College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab	CHEM 11
CHEM 201B: General College Chemistry w/Lab	CHEM 12&50
CHEM 212A: Organic Chemistry w/Lab	CHEM 31
CHEM 212B: Organic Chemistry w/Lab	CHEM 33 (If CHEM 212A & 212B completed, equates to SCU's CHEM 31, 32, & 33)
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)
<b>Engineering:</b>	
ENGR 217: Circuit Analysis	ELEN 50/50L
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14

## CIVIL ENGINEERING MAJOR REQUIREMENTS

Cuesta College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab	CHEM 11
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)
GEOL 210: Physical Geology w/Lab	CENG 20/20L
<b>Engineering:</b>	
ENGR 226: Engineering Drawing	CENG 7/7L
ENGR 201: Plane Surveying	CENG 10/10L
ENGR 250: Engineering Statics	CENG 41
ENGR 252A: Strength of Materials 1	CENG 44A (but does NOT fulfill the lab requirement)
ENGR 252B: Strength of Materials II	CENG 44B (ENGR 252A + ENGR 252B equates to CENG 43 but does NOT fulfill the lab requirement)
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12

MATH 283: Calculus III: Multivariable Calculus	MATH 13&14
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### COMPUTER SCIENCE & ENGINEERING MAJOR REQUIREMENTS

Cuesta College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab	CHEM 11
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)
<b>Engineering:</b>	
ENGR 217: Circuit Analysis	ELEN 50/50L
CIS 217: "C" Programming Language OR CIS 231: Fundamentals of Computer Science I	COEN 10/10L
CIS 232: Fundamentals of Computer Science II	COEN 11 (*Must take COEN 11L at SCU)
CIS 233: Fundamentals of Computer Science III	COEN 12 (*Must take COEN 12L at SCU)
CIS 241: Discrete Structures	COEN 19 or MATH 51
CIS 240: Microcomputer Architecture and Programming	COEN 20/20L
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14
MATH 287: Ordinary Differential Equations and Linear Algebra	MATH 53

### ELECTRICAL & COMPUTER ENGINEERING MAJOR REQUIREMENTS

Cuesta College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab	CHEM 11
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)
<b>Engineering:</b>	
ENGR 217: Circuit Analysis	ELEN 50/50L
CIS 217: "C" Programming Language OR CIS 231: Fundamentals of Computer Science I	COEN 10/10L
CIS 232: Fundamentals of Computer Science II	COEN 11 (*Must take COEN 11L at SCU)
CIS 233: Fundamentals of Computer Science III	COEN 12 (*Must take COEN 12L at SCU)
CIS 241: Discrete Structures	COEN 19 or MATH 51
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14
MATH 287: Ordinary Differential Equations and Linear Algebra	MATH 53

**ELECTRICAL ENGINEERING MAJOR REQUIREMENTS**

<b>Cuesta College Course</b>	<b>SCU course equivalency</b>
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab	CHEM 11
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)
<i>No approved course equivalency at time of publication</i>	PHYS 34
<b>Engineering:</b>	
ENGR 217: Circuit Analysis	ELEN 50/50L
ENGR 250: Engineering Statics	CENG 41
CIS 217: "C" Programming Language OR CIS 231: Fundamentals of Computer Science I	COEN 10/10L
CIS 232: Fundamentals of Computer Science II	COEN 11 (*Must take COEN 11L at SCU)
CIS 233: Fundamentals of Computer Science III	COEN 12 (*Must take COEN 12L at SCU)
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14

**GENERAL ENGINEERING MAJOR REQUIREMENTS**

<b>Cuesta College Course</b>	<b>SCU course equivalency</b>
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab	CHEM 11
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)
<b>Engineering:</b>	
ENGR 217: Circuit Analysis	ELEN 50/50L
ENGR 250: Engineering Statics	CENG 41
CIS 217: "C" Programming Language OR CIS 231: Fundamentals of Computer Science I	COEN 10/10L
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14

**MECHANICAL ENGINEERING MAJOR REQUIREMENTS**

<b>Cuesta College Course</b>	<b>SCU course equivalency</b>
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab	CHEM 11
PHYS 208A: Principles of Physics w/Lab	PHY 31
PHYS 208B: Principles of Physics w/Lab	PHYS 33 (If PHYS 208A & 208B completed, equates to SCU's PHYS 31, 32, & 33)



<b>Engineering:</b>	
ENGR 217: Circuit Analysis	ELEN 50/50L
ENGR 250: Engineering Statics	CENG 41
ENGR 246/246L: Materials Engineering w/Lab	MECH 15/15L
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14

## WEB DESIGN AND ENGINEERING MAJOR REQUIREMENTS

Cuesta College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 201A: General College Chemistry w/Lab ( <i>Recommended</i> )	CHEM 11
<b>Engineering:</b>	
CIS 217: "C" Programming Language OR CIS 231: Fundamentals of Computer Science I	COEN 10/10L
CIS 232: Fundamentals of Computer Science II	COEN 11 (*Must take COEN 11L at SCU)
CIS 233: Fundamentals of Computer Science III	COEN 12 (*Must take COEN 12L at SCU)
<b>Mathematics:</b>	
MATH 265A: Calculus I	MATH 11
MATH 265B: Calculus II	MATH 12
MATH 283: Calculus III: Multivariable Calculus	MATH 13&14

### Additional notes:

- Consult the current Undergraduate Bulletin for Advanced Placement and High-Level International Baccalaureate test credit equivalencies at:  
<https://www.scu.edu/bulletin/undergraduate/chapter-8/AcademicCreditEvaluation.html>
- Consult the Santa Clara University Undergraduate Bulletin for additional requirements in a major. The Bulletin can be found at:  
<https://www.scu.edu/academics/course-catalogs/undergraduate-bulletin/>
- Once students are admitted to Santa Clara University, they must abide by the policies, regulations and other requirements outlined in the Undergraduate Bulletin for their cohort year.
- **Per SCU policy, transfer credit earned after enrollment cannot satisfy University Core, major or minor requirements.** Refer to the SCU Undergraduate Bulletin for additional transfer credit restrictions.

- This guide is to be used by transfer applicants, not First-Year (aka: freshmen) applicants. Admitted First-Year students must complete the following Core requirements at SCU: Critical Thinking & Writing 1 and 2; Cultures & Ideas 1 and 2; Religion Theology & Culture 1, 2 and 3 (taken in sequence order at SCU); Civic Engagement; Science, Technology & Society; Experiential Learning for Social Justice; Advanced Writing; and four Pathway courses.

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