

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
Second Language
Mathematics\*
Religion Theology & Culture 1

(Students transferring with more than 30 semester units of transfer credit will be exempt from this requirement.)

EXPLORATIONS

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

INTEGRATIONS

- E L S J
Advanced Writing
Pathways

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 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**

# **West 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 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 3A and MATH 3B
- One natural science: CHEM 1A
- Two calculus-based physics courses: PHYS 4A and PHYS 4B
  - Web Design Engineering majors are not required to complete CHEM 1A, PHYS 4A & 4B. 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) and some major requirements.

## STRUCTURE OF SANTA CLARA UNIVERSITY GENERAL CORE

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



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

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

**MAXIMUM NUMBER OF TRANSFER UNITS ACCEPTED:**

- Santa Clara University is on a quarter system
  - 1 semester unit is equivalent to 1.5 quarter units
- It is recommended to transfer with 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 International Baccalaureate test credits.

Academic Division	Minimum number of units required for graduation	Maximum transferrable <b>quarter</b> units	Maximum transferrable <b>Semester</b> Unit equivalency
<b>College of Arts and Sciences</b>	175	87.5	58.33
<b>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, most criminal/administration of justice courses, remedial English and remedial mathematics courses.

Santa Clara University only accepts University of California transferable courses. In addition, SCU does not allow the following West Valley College UC transferrable courses to transfer for credit: Architecture, Athletics, some Counseling, ESL, some Health Education, Physical education except for Dance courses, and Physical Education Theory. To view all West 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. 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 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 Advanced Writing course at SCU to satisfy the CTW 2 requirement.

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

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

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

West Valley College Course
ENGL 1A: English Composition

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

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

West Valley College Course
ENGL 1B: English Composition
ENGL 1C: Critical Thinking and Writing
ENGL 1CH: Honors
PHIL 17: Logic and Critical Reasoning

## 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>West Valley College Course</b>
ART 1A: Survey of Western Art I
ART 1AH: Honors Survey of Western Art I
ART 1B: Survey of Western Art II
ART 1BH: Honors Survey of Western Art II
ART 1D: Art of the 20 <sup>th</sup> Century
ART1DH: Honors Art of 20 <sup>th</sup> Century
ART 10: American Art: A Multi-Cultural Approach
ENGL 7A: American Literature
ENGL 7B: American Literature
HIST 4A: History of Western Civilization
HIST 4B: History of Western Civilization
HIST 17A: United States History
HIST 17B: United States History
HIST 5A: World History: Pre-History to 1500
HIST 5B: World History from 1500
HUMAN 1A: Human Values in... the Arts
HUMAN 1AH: Honors Human Values...
HUMAN 1B: Human Values in... the Arts
HUMAN 1BH: Honors Human Values...
POLIT 1: American Government
POLIT 1HONOR: American Government
SOCI 20: American Race Relations
THEAR 69: Rep American Theater: 1980-Present

**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.

West Valley College Course
ANTHR 3: Intro to Cultural Anthropology
ANTHR 55: Anth of Magic, Witchcraft & Rel
ART 1E: Design in Society
ART 1J: Survey of Non-Western Art: Africa, Oceania, and
ART 7: Art of Asia
ART 12A: Art of Pre-Hispanic Mexico
ART 12B: Art of Colonial and Modern Mexico
ART 14: Women in Art History
BUS 24: International Business
ENGL 6A: World Literature
ENGL 6B: World Literature
GEOG 2: Intro to Cultural Geography
GEOG 6: World Regional Geography
HIST 5A: World History: Prehistory -1500
HIST 5B: World History from 1500
HIST 8A: History of the Americas
HIST 8B: History of Latin America
NS 20: World Food Customs and Nutrition
PHIL 4: Patterns in Comparative Religions
POLIT 2: Comparative Governments
POLIT 4: 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 3A and MATH 3B***

*To fulfill the admissions mathematics requirement, complete MATH 3A and 3B 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).*

West Valley College Course	SCU Course
<b>MATH 3A: Calculus &amp; Analytical Geom</b>	<b>MATH 11</b>
<b>MATH 3B: Calculus &amp; Analytical Geom</b>	<b>MATH 12</b>
MATH 4A: Intermediate Calculus	MATH 13&14
MATH 4B: Differential Equations	MATH 22

*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.

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.

West Valley College Course
PHIL 4: Patterns in Comparative Religions
PHIL 4H: Honors Patterns in Comparative Religions

## EXPLORATIONS CORE REQUIREMENTS

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

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

West Valley College Course
PHIL 3: Introduction to Ethics
PHIL 12: Introduction to Environmental 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.

West Valley College Course
COMM 12: Intercultural Communication
COUNS 50: Cross-Cultural Perspectives
ENGL 12: African American Literature
ENGL 13: Latino/Chicano Literature
ENGL 46: Contemporary American Multi-Cultural Literature



HIST 3: Asian American History
HIST 12: African-American History
HIST 16: Mexican American History
PHIL 21: World Philosophers on Death
PSYCH 9: Psychology of Women- A Multicultural Perspective
SOC 2 or 2H: Social Problems
WS 2: Women in the Arts: Multicultural Perspectives

## 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 1A; PHYS 4A & 4B.*

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

*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.

West Valley Course	SCU Course
BIO 41: Principles of Animal Biology	BIOL 21
BIO 42: Principles of Plant Biology	BIOL 22/23
BIO 43: Principles of Cell Biology	BIOL 24/25
<b>CHEM 1A: General Chemistry</b>	<b>CHEM 11</b>
CHEM 1B: General Chemistry	CHEM 13 (If CHEM 1A & 1B completed, equates to SCU's CHEM 11,12, 13 sequence)
CHEM 12A: Organic Chemistry	CHEM 31
CHEM 12B: Organic Chemistry	CHEM 33 (If CHEM 12A & 12B completed, equates to SCU's CHEM 31, 32, 33 sequence)
GEOL 1A: Physical Geology	CENG 20/20L
GEOL 1AH: Honors Physical Geology	CENG 20/20L
PHYS 2A: General Physics	PHYS 11

PHYS 2B: General Physics	PHYS 13 (If PHYS 2A & 2B completed, fulfills PHYS 11,12, 13 sequence)
<b>PHYS 4A: Engineering Physics- Mechanics</b>	<b>PHYS 31</b>
<b>PHYS 4B: Engineering Physics- Electr &amp; Magnetism</b>	<b>PHYS 33 (If PHYS 4A &amp; 4B completed, equates to SCU PHYS 31,32,33 sequence)</b>
PHYS 4C: Engineering Physics- Light & Heat	PHYS 32
PHYS 4D: Modern Physics	PHYS 34

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

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

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

<b>West Valley College Course</b>
ANTHR 2: Intro to Archaeology
ANTHR 3: Intro to Cultural Anthropology
ECON 1A: Principles of Macroeconomics
ECON 1AH: Honors Principles of Macroeconomics
ECON 1B: Principles of Microeconomics
ECON 1BH: Honors Principles of Microeconomics
POLIT 2: Comparative Governments
POLIT 4: International Relations
PSYCH 1: General Psychology
PSYCH 17: Intro to Social Psychology
SOC 1: Intro to Sociology
SOC 2: Social Problems
SOC 3: Social Psychology: A Sociological Perspective
SOC 45: Sociology of Human Sexuality

**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.

<b>West Valley College Course</b>
ANTHR 3: Intro to Cultural Anthropology
ANTHR 55: Anth of Magic, Witchcraft & Rel
ART 1E: Design in Society
ART 1J: Survey of Non-Western Art: Africa, Oceania, and
ART 7: Art of Asia
ART 12A: Art of Pre-Hispanic Mexico
ART 12B: Art of Colonial and Modern Mexico
ART 14: Women in Art History
BUS 24: International Business
ENGL 6A: World Literature
ENGL 6B: World Literature
GEOG 2: Intro to Cultural Geography
GEOG 6: World Regional Geography
HIST 5A: World History: Prehistory -1500
HIST 5B: World History from 1500
HIST 8A: History of the Americas
HIST 8B: History of Latin America
NS 20: World Food Customs and Nutrition
PHIL 4: Patterns in Comparative Religions
POLIT 2: Comparative Governments
POLIT 4: 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 30 semester units (or 44 quarter units) of transfer credit must take 4 courses to fulfill the pathways requirement. However, students transferring in with more than 30 semester units (or more than 44 quarter units) will complete 3 courses to fulfill the Core Pathways requirement.*

## ADDITIONAL SCHOOL OF ENGINEERING REQUIREMENTS PER MAJOR

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

SCU COURSE	WV COURSE	BIOE	CENG	COEN	ECEN	ELEN	ENGR	MECH	WDE
MATH 11	MATH 3A	X	X	X	X	X	X	X	X
MATH 12	MATH 3B	X	X	X	X	X	X	X	X
MATH 13	MATH 4A	X	X	X	X	X	X	X	X
MATH 14	MATH 4A	X	X	X	X	X	X	X	X
MATH 22	MATH 4B	X	X	X	X	X	X	X	
MATH 51	MATH 19			X	X				
MATH 53	MATH 4C			X	X				
PHYS 31	PHYS 4A	X	X	X	X	X	X	X	
PHYS 32	PHYS 4C	X	X	X	X	X	X	X	
PHYS 33	PHYS 4B	X	X	X	X	X	X	X	
PHYS 34	PHYS 4D					X			
CHEM 11	CHEM 1A	X	X	X		X	X	X	
ELEN 50/50L	ENGR 98	X	X	X		X	X	X	
COEN 10/10L	-			X	X		X		X
COEN 11/11L	CIS 4A			X	X				X
COEN 44/44L	ENGR 21	X				X		X	
COEN 12/12L	CIS 4B			X	X	X			X
<b>Abbreviations and Links:</b>									

<a href="#">BIOE = Bioengineering</a>
<a href="#">CENG = Civil, Environmental, and Sustainable Engineering</a>
<a href="#">COEN = Computer Science and Engineering</a>
<a href="#">ECEN = Electrical and Computer Engineering</a>
<a href="#">ELEN = Electrical Engineering</a>
<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

West Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
BIOL 41: Principles of Animal Biology	TRCR 18
BIOL 43: Principles of Cell Biology	TRCR 18
CHEM 1A: General Chemistry	CHEM 11
CHEM 1B: General Chemistry	CHEM 13 (If CHEM 1A & 1B completed, equates to SCU's CHEM 11,12, 13 sequence)
CHEM 12A: Organic Chemistry	CHEM 31
CHEM 12B: Organic Chemistry	CHEM 33 (If CHEM 12A & 12B completed, equates to SCU's CHEM 31, 32, 33 sequence)
PHYS 4A: Engineering Physics- Mechanics	PHYS 31
PHYS 4B: Engineering Physics- Electricity and Magnetism	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
<b>Engineering:</b>	
ENGR 98: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 20: Engineering Graphics	MECH 10
ENGR 21: Intro Computing for Scient & Engr	COEN 44
<b>Mathematics:</b>	
MATH 3A: Calculus and Analytical Geometry	MATH 11
MATH 3B: Calculus and Analytical Geometry	MATH 12
MATH 4A: Intermediate Calculus	MATH 13&14
MATH 4B: Differential Equations	MATH 22

## CIVIL ENGINEERING MAJOR REQUIREMENTS

West Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Engineering Physics- Mechanics	PHYS 31
PHYS 4B: Engineering Physics- Electricity and Magnetism	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
GEOL 1A or 1AH: Physical Geology	GEOL 20/20L
<b>Engineering:</b>	
ENGR 1A: Plane Surveying	CENG 10

ENGR 98: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 20: Engineering Graphics	CENG 7/7L
ENGR 99: Statics/Vector Mechanics (Formerly ENGR 23; Vector Mechanics)	CENG 41
<b>Mathematics:</b>	
MATH 3A: Calculus and Analytical Geometry	MATH 11
MATH 3B: Calculus and Analytical Geometry	MATH 12
MATH 4A: Intermediate Calculus	MATH 13&14
MATH 4B: Differential Equations	MATH 22

## COMPUTER SCIENCE & ENGINEERING

West Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Engineering Physics- Mechanics	PHYS 31
PHYS 4B: Engineering Physics- Electricity and Magnetism	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
<b>Engineering:</b>	
ENGR 98: Introduction to Circuit Analysis	ELEN 50/50L
CIS 4A: Computer Programming I	COEN 11/11L
CIS 4B: Computer Programming II	COEN 12/12L
ENGR 21: Intro Computing for Scient & Engr	COEN 44/44L
<b>Mathematics:</b>	
MATH 3A: Calculus and Analytical Geometry	MATH 11
MATH 3B: Calculus and Analytical Geometry	MATH 12
MATH 4A: Intermediate Calculus	MATH 13&14
MATH 4B: Differential Equations	MATH 22
MATH 4C: Linear Algebra	MATH 53
MATH 19: Discrete Mathematics	COEN 19

## ELECTRICAL ENGINEERING

West Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
BIOL 41: Principles of Animal Biology	TRCR 18
CHEM 1A: General Chemistry	CHEM 11
CHEM 1B: General Chemistry	CHEM 13 (If CHEM 1A & 1B completed, equates to SCU's CHEM 11,12, 13 sequence)
PHYS 4A: Engineering Physics- Mechanics	PHYS 31
PHYS 4B: Engineering Physics- Electricity and Magnetism	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
PHYS 4D: Modern Physics	PHYS 34
<b>Engineering:</b>	
ENGR 98: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 99: Statics/Vector Mechanics (Formerly ENGR 23; Vector Mechanics)	CENG 41

CIS 4A: Computer Programming I	COEN 11/11L
CIS 4B: Computer Programming II	COEN 12/12L
<b>Mathematics:</b>	
MATH 3A: Calculus and Analytical Geometry	MATH 11
MATH 3B: Calculus and Analytical Geometry	MATH 12
MATH 4A:Intermediate Calculus	MATH 13&14
MATH 4B: Differential Equations	MATH 22

## GENERAL ENGINEERING

West Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Engineering Physics- Mechanics	PHYS 31
PHYS 4B: Engineering Physics- Electricity and Magnetism	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
<b>Engineering:</b>	
ENGR 98: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 20: Engineering Graphics	MECH 10
ENGR 99: Statics/Vector Mechanics (Formerly ENGR 23; Vector Mechanics)	CENG 41
ENGR 21: Intro Computing for Scient & Engr	COEN 44/44L
<b>Mathematics:</b>	
MATH 3A: Calculus and Analytical Geometry	MATH 11
MATH 3B: Calculus and Analytical Geometry	MATH 12
MATH 4A:Intermediate Calculus	MATH 13&14
MATH 4B: Differential Equations	MATH 22

## MECHANICAL ENGINEERING

West Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry	CHEM 11
PHYS 4A: Engineering Physics- Mechanics	PHYS 31
PHYS 4B: Engineering Physics- Electricity and Magnetism	PHYS 33 (If PHYS 4A & 4B completed, equates to SCU PHYS 31,32,33 sequence)
<b>Engineering:</b>	
ENGR 98: Introduction to Circuit Analysis	ELEN 50/50L
ENGR 20: Engineering Graphics	MECH 10
ENGR 99: Statics/Vector Mechanics (Formerly ENGR 23; Vector Mechanics)	CENG 41
ENGR 21: Intro Computing for Scient & Engr	COEN 44/44L
<b>Mathematics:</b>	
MATH 3A: Calculus and Analytical Geometry	MATH 11
MATH 3B: Calculus and Analytical Geometry	MATH 12
MATH 4A:Intermediate Calculus	MATH 13&14
MATH 4B: Differential Equations	MATH 22

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## WEB DESIGN AND ENGINEERING

West Valley College Course	SCU course equivalency
<b>Natural Science:</b>	
CHEM 1A: General Chemistry ( <i>Recommended</i> )	CHEM 11
<b>Engineering:</b>	
CIS 4A: Computer Programming I	COEN 11/11L
CIS 4B: Computer Programming II	COEN 12/12L
<b>Mathematics:</b>	
MATH 3A: Calculus and Analytical Geometry	MATH 11
MATH 3B: Calculus and Analytical Geometry	MATH 12
MATH 4A: Intermediate Calculus	MATH 13&14

### Additional notes:

- Consult the current Undergraduate Bulletin for Advanced Placement and International Baccalaureate test credit equivalencies at: <https://www.scu.edu/academics/course-catalogs/undergraduate-bulletin/>
- 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.
- **Transfer credit earned after enrollment cannot satisfy University Core, major or minor requirements.** Refer to the SCU Undergraduate Bulletin for additional transfer credit restrictions at: <https://www.scu.edu/academics/course-catalogs/undergraduate-bulletin/>
- 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 (unless transfer credit for a course was preapproved to fulfill the Core RTC 1 requirement); Civic Engagement; Religion, Theology & Culture 2 and 3 (taken in sequence order after RTC 1 is completed); Science, Technology & Society; Experiential Learning for Social Justice; Advanced Writing; and four Pathway courses.

For questions regarding transfer credit or AP/IB test Credit, contact 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.