K-15-00575

Articulation Agreement
Between
University of Houston and
San Jacinto College

University of Houston ("UH") hereby establishes this Articulation Agreement (together with all exhibits and appendices, "Agreement") to facilitate students' transfer from San Jacinto Community College District ("SJCD") to UH through partnering academic programs. Both UH and SJCD may be referred to individually as a "Party" or collectively as the "Parties".

I. PURPOSE

A. This Agreement provides a framework to develop programs designed to enhance the educational experience of students attending both UH and SJCD in areas including, but not limited to:

i. Transfer of credit from SJCD to UH;
ii. Reverse transfer of credit from UH to SJCD;

Both institutions enter into this Agreement in the spirit of cooperation and to mutually recognize each other as quality institutions of higher education. Each institution is dedicated to serving students from diverse populations.

B. Transfer of credit from SJCD to UH for the purpose of completion of a baccalaureate program of study is designed to maximize the amount of course work completed for the associate degree applicable to the baccalaureate degree.

C. Reverse transfer of credit from UH to SJCD allows students to complete requirements for the associate degree in accordance with the Texas Education Code Section 2, Chapter 61, Subchapter S, Section 61.833. This program is specifically designed to allow eligible students who transfer to UH prior to earning an associate's degree from SJCD to complete requirements for an associate's degree when they leave SJCD and prior to completion of the baccalaureate degree at UH.

II. TRANSFER ELEMENTS

A. This Agreement establishes general articulation and reverse articulation of credit. Successful transfer and degree completion requires the mapping of credits from SJCD Associate Degree Programs in Engineering Science at SJCD ("Articulated Associate Degrees") to UH Bachelor's Engineering Degree Programs, identifying those SJCD courses and credits which will satisfy the requirements of UH Bachelor's Engineering Degree Programs. Credits, both transfer and reverse transfer, shall be accepted and applied toward the designated Degree Program(s) at the respective institutions. SJCD students must meet UH Engineering admission requirements. UH admission requirements plus Articulated Associate Degrees will be identified, maintained, and available as Appendix A to this Articulation Agreement, attached hereto and hereby incorporated by reference.

III. JOINT OBLIGATIONS

UH and SJCD agree to the following terms and conditions:

A. UH and SJCD will work to create specific Articulation Agreements in a range of majors. These Agreements will be made available to students and advisors at both institutions and will be attached hereto as Appendix B and hereby incorporated by reference.

B. UH and SJCD will exchange information within legal guidelines, including, but not limited to, the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA) (20 U.S.C §1232g; 34 CFR Part 99), about specific students with the goal of making students aware of scholarships, financial aid, and the potential to satisfy degree requirements by transferring coursework between both institutions.

C. Separate academic records for students will be maintained at each institution. Periodic exchange of information advantageous to students is anticipated.

D. At the time of student application to UH, UH will notify students of the purpose of this Agreement and the reverse articulation of credit, will ask students to indicate their interest in the reverse articulation of credit to SJCD, and will notify students of the likelihood that UH will share transcript information with SJCD.

E. SJCD will provide UH with information on transfer students to help the Parties determine students who could benefit from reverse transfer of courses and SJCD will provide UH with information about degrees awarded as a result of reverse transfer, subject to applicable state and federal laws.

F. At appropriate intervals agreed upon by the Parties, UH will review its student records and determine which students are eligible for the reverse articulation of credit by applying the following criteria: (i) the UH student previously transferred coursework from SJCD, (ii) the student has indicated an interest in reverse articulation of credit and (iii) the student completed necessary credit hours at SJCD to satisfy the SJCD residency requirement. UH will securely transmit official paper or electronic copies of these students' transcripts to SJCD. Upon receipt of UH transcript information, SJCD will conduct a degree audit of each eligible student and evaluate all coursework that may apply to the completion of the student's associate degree at SJCD. Students who meet all SJCD degree requirements are eligible to receive an SJCD degree at no additional cost to the student. SJCD will notify each student that he or she is eligible to receive an associate's degree and eligible to participate in SJCD's graduation ceremony.

G. UH will recognize for transfer credit within legal and accreditation limitations, no less than 60 semester credit hours of course work submitted from SJCD resulting from transfer credit, dual/concurrent enrollment, advanced placement, CLEP, or other recognized means by which credit is awarded by examination (as appropriate and subject to UH policies).

H. Each Party will be responsible for assuring students are in compliance with their respective admission requirements (including state mandated requirements) to higher education, including without limitation the Texas Success Initiative ("TSI"). It should be noted that students seeking certification in some fields are subject to more stringent requirements than students in the general population.

I. Students desiring to minimize the loss of transfer hours due to changes in state law, program accreditation, and other restrictions to which either or both academic institutions are subject are encouraged to complete a minimum of 12 semester credit hours per semester applicable to the anticipated major and/or minor.

IV. TERM

A. Termination and renewal of this agreement:

i. This Agreement will commence on May 1, 2015 and remain in effect for one full academic year, including summer, and shall automatically renew for additional terms unless sooner terminated in accordance with this agreement.

ii. Immediate termination will occur if either SJCD or UH loses their current accreditation status. If termination due to a loss of accreditation occurs, the Agreement will end retroactive to the date the accreditation status changed.

iii. Notwithstanding any other provision of this Agreement, either Party shall have the right to terminate this Agreement upon thirty (30) days' prior written notice if the Party to whom such notice is given has breached any provision of this Agreement, and such breach shall not have been cured within twenty (20) days following the receipt of such notice.

iv. Notwithstanding any other provision of this Agreement, either Party shall have the right to terminate this Agreement after ninety (90) calendar days' written notice is given to the other Party.

v. Notwithstanding any other provision of this Agreement, in the event of termination, UH agrees to ensure students currently enrolled in or newly accepted into a Program under this Agreement, prior to the effective termination date, will be given the opportunity to complete their Degree Program with UH under the articulation plans incorporated herein.

V. RELATIONSHIP OF THE PARTIES

A. It is agreed and understood that nothing in this Agreement shall be construed to imply or create any partnership, joint venture, association, or like relationship between the Parties. Neither Party shall have the power to obligate or bind the other in any manner except to the extent herein provided.

VI. GENERAL PROVISIONS

A. This Agreement contains the entire agreement regarding the matters described herein between UH and SJCD and may only be modified in writing by the

individuals authorized to execute on behalf of their respective Party below or their designees at least thirty (30) days in advance of the modification.

B. This Agreement will remain in effect until such time as mutual agreement is made to modify or terminate the Agreement.

C. Parties agree that this Agreement will be construed by the laws of the State of Texas (exclusive of its conflict of laws provision), and venue for purposes of claims, or litigation shall be Houston, Harris County, Texas.

D. Any notice required or permitted under this Agreement shall be considered effective as of the date sent by certified mail, return receipt requested as follows:

SJCD:

San Jacinto Community College District
Dr. Brenda Hellyer
4624 Fairmont Parkway
Pasadena, Texas 77504
281-998-6100

UH:

University of Houston
Office of the General Counsel
Attn: Contract Administration
311 E. Cullen, Suite N
Houston, TX 77204-5010

E. This Agreement is entered into by and between the Parties hereto and for their benefit. Unless explicitly provided in this Agreement, there is no intent by either Party to create or establish third party beneficiary status or rights in any third party and no such third party shall have any right to enforce any right or enjoy any benefit created or established under this Agreement.

F. This Agreement may be executed in multiple counterparts, each of which will be deemed an original, but all of which taken together shall constitute one and the same instrument.

G. Each individual executing this Agreement on behalf of any Party expressly represents and warrants that he/she has authority to do so, and thereby to bind Party on behalf of which/whom he/she signs, to the terms of this Agreement.

H. The respective designees at both SJCD and UH will monitor and report on the status and impact of this Agreement. As long as this Agreement is in effect, the Agreement and any subsequent articulation plans should be reviewed annually or bi-annually and revised or amended as necessary.

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I. SJCD and UH agree to comply with the Family Educational Rights and Privacy Act of 1974 (FERPA) (20 U.S.C §1232g; 34 CFR Part 99) and its associated regulations, taking steps to ensure that confidential information is not disclosed or distributed in a manner inconsistent therewith. This provision shall survive termination or expiration of this Agreement.

J. This Agreement embodies the entire agreement and understanding between the Parties and supersedes all prior agreements, whether oral or written between the Parties relating to the subject matter hereof.

K. This Agreement may not be amended or modified except by a written instrument executed by both Parties. SJCD and UH agree to mutual notification of changes and additions to the curriculum and curriculum standards, so that articulation plans may be revised as necessary. Proposed changes in policies or curriculum by either Party must be communicated in writing to the other Party and agreed upon in consultation with officials of each institution. Any changes agreed upon must be signed by both Parties, dated, and attached to this Agreement.

L. If any of the provisions or portions of this Agreement are invalid under any applicable statute or rule of law, they are to that extent to be deemed omitted.

M. Except as otherwise provided in this Agreement, neither Party shall assign or transfer any of its rights or obligations hereunder without the prior written consent of the other Party hereto, which assignment shall not be unreasonably withheld, and any such attempted assignment without such consent shall be void.

IN WITNESS THEREOF, the Parties have executed this Agreement in multiple counterparts. The effective date of this Agreement is May 1, 2015.

UNIVERSITY OF HOUSTON

By: _____

Paula Myrick Short, PhD

VC/VP for Academic Affairs & Provost

SAN JACINTO COMMUNITY COLLEGE DISTRICT

By: _____

Brenda Hellyer, Ed.D.

Chancellor

APPROVED AS TO FORM BY:

_____

OFFICE OF THE GENERAL COUNSEL
UNIVERSITY OF HOUSTON SYSTEM

_____

Sabrina Hassumani

Associate Provost, Finance & Administration

Engineering Undergraduate Admissions Requirements

Transfer Students

You will be evaluated as a transfer student for admissions purposes if:

- You are a US citizen and have earned 15 or more semester hours of college-level credit; or,
- You are an international student who has completed post-secondary coursework.

For more information, visit UH Transfer Admissions.

Area	Required GPA
All college level work attempted	3.00
All calculus courses and math courses with calculus prerequisites attempted	3.00
All college level science courses* required by any engineering major attempted	3.00
All college level non-remedial English courses attempted	2.50
All college level engineering courses attempted	3.00

To be admitted, students must have attempted at least one non-remedial college level English course, at least one calculus course, and at least one college level science course* required by any engineering major. In the calculation of each GPA, all attempts taken at any institution count – even if course was repeated.

* Biology 1361/1161 and 1362/1162, Chemistry 1331/1111, 1332/1112, 1372/1117, 3221, 3331, and 3332, Geology 1330, Physics 1321/1121 and 1322.

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San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Biomedical Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
CHEM 1311	*General Chemistry II*
CHEM 1111	*General Chemistry II Laboratory*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
CHEM 2323	*Organic Chemistry I*
CHEM 2123	*Organic Chemistry I Laboratory*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
BIOL 1306	*Biology for Science Majors I*
BIOL 1106	*Biology for Science Majors I Laboratory*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Chemical Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
CHEM 1311	*General Chemistry II*
CHEM 1111	*General Chemistry II Laboratory*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
CHEM 2323	*Organic Chemistry I*
CHEM 2123	*Organic Chemistry I Laboratory*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
CHEM 2325	*Organic Chemistry II*
CHEM 2125	*Organic Chemistry II Laboratory*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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Associate of Science in Engineering Science Degree
(Civil Engineering Track)

2ENGINEER
43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
ENGR 1304	*Engineering Graphics I*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2302	*Engineering Mechanics: Dynamics*
ENGR 2308	*Engineering Economics*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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Associate of Science in Engineering Science Degree
(Computer/Electrical Engineering Track)

2ENGINEER
43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
COSC 1337	*Fundamentals of Programming II*
MATH 2318	*Linear Algebra*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2305	*Electrical Circuits I*
ENGR 2105	*Electrical Circuits I Laboratory*
ENGR 2308	*Engineering Economics*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

San Jacinto Feb 2015

Associate of Science in Engineering Science Degree

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
Track Option (3-4 SCH)	

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
Track Option (3-6 SCH)	

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
Track Option (4-7 SCH)	

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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UH – SAN JAC ENGR Course Equivalents

SJ------ENGR 1201 Introduction to Engineering
UH-----All versions of XXX 11XX within Engineering College...

SJ..... ENGR 2304 Programming for Engineers
UH..... All versions of XXX 1331 within Engineering College

SJ.....ENGR 2301 Engineering Mechanics: Statics
UH.....MECE 2336 and CIVE 2330

SJ-----ENGR 2302 Engineering Mechanics: Dynamics
UH.....MECE 3336 and CIVE 2331

SJ.....ENGR 2308 Engineering Economics
UH....INDE 3333

SJ... ENGR 2305/2105 Electrical Circuits I with Laboratory
UH...ECE 2300/2100

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Associate of Science in Engineering Science Degree (Industrial Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
ENGR 1304	*Engineering Graphics I*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2305	*Electrical Circuits I*
ENGR 2105	*Electrical Circuits I Laboratory*
ENGR 2308	*Engineering Economics*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Mechanical Engineering Track)

2ENGINEER
43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
ENGR 1304	*Engineering Graphics I*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2305	*Electrical Circuits I*
ENGR 2105	*Electrical Circuits I Laboratory*
or	
CHEM 1312	*General Chemistry II*
CHEM 1112	*General Chemistry II Laboratory*
ENGR 2308	*Engineering Economics*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

K-15-00575

San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Petroleum Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
CHEM 1312	*General Chemistry II*
CHEM 1112	*General Chemistry II Laboratory*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
GEOL 1303	*Physical Geology*
GEOL 1103	*Physical Geology Laboratory*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

K-15-00575

Articulation Agreement
Between
University of Houston and
San Jacinto College

University of Houston ("UH") hereby establishes this Articulation Agreement (together with all exhibits and appendices, "Agreement") to facilitate students' transfer from San Jacinto Community College District ("SJCD") to UH through partnering academic programs. Both UH and SJCD may be referred to individually as a "Party" or collectively as the "Parties".

I. PURPOSE

A. This Agreement provides a framework to develop programs designed to enhance the educational experience of students attending both UH and SJCD in areas including, but not limited to:

i. Transfer of credit from SJCD to UH;
ii. Reverse transfer of credit from UH to SJCD;

Both institutions enter into this Agreement in the spirit of cooperation and to mutually recognize each other as quality institutions of higher education. Each institution is dedicated to serving students from diverse populations.

B. Transfer of credit from SJCD to UH for the purpose of completion of a baccalaureate program of study is designed to maximize the amount of course work completed for the associate degree applicable to the baccalaureate degree.

C. Reverse transfer of credit from UH to SJCD allows students to complete requirements for the associate degree in accordance with the Texas Education Code Section 2, Chapter 61, Subchapter S, Section 61.833. This program is specifically designed to allow eligible students who transfer to UH prior to earning an associate's degree from SJCD to complete requirements for an associate's degree when they leave SJCD and prior to completion of the baccalaureate degree at UH.

II. TRANSFER ELEMENTS

A. This Agreement establishes general articulation and reverse articulation of credit. Successful transfer and degree completion requires the mapping of credits from SJCD Associate Degree Programs in Engineering Science at SJCD ("Articulated Associate Degrees") to UH Bachelor's Engineering Degree Programs, identifying those SJCD courses and credits which will satisfy the requirements of UH Bachelor's Engineering Degree Programs. Credits, both transfer and reverse transfer, shall be accepted and applied toward the designated Degree Program(s) at the respective institutions. SJCD students must meet UH Engineering admission requirements. UH admission requirements plus Articulated Associate Degrees will be identified, maintained, and available as Appendix A to this Articulation Agreement, attached hereto and hereby incorporated by reference.

III. JOINT OBLIGATIONS

UH and SJCD agree to the following terms and conditions:

A. UH and SJCD will work to create specific Articulation Agreements in a range of majors. These Agreements will be made available to students and advisors at both institutions and will be attached hereto as Appendix B and hereby incorporated by reference.

B. UH and SJCD will exchange information within legal guidelines, including, but not limited to, the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA) (20 U.S.C §1232g; 34 CFR Part 99), about specific students with the goal of making students aware of scholarships, financial aid, and the potential to satisfy degree requirements by transferring coursework between both institutions.

C. Separate academic records for students will be maintained at each institution. Periodic exchange of information advantageous to students is anticipated.

D. At the time of student application to UH, UH will notify students of the purpose of this Agreement and the reverse articulation of credit, will ask students to indicate their interest in the reverse articulation of credit to SJCD, and will notify students of the likelihood that UH will share transcript information with SJCD.

E. SJCD will provide UH with information on transfer students to help the Parties determine students who could benefit from reverse transfer of courses and SJCD will provide UH with information about degrees awarded as a result of reverse transfer, subject to applicable state and federal laws.

F. At appropriate intervals agreed upon by the Parties, UH will review its student records and determine which students are eligible for the reverse articulation of credit by applying the following criteria: (i) the UH student previously transferred coursework from SJCD, (ii) the student has indicated an interest in reverse articulation of credit and (iii) the student completed necessary credit hours at SJCD to satisfy the SJCD residency requirement. UH will securely transmit official paper or electronic copies of these students' transcripts to SJCD. Upon receipt of UH transcript information, SJCD will conduct a degree audit of each eligible student and evaluate all coursework that may apply to the completion of the student's associate degree at SJCD. Students who meet all SJCD degree requirements are eligible to receive an SJCD degree at no additional cost to the student. SJCD will notify each student that he or she is eligible to receive an associate's degree and eligible to participate in SJCD's graduation ceremony.

G. UH will recognize for transfer credit within legal and accreditation limitations, no less than 60 semester credit hours of course work submitted from SJCD resulting from transfer credit, dual/concurrent enrollment, advanced placement, CLEP, or other recognized means by which credit is awarded by examination (as appropriate and subject to UH policies).

H. Each Party will be responsible for assuring students are in compliance with their respective admission requirements (including state mandated requirements) to higher education, including without limitation the Texas Success Initiative ("TSI"). It should be noted that students seeking certification in some fields are subject to more stringent requirements than students in the general population.

I. Students desiring to minimize the loss of transfer hours due to changes in state law, program accreditation, and other restrictions to which either or both academic institutions are subject are encouraged to complete a minimum of 12 semester credit hours per semester applicable to the anticipated major and/or minor.

IV. TERM

A. Termination and renewal of this agreement:

i. This Agreement will commence on May 1, 2015 and remain in effect for one full academic year, including summer, and shall automatically renew for additional terms unless sooner terminated in accordance with this agreement.

ii. Immediate termination will occur if either SJCD or UH loses their current accreditation status. If termination due to a loss of accreditation occurs, the Agreement will end retroactive to the date the accreditation status changed.

iii. Notwithstanding any other provision of this Agreement, either Party shall have the right to terminate this Agreement upon thirty (30) days' prior written notice if the Party to whom such notice is given has breached any provision of this Agreement, and such breach shall not have been cured within twenty (20) days following the receipt of such notice.

iv. Notwithstanding any other provision of this Agreement, either Party shall have the right to terminate this Agreement after ninety (90) calendar days' written notice is given to the other Party.

v. Notwithstanding any other provision of this Agreement, in the event of termination, UH agrees to ensure students currently enrolled in or newly accepted into a Program under this Agreement, prior to the effective termination date, will be given the opportunity to complete their Degree Program with UH under the articulation plans incorporated herein.

V. RELATIONSHIP OF THE PARTIES

A. It is agreed and understood that nothing in this Agreement shall be construed to imply or create any partnership, joint venture, association, or like relationship between the Parties. Neither Party shall have the power to obligate or bind the other in any manner except to the extent herein provided.

VI. GENERAL PROVISIONS

A. This Agreement contains the entire agreement regarding the matters described herein between UH and SJCD and may only be modified in writing by the

individuals authorized to execute on behalf of their respective Party below or their designees at least thirty (30) days in advance of the modification.

B. This Agreement will remain in effect until such time as mutual agreement is made to modify or terminate the Agreement.

C. Parties agree that this Agreement will be construed by the laws of the State of Texas (exclusive of its conflict of laws provision), and venue for purposes of claims, or litigation shall be Houston, Harris County, Texas.

D. Any notice required or permitted under this Agreement shall be considered effective as of the date sent by certified mail, return receipt requested as follows:

SJCD:

San Jacinto Community College District
Dr. Brenda Hellyer
4624 Fairmont Parkway
Pasadena, Texas 77504
281-998-6100

UH:

University of Houston
Office of the General Counsel
Attn: Contract Administration
311 E. Cullen, Suite N
Houston, TX 77204-5010

E. This Agreement is entered into by and between the Parties hereto and for their benefit. Unless explicitly provided in this Agreement, there is no intent by either Party to create or establish third party beneficiary status or rights in any third party and no such third party shall have any right to enforce any right or enjoy any benefit created or established under this Agreement.

F. This Agreement may be executed in multiple counterparts, each of which will be deemed an original, but all of which taken together shall constitute one and the same instrument.

G. Each individual executing this Agreement on behalf of any Party expressly represents and warrants that he/she has authority to do so, and thereby to bind Party on behalf of which/whom he/she signs, to the terms of this Agreement.

H. The respective designees at both SJCD and UH will monitor and report on the status and impact of this Agreement. As long as this Agreement is in effect, the Agreement and any subsequent articulation plans should be reviewed annually or bi-annually and revised or amended as necessary.

I. SJCD and UH agree to comply with the Family Educational Rights and Privacy Act of 1974 (FERPA) (20 U.S.C §1232g; 34 CFR Part 99) and its associated regulations, taking steps to ensure that confidential information is not disclosed or distributed in a manner inconsistent therewith. This provision shall survive termination or expiration of this Agreement.

J. This Agreement embodies the entire agreement and understanding between the Parties and supersedes all prior agreements, whether oral or written between the Parties relating to the subject matter hereof.

K. This Agreement may not be amended or modified except by a written instrument executed by both Parties. SJCD and UH agree to mutual notification of changes and additions to the curriculum and curriculum standards, so that articulation plans may be revised as necessary. Proposed changes in policies or curriculum by either Party must be communicated in writing to the other Party and agreed upon in consultation with officials of each institution. Any changes agreed upon must be signed by both Parties, dated, and attached to this Agreement.

L. If any of the provisions or portions of this Agreement are invalid under any applicable statute or rule of law, they are to that extent to be deemed omitted.

M. Except as otherwise provided in this Agreement, neither Party shall assign or transfer any of its rights or obligations hereunder without the prior written consent of the other Party hereto, which assignment shall not be unreasonably withheld, and any such attempted assignment without such consent shall be void.

IN WITNESS THEREOF, the Parties have executed this Agreement in multiple counterparts. The effective date of this Agreement is May 1, 2015.

UNIVERSITY OF HOUSTON

By: _____

Paula Myrick Short, PhD

VC/VP for Academic Affairs & Provost

SAN JACINTO COMMUNITY COLLEGE DISTRICT

By: _____

Brenda Hellyer, Ed.D.

Chancellor

APPROVED AS TO FORM BY:

_____

OFFICE OF THE GENERAL COUNSEL
UNIVERSITY OF HOUSTON SYSTEM

_____

Sabrina Hassumani

Associate Provost, Finance & Administration

Engineering Undergraduate Admissions Requirements

Transfer Students

You will be evaluated as a transfer student for admissions purposes if:

- You are a US citizen and have earned 15 or more semester hours of college-level credit; or,
- You are an international student who has completed post-secondary coursework.

For more information, visit UH Transfer Admissions.

Area	Required GPA
All college level work attempted	3.00
All calculus courses and math courses with calculus prerequisites attempted	3.00
All college level science courses* required by any engineering major attempted	3.00
All college level non-remedial English courses attempted	2.50
All college level engineering courses attempted	3.00

To be admitted, students must have attempted at least one non-remedial college level English course, at least one calculus course, and at least one college level science course* required by any engineering major. In the calculation of each GPA, all attempts taken at any institution count – even if course was repeated.

* Biology 1361/1161 and 1362/1162, Chemistry 1331/1111, 1332/1112, 1372/1117, 3221, 3331, and 3332, Geology 1330, Physics 1321/1121 and 1322.

K-15-00575

San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Biomedical Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
CHEM 1311	*General Chemistry II*
CHEM 1111	*General Chemistry II Laboratory*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
CHEM 2323	*Organic Chemistry I*
CHEM 2123	*Organic Chemistry I Laboratory*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
BIOL 1306	*Biology for Science Majors I*
BIOL 1106	*Biology for Science Majors I Laboratory*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

K-15-00575

San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Chemical Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
CHEM 1311	*General Chemistry II*
CHEM 1111	*General Chemistry II Laboratory*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
CHEM 2323	*Organic Chemistry I*
CHEM 2123	*Organic Chemistry I Laboratory*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
CHEM 2325	*Organic Chemistry II*
CHEM 2125	*Organic Chemistry II Laboratory*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

K-15-00575

San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Civil Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
ENGR 1304	*Engineering Graphics I*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2302	*Engineering Mechanics: Dynamics*
ENGR 2308	*Engineering Economics*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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San Jacinto Feb 2015

Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
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Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

K-15-00575

San Jacinto Feb 2015

Associate of Science in Engineering Science Degree
(Computer/Electrical Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
COSC 1337	*Fundamentals of Programming II*
MATH 2318	*Linear Algebra*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2305	*Electrical Circuits I*
ENGR 2105	*Electrical Circuits I Laboratory*
ENGR 2308	*Engineering Economics*

*This course meets the computer literacy requirement for engineering.

U.S. History and Government should be taken at university. As with all transfer degrees, students should contact the upper-level institution regarding baccalaureate degree requirements. The educational planners and academic advisors can assist with this.

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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Associate of Science in Engineering Science Degree

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework

Core Curriculum Requirement (010)

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*

Core Curriculum Requirement (010)
Track Option (3-4 SCH)

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics

Track Option (3-6 SCH)

Fourth Semester

MATH 2320	Differential Equations

Core Curriculum Requirement (040)
Core Curriculum Requirement (050)
Track Option (4-7 SCH)

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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UH – SAN JAC ENGR Course Equivalents

SJ——ENGR 1201 Introduction to Engineering
UH——All versions of XXX 11XX within Engineering College...

SJ..... ENGR 2304 Programming for Engineers
UH..... All versions of XXX 1331 within Engineering College

SJ.....ENGR 2301 Engineering Mechanics: Statics
UH.....MECE 2336 and CIVE 2330

SJ——ENGR 2302 Engineering Mechanics: Dynamics
UH.....MECE 3336 and CIVE 2331

SJ.....ENGR 2308 Engineering Economics
UH....INDE 3333

SJ... ENGR 2305/2105 Electrical Circuits I with Laboratory
UH...ECE 2300/2100

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Associate of Science in Engineering Science Degree
(Industrial Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
ENGR 1304	*Engineering Graphics I*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2305	*Electrical Circuits I*
ENGR 2105	*Electrical Circuits I Laboratory*
ENGR 2308	*Engineering Economics*

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics

Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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Associate of Science in Engineering Science Degree
(Mechanical Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
ENGR 1304	*Engineering Graphics I*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
ENGR 2305	*Electrical Circuits I*
ENGR 2105	*Electrical Circuits I Laboratory*
or	
CHEM 1312	*General Chemistry II*
CHEM 1112	*General Chemistry II Laboratory*
ENGR 2308	*Engineering Economics*

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Track Options

Biomedical Engineering Track (12 SCH):

BIOL 1306/1106	Biology for Science Majors I with Laboratory
CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory

Chemical Engineering Track (12 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
CHEM 2323/2123	Organic Chemistry I with Laboratory
CHEM 2325/2125	Organic Chemistry II with Laboratory

Civil Engineering Track (12 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
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Mechanical Engineering Track (13 SCH):

ENGR 1304	Engineering Graphics I
ENGR 2301	Engineering Mechanics: Statics
ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2305/2105	Electrical Circuits I with Laboratory
or	
CHEM 1312/1112	General Chemistry II with Laboratory (if transferring to UH)

Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory

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Associate of Science in Engineering Science Degree
(Petroleum Engineering Track)

2ENGINEER

43-45 SCH in specific CHEM, ENGR, MATH, and PHYS (consult with educational planner) and 18 SCH in the core curriculum

First Semester

MATH 2413	Calculus I (020)
CHEM 1311	General Chemistry I (030)
CHEM 1111	General Chemistry I Laboratory (090)
ENGR 1201	Introduction to Engineering
EDUC/PSYC 1300	Learning Framework
Core Curriculum Requirement (010)	

Second Semester

MATH 2414	Calculus II
PHYS 2325	University Physics I (030)
PHYS 2125	University Physics I Laboratory (090)
ENGR 2304	Programming for Engineers*
Core Curriculum Requirement (010)	
CHEM 1312	*General Chemistry II*
CHEM 1112	*General Chemistry II Laboratory*

Third Semester

MATH 2415	Calculus III
PHYS 2326	University Physics II (090)
PHYS 2126	University Physics II Laboratory (090)
ECON 2301	Macroeconomics (080)
or	
ECON 2302	Microeconomics
ENGR 2301	*Engineering Mechanics: Statics*

Fourth Semester

MATH 2320	Differential Equations
Core Curriculum Requirement (040)	
Core Curriculum Requirement (050)	
GEOL 1303	*Physical Geology*
GEOL 1103	*Physical Geology Laboratory*

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Track Options

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ENGR 2302	Engineering Mechanics: Dynamics
ENGR 2308	Engineering Economics

Computer/Electrical Engineering Track (13 SCH):

COSC 1337	Fundamentals of Programming II
ENGR 2305/2105	Electrical Circuits I with Laboratory
ENGR 2308	Engineering Economics
MATH 2318	Linear Algebra

Industrial Engineering Track (13 SCH):

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ENGR 2305/2105	Electrical Circuits I with Laboratory
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Mechanical Engineering Track (13 SCH):

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ENGR 2305/2105	Electrical Circuits I with Laboratory
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Petroleum Engineering Track (11 SCH):

CHEM 1312/1112	General Chemistry II with Laboratory
ENGR 2301	Engineering Mechanics: Statics
GEOL 1303/1103	Physical Geology with Laboratory