Bachelor of Science in Civil Engineering
Houston Community College
2+2 Transfer Guide

Houston Community College & Angelo State University Transfer Plan for Engineering Science- Civil Engineering, A.S. Bachelor of Science in Civil Engineering (B.S.C.E.)						
Houston Community College Fall Semester Year 1		**sch**		**Houston Community College Spring Semester Year 1**		**sch**
ENGR 1201 (Program Requirement)	Introduction to Engineering *will transfer as ASU's ENGR 1201*	2		ENGR 1304 (Program Requirement)	Engineering Graphics I *will transfer as ASU's 1304*	3
ENGL 1301 (Core 010N)	Composition I *will transfer as ASU's ENGL 1301*	3		ENGL 2311 (Core 010N)	Technical & Business Writing *will transfer as ASU's ENGL 2311*	3
HIST 1301 (Core 060N)	United States History I *will transfer as ASU's HIST 1301*	3		MATH 2414 (Major Support Course)	Calculus II *will transfer as ASU's MATH 2414*	4
MATH 2413 (Core 020N & Major Support Course)	Calculus I *will transfer as ASU's MATH 2413*	4		PHYS 2325 (Core 030N & Major Support Course)	University Physics I (Lecture) *will transfer as ASU's PHYS 2325*	3
CHEM 1311/1111 (Area B 090N & Major Support Course)	General Chemistry I (Lecture & Lab) *will transfer as ASU's CHEM 1311/1111*	4		PHYS 2125 (Core 030N & Major Support Course)	University Physics I (Lab) *will transfer as ASU's PHYS 2125*	1
	TOTAL	**16**			TOTAL	**14**
Houston Community College Fall Semester Year 2		**sch**		**Houston Community College Spring Semester Year 2**		**sch**
MATH 2415[1] (Major Support Course)	Calculus III *will transfer as ASU's MATH CENA*	4		MATH 2320[2] (Major Support Course)	Differential Equations *will transfer as ASU's MATH CENA*	3
ENGR 2301 (Program Requirement)	Engineering Mechanics-Statics *will transfer as ASU's ENGR 3201*	3		ENGR 2332 (Program Requirement)	Mechanics of Materials *will transfer as ASU's ENGR 2332*	3
ECON 2301 **OR** ECON 2302 (Core 080N)	Principles of Macroeconomics **OR** Principles of Microeconomics *will transfer as ASU's ECON 2301* ***OR*** *ECON 2302 (Social & Behavioral Sciences)*	3		ENGR 2302 (Program Requirement)	Engineering Mechanics- Dynamics *will transfer as ASU's ENGR 2302*	3
PHYS 2326 (Core 030N & Major Support Course)	University Physics II (Lecture) *will transfer as ASU's PHYS 2326*	3		GOVT 2305 (Core 070N)	Federal Government *will transfer as ASU's POLS 2305*	3
PHYS 2126 (Core 030N & Major Support Course)	University Physics II (Lab) *will transfer as ASU's PHYS 2126*	1		KINE 1164[3] (Major Support Course)	Introduction to Physical Fitness and Wellness *will transfer as ASU's KIN NENA*	1
ENGR 2304 (Program Requirement)	Programming for Engineers *will transfer as ASU's* ENGR 2304	3				

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	TOTAL	**17**			TOTAL	**13**
				TOTAL DEGREE HOURS		**60**

[1]MATH 2415 will transfer in as MATH CENA. MATH 2415 is approved to substitute MATH 3415 for the purpose of this agreement with the David L. Hirschfeld Department of Engineering. If a student changes their major, the substitution will not apply to their new degree plan.

[2]MATH 2320 will transfer as MATH CENA. Students will then have the option to a) take MATH 3301 at ASU or b) take MATH 3324 at ASU. Please note, taking both, MATH 2320 and MATH 3301 are approved to substitute ASU's MATH 3324 for the purpose of this agreement with the David L. Hirschfeld Department of Engineering. If a student changes their major, the substitution will not apply to their new degree plan.

[3]KINE 1164 will transfer as KIN NENA. KINE 1164 is approved to substitute ASU's GS 1181 Freshman Seminar course for the purpose of this agreement with David L. Hirschfeld Department of Engineering. If a student changes their major, the substitution will not apply to their new degree plan.

Houston Community College & Angelo State University Transfer Plan for Engineering Science- Civil/Environmental Engineering Field of Study, A.S. Bachelor of Science in Civil Engineering (B.S.C.E.)						
ASU Fall Semester Year 1		**sch**		**ASU Spring Semester Year 1**		**sch**
ENGR 1307 (Program Requirement)	Plane Surveying	3		ENGR 2318 (Program Requirement)	Sustainable Development Principles	3
ENGR 3331 (Program Requirement)	Engineering Materials	3		Creative Arts (Core 050N)		3
HIST 1302 (Core 060N)	History of the United States, 1865 to Present	3		CENG 3341 (Program Requirement)	Geotechnical Engineering	3
MATH 3301 **OR** MATH 3324 (Major Support Course)	Linear Algebra **OR** Applied Math for Engineering	3		ENGR 3305 (Program Requirement)	Probability and Risk in Engineering	3
CENG 3361 (Program Requirement)	Structural Analysis I	3				
	TOTAL	**15**			TOTAL	**12**
ASU Fall Semester Year 2		**sch**		**ASU Spring Semester Year 2**		**sch**
COMM 1315 (Area A 091)	Public Speaking	3		CENG 3352 (Program Requirement)	Hydrology and Hydraulics	3
CENG 3311 (Program Requirement)	Introduction to Transportation Engineering	3		Technical Elective (advanced) (Program Requirement)		3

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CENG 3351 (Program Requirement)	Introduction to Environmental Engineering	3		BIOL 1306/1106, 1307/1107, 1308/1108, 1309/1109, OR GEOL 1303/1103[3] (Major Support Course)	Principles of Bio I/Lab, Principles of Bio II/Lab, Human Bio/Lab, Man and the Environment/Lab, OR Physical Geology/Lab	4
CENG/MATH/ Science Elective (adv) (Program Requirement)		3		ENGR 4201 (Program Requirement)	Professional Engineering Practice	2
ENGR 3404 (Program Requirement)	Introduction to Fluid Mechanics	4		Design Elective (advanced) (Program Requirement)		3
	TOTAL	**16**			TOTAL	**15**
ASU Fall Semester Year 3		**sch**				
Language, Philosophy, & Culture (Core 040N)		3				
Design Elective (advanced) (Program Requirement)		3				
CENG 4380 (Program Requirement)	Civil Engineering Senior Design	3				
POLS 2306 (Core 070N)	Texas Government (Texas Constitution and Topics)	3				
	TOTAL	**12**				
				B.S.C.E. TOTAL DEGREE HOURS		**130**

[3]Or other core science course outside of chemistry and physics, with departmental approval.

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Civil Engineering Fundamentals

I. Overall GPA of at least 2.50.
II. Completion of the sequence below with a GPA of at least 2.50:
- Engineering 1201 – Introduction to Engineering
- Engineering 1304 – Engineering Graphics
- Engineering 1307 – Plane Surveying or Engineering 1308 - Introduction to Geomatics
- Engineering 2301* - Engineering Mechanics – Statics
- Engineering 2302* - Engineering Mechanics – Dynamics
- Mathematics 2413* - Calculus I
- Mathematics 2414*- Calculus II
- Physics 2325/2125* - Fundamentals of Physics I
- Physics 2326/2126* - Fundamentals of Physics II

III. Successful completion of the advancement exam.

*A grade of “C” or better is required for these courses.

Additional Notes

Please Note: This guide is for students to utilize as a reference of what courses they can take at each institution. It's possible for students to take these courses in a different sequence if they are coming in with prior credit or if there are changes to course offerings and degree plans. Therefore, it is encouraged for students to reach out to their academic advisor at each institution to discuss current course options and sequences.