

2+2 TRANSFER PLAN TO
UNIVERSITY OF HOUSTON-CLEAR LAKE

COMPUTER SYSTEMS ENGINEERING

(B.S. at UHCL; A.A./A.S. at Community College \)

University-Required Transfer Courses

<u>Foot- notes</u>	<u>Core Curriculum Requirements*</u>	<u>Core # 4</u>	<u>Foot- notes</u>	<u>Program Foundation Courses*</u>	
a	ENGL 1301 - Composition I	3	a,#	ENGL 2311 – Technical Report Writing**	3
a	ENGL 1302 – Composition II	3	#	MATH 2414 – Calculus II	4
b	Humanities	3	#	MATH 2318 – Linear Algebra **	3
c	HIST 1301 – American History I	3	#	MATH 2320 – Ordinary Differential Equations**	3
c	HIST 1302 – American History II, or HIST 2301,2302 or 2303 – Texas History	3	#	MATH 2415 – Calculus III**	4
	GOVT 2301 – Government I	3	#	CHEM 1411 – General Chemistry I	<u>4</u>
	GOVT 2302 – Government II	3	#		21*
d,#	MATH 2413 – Calculus I (or higher)	4	#		
e	Visual & Performing Arts **	3	i	<u>Prerequisites &/or Remedial Courses</u>	
	PHYS 2425 – University Physics I **	4		MATH 1316 – Trigonometry	3
#	PHYS 2426 – University Physics II **	4		MATH 2312 or 2412 – Elem.Functions/Precalc.	4
g	Social & Behavioral Science **	3			
h	Speech Communication	3			
#	C Programming Language **	<u>3</u>			
		45*			
			I	<u>Additional Courses for the Associate Degree</u>	

Explanation of Footnotes

- \ Associate degree requirements at the community college, including the minimum allowed grade point average, are found in the community college catalog in effect during the student's initial semester of continuous enrollment. See a community college counselor for more information. Please note that not all courses are offered at all community colleges. Check with your counselor for availability of courses on your campus.
- * UHCL's requirements are consistent with the 42- hour Texas core curriculum. If a student completes a component of the core at one Texas institution, that block of courses will be substituted for UHCL's same core component(s). Additional Program Foundation courses are required. **Please refer to your school's core requirements for specific courses in each area below.**
- ** These courses may be fulfilled by approved upper-level equivalents at UHCL.
- # These courses are included in the Program Foundation Core and must be completed with a grade of "C-" or better.
- a** Must complete six hours of Composition with grade of "C-" or better. Three hours of technical writing are required by the School of Science and Computer Engineering.
- b** Suggested courses for Humanities include: any ENGL literature, HUMA, PHIL, RELI, SPCH or HIST (in addition to core requirements), or sophomore-level foreign language course.
- c** Six hours of American History required; three hours may be in Texas History.
- d** MATH 2413 may have prerequisites..
- e** Suggested courses for Visual & Performing Arts include: any ARTS, DANC, DRAM, MUSI, or MUAP course. Three semester hours credit required.
- f** **MATH 2413 – Calculus I must be completed before taking PHYS 2425. Students completing PHYS courses at HCC must also complete labs: PHYS 2125 and 2126.**
- g** Suggested courses for Social & Behavioral Science include: any ANTH, ECON, GEOG, PSYC, or SOCI course. Also any GOVT, HIST, or POLS course in addition to core requirements.
- h** Suggested courses for Speech/Communication include: any SPCH course.
- i** With the exception of remedial courses, these courses will count toward the bachelor's degree at UHCL as lower-level electives. These courses are either prerequisite courses for required university courses, courses required for the associate degree, or are required remedial courses to satisfy the TASP mandate
- 4** The core component number is used by Texas schools to identify which area of the 42-hour core curriculum a course fills.

**SCHOOL OF SCIENCE AND COMPUTER ENGINEERING
BACHELOR OF SCIENCE IN COMPUTER SYSTEMS ENGINEERING
2005-2006 CATALOG**

GENERAL DEGREE REQUIREMENTS

- * A total of 132 semester hours of applicable college credit. A maximum of three hours of lower-level “activities” courses may be applied toward graduation. No more than 18 semester hours of previously earned lower-level credit may have been taken by correspondence, extension or CLEP.
- * At least 54 semester hours of upper-level work. Correspondence, extension or CLEP credit cannot be used to fulfill this requirement.
- * At least 30 hours of the degree plan, including 12 hours in the major, must be taken in residence at UHCL.
- * A cumulative GPA of 2.000 on course work completed at UHCL with grades of “C” or better on at least 30 hours of resident upper-level work. Grades of “C-“ and below cannot be applied toward the 30 hours of resident upper-level work.
- * Remain continuously enrolled (complete at least one course in a 12 month period) or meet requirements of a later catalog.
- * Complete the degree within seven years or meet requirements of a later catalog.

COMPUTER SYSTEMS ENGINEERING ADMISSION REQUIREMENTS

All applicants to this program must have a cumulative GPA of 2.500 or better in lower-level or transfer courses. Students with a GPA of less than 2.500 should provide a written statement or additional materials to the admission committee to assist the committee in determining the student’s potential for success in upper-level courses.

CENG PLAN CORE REQUIREMENTS (76 hours)

All plan core courses require a grade of “C-“ or better. Lower level credit given for any of the following courses may require students to take additional approved technical electives to satisfy program requirements.

CENG 3132/3112 – Digital Circuits &Lab	4 hrs	CSCI 3231 – Numerical Methods	3 hrs
CENG 3133/3113 – Linear Circuits & Lab	4 hrs	CSCI 3233 – Object Oriented Design and Programming	3 hrs
CENG 3134/3114 – Advanced Linear Circuits & Lab	4 hrs	CSCI 3331 – Computer Organization & Assembly Lang.	3 hrs
CENG 3135/3115 – Intro Digital Signal Processing & Lab	4 hrs	CSCI 3333 – Data Structures	3 hrs
CENG 3331/3311 – Telecom and Networks &Lab	4 hrs	SWEN 4432 – Software Engineering	3 hrs
CENG 3531/3511 – Computer Architecture and Lab	4 hrs	MATH 3331 – Discrete Math	3 hrs
CENG 3624 – Intro to Engineering	2 hrs	MATH 3334 – Prob/Stat for Sci/Eng	3 hrs
CENG 4133/4113 – Microprocessor Interfacing & Lab	4 hrs	Technical Elective**	3 hrs
CENG 4331 – Analysis & Design of Linear Systems	3 hrs	Technical Elective**	3 hrs
CENG 4534 – Digital System Design	3 hrs	Technical Elective**	3 hrs
CENG 4625/4626 – Senior Projects	4 hrs	Technical Elective**	3 hrs
SENG 4130 – Intro to Systems Engineering	3 hrs		

** Indicates required technical electives that may be chosen from CENG/CSCI/SWEN courses. They also may be selected from the Support Areas in Telecommunications or Software Engineering.

OPTIONAL SUPPORT AREAS

Students interested in Telecommunications and Networks should select the following courses as their required technical electives:

CENG 4031 – Telecom Systems Operation	3 hrs	CENG 4231 – Telecom Switching Systems	3 hrs
CENG 4131 – Telecom Networking Devices	3 hrs	CSCI 4132 – Network Protocols	3 hrs

Students interested in Software Engineering should select the following courses as their required technical electives:

CSCI 3532 – Advanced Data Structures & Algorithms	3 hrs	SWEN 4433 – Software Engineering Tools	3 hrs
CSCI 4534 – Operating Systems	3 hrs	SWEN 4435 – Personal Software Process	3 hrs

ADDITIONAL COURSES NECESSARY TO MEET UPPER-LEVEL REQUIREMENT OR TO MEET MINIMUM REQUIRED HOURS FOR GRADUATION: _____