



# COE – CONSTRUCTION PROGRAMS - CATALOG YEAR 2017 - 2018

## Find the Right Educational Degree Plan

There are two distinctly different ways to pursue your education at HCC. Each pattern has its own particular purpose, and its own advantages and disadvantages. Read the descriptions carefully to make an informed choice. You must choose one of the two following patterns: The *Academic Transfer* pattern of education **OR** The *Workforce Career* pattern of education. For more information, visit our [College and Career Planner Guide](#).

## CONSTRUCTION

### CONSTRUCTION TECHNOLOGY

Construction Technology - General - AAS . . . . .	2-3
Craft Management Specialization - AAS . . . . .	4-5
Construction Technology - Certificate: Level I . . . . .	.6
Construction Helper - Certificate: Level I. . . . .	.7

### HEATING, AIR CONDITIONING AND REFRIGERATION

Heating, Air Conditioning & Refrigeration - AAS . . . . .	8-9
Heating, Air Conditioning & Refrigeration - Basic - Certificate: Level I. . . . .	10
Advanced Heating, Air Conditioning & Refrigeration Technology - Certificate: . . . . .	
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Solar Photovoltaic System Installer - Certificate Level I . . . . .	13
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Industrial Automation Technology - Certificate: Level I . . . . .	15

**HOUSTON COMMUNITY COLLEGE SYSTEM  
EDUCATIONAL PLAN/TRANSFER SUBSTITUTION PETITION**

\_\_\_ FA \_\_\_ VA

NAME:	SID#:	TEL#:	EMAIL:	DATE:
COLLEGE:	COU/ADV:	TEL#:	EMAIL:	CAT YR: 8/15/17-8/14/18

**CONSTRUCTION TECHNOLOGY - GENERAL - ASSOCIATE OF APPLIED SCIENCE**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
TSI testing is required prior to first enrollment.									
<b>FIRST YEAR</b>									
<b>FIRST SEMESTER</b>									
EDUC 1300 Learning Framework <sup>A</sup>	3								
ELPT 1315 Electrical Calculations I	3								
CNBT 1301 Introduction to Construction Industry	3								
CNBT 1318 Construction Tools and Techniques	3								
CNBT 1300 Residential and Light Commercial Blueprint Reading	3								
CNBT 1311 Construction Methods and Materials I	3								
<b>SEMESTER TOTAL</b>	<b>18</b>								
<b>SECOND SEMESTER</b>									
CNBT 1342 Building Codes and Inspections	3								
ELPT 1329 Residential Wiring	3								
CNBT 1346 Construction Estimating I	3								
CNBT 1302 Mechanical, Plumbing, and Electrical Systems in Construction	3								
CNBT 1316 Construction Technology I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
XXXX #3## General Education Elective <sup>E</sup>	3								
CNBT 2337 Construction Estimating II	3								
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup>	3								
<b>SEMESTER TOTAL</b>	<b>9</b>								
<b>SECOND SEMESTER</b>									
CNBT 2342 Construction Management I	3								
XXXX #3## Math/Natural Science Elective <sup>B</sup>	3								
XXXX #3## General Education Elective <sup>E</sup>	3								

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**CONSTRUCTION TECHNOLOGY - GENERAL - ASSOCIATE OF APPLIED SCIENCE**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
(Continued from page 1)									
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup>	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
<b>THIRD SEMESTER</b>									
CNBT 1391 Special Topics in Construction/Building Technology/Technician	3								
CNBT 2335 Computer- Aided Construction Scheduling <sup>#</sup>	3								
<b>SEMESTER TOTAL</b>	<b>6</b>								
<b>PROGRAM TOTAL</b>	<b>60</b>								
<b># CAPSTONE COURSE</b>									

- A. **Student Success Course:** Students are required to complete **EDUC 1300** within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.
  
- B. **Math/Natural Science: *May choose from*** – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.
  
- C. **Humanities/Fine Arts: *May choose from*** – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).
  
- D. **Social/Behavioral Sciences: *May choose from*** – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.
  
- E. **General Education: *May choose from*** – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

**HOUSTON COMMUNITY COLLEGE SYSTEM  
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\_\_\_ FA \_\_\_ VA

NAME:	SID#:	TEL#:	EMAIL:	DATE:
COLLEGE:	COU/ADV:	TEL#:	EMAIL:	CAT YR: 8/15/17-8/14/18

**CONSTRUCTION TECHNOLOGY - CRAFT MANAGEMENT SPECIALIZATION - ASSOCIATE OF APPLIED SCIENCE**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
TSI testing is required prior to first enrollment.									
<b>FIRST YEAR</b>									
<b>Block credit for approved certification 21 semester hours.</b>	<b>21</b>								
EDUC 1300 Learning Framework <sup>A</sup>	3								
<b>SEMESTER TOTAL</b>	<b>24</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
XXXX #3## General Education Elective <sup>E</sup>	3								
CNBT 1342 Building Codes and Inspections	3								
CNBT 2335 Computer-Aided Construction Scheduling	3								
CNBT 1300 Residential and Light Commercial Blueprint Reading	3								
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup>	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
CNBT 1346 Construction Estimating I	3								
CNBT 2342 Construction Management I	3								
XXXX #3## Math/Natural Science Elective <sup>B</sup>	3								
XXXX #3## General Education Elective	3								
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup>	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>THIRD SEMESTER</b>									
CNBT 2337 Construction Estimating II	3								
CNBT 1391 Special Topics in Construction/ Building Technology/Technician <sup>**</sup>	3								
<b>SEMESTER TOTAL</b>	<b>6</b>								
<b>PROGRAM TOTAL</b>	<b>60</b>								
<b>** CAPSTONE COURSE</b>									

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<b>COLLEGE:</b>	<b>COU/ADV:</b>	<b>TEL#:</b>	<b>EMAIL:</b>	CAT YR: 8/15/17-8/14/18

**CONSTRUCTION TECHNOLOGY - CRAFT MANAGEMENT SPECIALIZATION - ASSOCIATE OF APPLIED SCIENCE**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				

- A. Student Success Course:** Students are required to complete **EDUC 1300** within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.
- B. Math/Natural Science:** *May choose from* – **ANTH 2301** (with or without 2101 = lab), 2302, **ASTR 1303, 1304, 1403, 1404**, **BIOL 1308, 1309, 1322, 1406, 1407**, (*2301, 2302 – restricted to Engineering, Science, and Health Sciences majors*), **CHEM 1305, 1405, 1411, 1412**, **COSC 1436**, **GEOG 1301**, **GEOL 1305, 1345, 1347, 1403, 1404**, **MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415**, **PHYS 1305, 1401, 1402, 2325** (*with or without 2125= lab*), 2326 (*with or without 2126 = lab*), **PSYC 2317**.
- C. Humanities/Fine Arts:** *May choose from* – **ARTS 1301, 1303, 1304**, **COMM 2366**, **DANC 2303**, **DRAM 1310, 2316, 2366**, **ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351**, **HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381**, **HUMA 1301, 1305, 1311, 2319, 2323**, **MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316**, World Languages (**ARAB 1411, 1412**, **CHIN 1411, 1412**, **FREN 1411, 1412**, **GERM 1411, 1412**, **JAPN 1411, 1412**, **KORE 1411, 1412**, **SPAN 1411, 1412**).
- D. Social/Behavioral Sciences:** *May choose from* – **ANTH 2346, 2351**, **ECON 1301, 2301, 2302**, **EDUC 1300**, **GEOG 1302, 1303**, **GOVT 2305, 2306**, **PSYC 2301, 2314, 2316, 2319**, **SOCI 1301, 1306, 2301, 2336**, **TECA 1354**.
- E. General Education:** *May choose from* – **ANTH 2301** (*with or without 2101 = lab*), 2302, 2346, 2351, **ARTS 1301, 1303, 1304**, **ASTR 1303, 1304, 1403, 1404**, **BIOL 1308, 1309, 1322, 1406, 1407**, (*2301, 2302 – restricted to Engineering, Science, and Health Sciences majors*), **CHEM 1305, 1405, 1411, 1412**, **COMM 2366**, **COSC 1436**, **DANC 2303**, **DRAM 1310, 2316, 2366**, **ECON 1301, 2301, 2302**, **EDUC 1300**, **ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351**, **GEOG 1301, 1302, 1303**, **GEOL 1305, 1345, 1347, 1403, 1404**, **GOVT 2305, 2306**, **HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381**, **HUMA 1301, 1305, 1311, 2319, 2323**, **MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415**, **MUSI 1306, 1310**, **PHIL 1301, 1304, 2306, 2307, 2316**, **PHYS 1305, 1401, 1402, 2325** (*with or without 2125 = lab*), 2326 (*with or without 2126 = lab*), **PSYC 2301, 2314, 2316, 2317, 2319**, **SOCI 1301, 1306, 2301, 2336**, **TECA 1354**, World Languages (**ARAB 1411, 1412**, **CHIN 1411, 1412**, **FREN 1411, 1412**, **GERM 1411, 1412**, **JAPN 1411, 1412**, **KORE 1411, 1412**, **SPAN 1411, 1412**).

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**CONSTRUCTION TECHNOLOGY - CERTIFICATE: LEVEL I**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
<b>FIRST SEMESTER</b>									
ELPT 1315 Electrical Calculations I	3								
CNBT 1301 Introduction to the Construction Industry	3								
CNBT 1318 Construction Tools and Techniques	3								
CNBT 1300 Residential and Light Commercial Blueprint Reading	3								
CNBT 1311 Construction Methods and Materials I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
CNBT 2335 Computer-Aided Construction Scheduling	3								
ELPT 1329 Residential Wiring	3								
CNBT 1302 Mechanical, Plumbing and Electrical Systems in Construction I	3								
CNBT 1316 Construction Technology I #	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
<b>PROGRAM TOTAL</b>	<b>27</b>								
<b># CAPSTONE COURSE</b>									

HOUSTON COMMUNITY COLLEGE SYSTEM  
EDUCATIONAL PLAN/TRANSFER SUBSTITUTION PETITION

\_\_\_ FA \_\_\_ VA

<b>NAME:</b>		<b>SID#:</b>	<b>TEL#:</b>	<b>EMAIL:</b>	<b>DATE:</b>
<b>COLLEGE:</b>	<b>COU/ADV:</b>		<b>TEL#:</b>	<b>EMAIL:</b>	CAT YR: 8/15/17-8/14/18

**CONSTRUCTION TECHNOLOGY - CONSTRUCTION HELPER - CERTIFICATE: LEVEL I**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
<b>FIRST SEMESTER</b>									
ELPT 1315 Electrical Calculations I	3								
CNBT 1301 Introduction to Construction Industry	3								
CNBT 1318 Construction Tools and Techniques	3								
CNBT 1300 Residential and Light Commercial Blueprint Reading	3								
CNBT 1311 Construction Methods and Materials I #	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>15</b>								
# CAPSTONE COURSE									

**HOUSTON COMMUNITY COLLEGE SYSTEM  
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<b>NAME:</b>	<b>SID#:</b>	<b>TEL#:</b>	<b>EMAIL:</b>	<b>DATE:</b>
<b>COLLEGE:</b>	<b>COU/ADV:</b>	<b>TEL#:</b>	<b>EMAIL:</b>	<b>CAT YR: 8/15/17-8/14/18</b>

**HEATING, AIR CONDITIONING & REFRIGERATION - AAS**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
TSI testing is required prior to first enrollment.									
<b>FIRST YEAR</b>									
<b>FIRST SEMESTER</b>									
EDUC 1300 Learning Framework <sup>A</sup>	3								
ELPT 1315 Electrical Calculations I	3								
HART 1301 Basic Electricity for HVAC	3								
HART 1356 EPA Recovery Certification Preparation <sup>E</sup>	3								
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup>	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
HART 1303 Air Conditioning Control Principles	3								
HART 1307 Refrigeration Principles	3								
HART 1341 Residential Air Conditioning <sup>F</sup>	3								
HART 1345 Gas and Electric Heating <sup>F</sup>	3								
XXXX #3## Social/ Behavioral Sciences Elective <sup>D</sup>	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>THIRD SEMESTER</b>									
HART 2334 Advanced Air Conditioning Controls <sup>F</sup>	3								
HART 2341 Commercial Air Conditioning	3								
HART 2345 Residential Air Conditioning Systems Design <i>OR</i>									
HART 2302 Commercial Air Conditioning System Design	3								
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup>	3								
XXXX #3## Math/Natural Science Elective <sup>B</sup>	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
HART 2336 Air Conditioning Troubleshooting <sup>#</sup>	3								
HART 2342 Commercial Refrigeration <sup>E</sup>	3								
HART 2349 Heat Pumps <sup>E</sup>	3								

**(Continued on the next page)**



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NAME:	SID#:	TEL#:	EMAIL:	DATE:
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**HEATING, AIR CONDITIONING & REFRIGERATION - AAS**

HCCS Course Requirement	cr	Transfer	Substitute	Substitute (SU)	Term	Credits	Grade	Approval	Date
	hr	Institution	Course	Transfer (TR)	Comment/Disapproval			Signature	
(Continued from page 1)									
HART 2374 Building Control Systems	3								
XXXX #3## Humanities/Fine Arts Elective	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>60</b>								
# CAPSTONE COURSE									

- A. **Student Success Course:** Students are required to complete **EDUC 1300** within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.
- B. **Math/Natural Science: *May choose from*** – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.
- C. **Humanities/Fine Arts: *May choose from*** – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).
- D. **Social/Behavioral Sciences: *May choose from*** – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.
- E. **Employment certification (ER) required.**
- F. **EPA Certification Required.**

**NOTE:** EPA Certification and all Employment Ready Certifications are nationally recognized and offered by HVAC Excellence. <http://www.hvaexcellence.org/>

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**HEATING, AIR CONDITIONING & REFRIGERATION - BASIC - CERTIFICATE: LEVEL I**

HCCS Course Requirement	cr	Transfer	Substitute	Substitute (SU)	Term	Credits	Grade	Approval	Date
<b>FIRST SEMESTER</b>									
ELPT 1315 Electrical Calculations I	3								
HART 1301 Basic Electricity for HVAC	3								
HART 1356 EPA Recovery Certificate Preparation	3								
<b>SEMESTER TOTAL</b>	<b>9</b>								
<b>SECOND SEMESTER</b>									
HART 1303 Air Conditioning Control Principles	3								
HART 1307 Refrigeration Principles	3								
HART 1341 Residential Air Conditioning #	3								
HART 1345 Gas and Electric Heating	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
<b>PROGRAM TOTAL</b>	<b>21</b>								
<b># CAPSTONE COURSE</b>									

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<b>COLLEGE:</b>	<b>COU/ADV:</b>	<b>TEL#:</b>	<b>EMAIL:</b>	CAT YR: 8/15/17-8/14/18

**HEATING, AIR CONDITIONING & REFRIGERATION - ADVANCED HEATING, AIR CONDITIONING & REFRIGERATION TECHNOLOGY - CERTIFICATE: LEVEL I**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
<b>FIRST SEMESTER</b>									
ELPT 1315 Electrical Calculations I	3								
HART 1301 Basic Electricity for HVAC	3								
HART 1307 Refrigeration Principles	3								
HART 1356 EPA Recovery Certification Preparation <sup>A</sup>	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
<b>SECOND SEMESTER</b>									
HART 1303 Air Conditioning Control Principles	3								
HART 1341 Residential Air Conditioning <sup>B</sup>	3								
HART 1345 Gas and Electric Heating <sup>B</sup>	3								
HART 2342 Commercial Refrigeration <sup>B</sup>	3								
HART 2334 Advanced Air Conditioning Controls <sup>B</sup>	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>THIRD SEMESTER</b>									
HART 2336 Air Conditioning Troubleshooting #	3								
HART 2341 Commercial Air Conditioning	3								
HART 2349 Heat Pumps <sup>B</sup>	3								
HART 2302 Commercial Air Conditioning System Design	3								
HART 2345 Residential Air Conditioning Systems Design	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>42</b>								

A. EPA Certification Required.

B. Employment Certification (ER) required.

**NOTE: EPA Certification and all Employment Ready Certifications are nationally recognized and offered by HVAC Excellence. <http://www.hvaexcellence.org/>**



Updated: 08/14/2017

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<b>COLLEGE:</b>	<b>COU/ADV:</b>		<b>TEL#:</b>	<b>EMAIL:</b>	<b>CAT YR: 8/15/17-8/14/18</b>

**INDUSTRIAL ELECTRICITY - SOLAR PHOTOVOLTAIC SYSTEM INSTALLER - CERTIFICATE: LEVEL I**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
<b>FIRST YEAR</b>									
<b>FIRST SEMESTER</b>									
ELPT 1315 Electrical Calculations I	3								
ELPT 1221 Introduction to Electrical Safety and Tools	2								
ELPT 1311 Basic Electrical Theory	3								
ELMT 1311 Solar Fundamentals	3								
ELMT 1402 Solar Photovoltaic Systems #	4								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>15</b>								
# <b>CAPSTONE COURSE</b>									

**HOUSTON COMMUNITY COLLEGE SYSTEM  
EDUCATIONAL PLAN/TRANSFER SUBSTITUTION PETITION**

\_\_\_ FA \_\_\_ VA

<b>NAME:</b>	<b>SID#:</b>	<b>TEL#:</b>	<b>EMAIL:</b>	<b>DATE:</b>
<b>COLLEGE:</b>	<b>COU/ADV:</b>	<b>TEL#:</b>	<b>EMAIL:</b>	CAT YR: 8/15/17-8/14/18

**INDUSTRIAL ELECTRICITY - ELECTRICAL POWER TECHNOLOGY - CERTIFICATE: LEVEL I**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
<b>FIRST SEMESTER</b>									
ELPT 1315 Electrical Calculations I	3								
ELPT 1221 Introduction to Electrical Safety and Tools	2								
ELPT 1325 National Electrical Code I	3								
ELPT 1311 Basic Electrical Theory	3								
ELPT 1329 Residential Wiring	3								
<b>SEMESTER TOTAL</b>	<b>14</b>								
<b>SECOND SEMESTER</b>									
ELPT 1341 Motor Control	3								
CNBT 1300 Residential and Light Commercial Blueprint Reading	3								
ELMT 1301 Programmable Logic Controllers	3								
ELPT 1345 Commercial Wiring	3								
ELPT 2325 National Electrical Code II <i>OR</i>									
ELPT 1355 Electronic Applications	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>THIRD SEMESTER</b>									
XXXX #3## Department Approved Elective <sup>A</sup>	3								
ELPT 2301 Journeyman Electrician Exam Review <i>OR</i>									
CNBT 1302 Mechanical, Plumbing and Electrical Systems in Construction #	3								
<b>SEMESTER TOTAL</b>	<b>6</b>								
<b>PROGRAM TOTAL</b>	<b>35</b>								
<b># CAPSTONE COURSE</b>									

**A. Department Approved Elective:** *May choose from* – ELPT 1311, 1315, 1319, 1320, 1325, 1329, 1331, 1341, 1345, 1355, 1364, 1371, 1391, 2319, 2325, 2337, 2339, 2343, 2349, 2355, 2364, 2365.

## HOUSTON COMMUNITY COLLEGE SYSTEM EDUCATIONAL PLAN/TRANSFER SUBSTITUTION PETITION

\_\_\_ FA \_\_\_ VA

NAME:	SID#:	TEL#:	EMAIL:	DATE:
COLLEGE:	COU/ADV:	TEL#:	EMAIL:	CAT YR: 8/15/17-8/14/18

### INDUSTRIAL ELECTRICITY - INDUSTRIAL AUTOMATION TECHNOLOGY - CERTIFICATE: LEVEL I

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
<b>FIRST SEMESTER</b>									
ELPT 1315 Electrical Calculations I	3								
ELPT 1221 Introduction to Electrical Safety and Tools	2								
ELPT 1311 Basic Electrical Theory	3								
ELPT 1341 Motor Control	3								
ELMT 1301 Programmable Logic Controllers	3								
<b>SEMESTER TOTAL</b>	<b>14</b>								
<b>SECOND SEMESTER</b>									
ELPT 1355 Electronic Applications	3								
ELPT 2419 Programmable Logic Controllers I	4								
HYDR 1345 Hydraulics and Pneumatics	3								
INCR 1302 Physics of Instrumentation	3								
ELPT 1325 National Electrical Code I	3								
<b>SEMESTER TOTAL</b>	<b>16</b>								
<b>THIRD SEMESTER</b>									
ELPT 2455 Programmable Logic Controllers II	4								
ELPT 2449 Industrial Automation #	4								
<b>SEMESTER TOTAL</b>	<b>8</b>								
<b>PROGRAM TOTAL</b>	<b>38</b>								
<b># CAPSTONE COURSE</b>									