

# ARCHITECTURE AND CONSTRUCTION PROGRAMS - CATALOG YEAR 2013 - 2014

CLICK ON YOUR PLAN. GO TO THAT PAGE.



## CONSTRUCTION ENGINEERING TECHNOLOGY

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

## HEATING, AIR CONDITIONING AND REFRIGERATION

Basic Air Conditioning and Refrigeration - Certificate: Level I. . . . .	7
Heating, Air Conditioning and Refrigeration Technology - Certificate: Level I. .8	
Residential Building High Performance Technology Rater - Certificate: Level I 9	

## INDUSTRIAL ELECTRICITY

Electrical Helper - Certificate: Level I. . . . .	10
Electrical Power Technology - Certificate: Level I . . . . .	11
Industrial Automation Technology - Certificate: Level I . . . . .	12

## PLUMBING

Plumbing Technology - Certificate: Level I . . . . .	13
Plumbing Helper - Certificate: Level I. . . . .	14

**UPDATED: 09/23/2014**

**HOUSTON COMMUNITY COLLEGE SYSTEM  
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NAME:	SID#:	TEL#:	EMAIL:	DATE:
COLLEGE:	COU/ADV:	TEL#:	EMAIL:	CAT YR: 8/15/13-8/14/14

**CONSTRUCTION TECHNOLOGY - ASSOCIATE IN 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>									
LEAD 1200 Workforce Development with Critical Thinking	2								
TECM 1301 Industrial Mathematics	3								
CNBT 1201 Introduction to Construction Industry	2								
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>16</b>								
<b>SECOND SEMESTER</b>									
ITSC 1309 Integrated Software Applications I	3								
HART 1307 Refrigeration Principles <i>OR</i>									
ELPT 1329 Residential Wiring	3								
CNBT 1302 Mechanical, Plumbing, and Electrical Systems in Construction	3								
CNBT 1316 Construction Technology I	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
XXXX #3## General Education Elective	3								
CNBT 1342 Building Codes and Inspections	3								
BMGT 1301 Supervision	3								
XXXX #3## Humanities/Fine Arts General Ed. Elective	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
(Continued on page 2)									

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**CONSTRUCTION TECHNOLOGY - ASSOCIATE IN APPLIED SCIENCE**

HCCS Course Requirement	cr	Transfer	Substitute	Substitute (SU)	Term	Credits	Grade	Approval Signature	Date
	hr	Institution	Course	Transfer (TR)	Comment/Disapproval				
<b>SECOND SEMESTER</b>									
CNBT 1346 Construction Estimating I	3								
CNBT 2342 Construction Management I	3								
XXXX #3## Math/Natural Science General Ed. Elective	3								
XXXX #3## General Education Elective	3								
XXXX #3## Social/Behavioral Science General Ed. Elective	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>THIRD SEMESTER</b>									
CNBT 2337 Construction Estimating II <u>OR</u>									
BUSG 1303 Principles of Finance <u>OR</u>									
BMGT 1313 Principles of Purchasing	3								
CNBT 2335 Computer- Aided Construction Scheduling	3								
<b>SEMESTER TOTAL</b>	<b>6</b>								
<b>PROGRAM TOTAL</b>	<b>61</b>								

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**CONSTRUCTION TECHNOLOGY - CRAFT MANAGEMENT SPECIALIZATION - ASSOCIATE IN 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 24 semester hours.</b>	<b>22</b>								
LEAD 1370 Workforce Development and Critical Thinking									
Skills for Student Success	3								
<b>SEMESTER TOTAL</b>	<b>25</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
XXXX #3## General Education Elective	3								
CNBT 1342 Building Codes and Inspections	3								
BMGT 1301 Supervision	3								
ITSC 1309 Integrated Software Applications I	3								
XXXX #3## Humanities/ Fine Arts General Ed. Elective	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 General Ed. Elective	3								
XXXX #3## General Education Elective	3								
XXXX #3## Social/Behavioral Science General Ed. Elective	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>THIRD SEMESTER</b>									
CNBT 2337 Construction Estimating II	3								
CNBT 2335 Computer-Aided Construction Scheduling	3								
<b>SEMESTER TOTAL</b>	<b>6</b>								
<b>PROGRAM TOTAL</b>	<b>61</b>								

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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>									
LEAD 1200 Workforce Development with Critical Thinking									
TECM 1301 Industrial Mathematics									
CNBT 1201 Introduction to the Construction Industry									
CNBT 1318 Construction Tools and Techniques									
CNBT 1300 Residential and Light Commercial Blueprint Reading									
CNBT 1311 Construction Methods and Materials I									
<b>SECOND SEMESTER</b>									
ITSC 1309 Integrated Software Applications I									
HART 1307 Refrigeration Principles									
ELPT 1329 Residential Wiring									
CNBT #3## Department Approved Elective									
CNBT 1302 Mechanical, Plumbing and Electrical Systems in Construction I									
CNBT 1316 Construction Technology I									

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**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>									
LEAD 1200 Workforce Development with Critical Thinking									
TECM 1301 Industrial Mathematics									
CNBT 1201 Introduction to Construction Industry									
CNBT 1318 Construction Tools and Techniques									
CNBT 1300 Residential and Light Commercial Blueprint Reading									
CNBT 1311 Construction Methods and Materials I									

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

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
<b>FIRST SEMESTER</b>									
LEAD 1200 Workforce Development with Critical Thinking									
TECM 1301 Industrial Mathematics									
HART 1303 Air Conditioning Control Principles									
HART 1307 Refrigeration Principles									
HART 1341 Residential Air Conditioning									
HART 1345 Gas and Electric Heating									

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

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
<b>FIRST SEMESTER</b>									
LEAD 1200 Workforce Development with Critical Thinking	2								
TECM 1301 Industrial Mathematics	3								
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>17</b>								
<b>SECOND SEMESTER</b>									
HART 1356 EPA Recovery Certification Preparation***	3								
HART 2334 Advanced Air Conditioning Controls	3								
HART 2336 Air Conditioning Troubleshooting*	3								
HART 2342 Commercial Refrigeration**	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
<b>THIRD SEMESTER</b>									
HART 2341 Commercial Air Conditioning	3								
HART 2345 Residential Air Conditioning Systems Design	3								
HART 2349 Heat Pumps**	3								
HART 2357 Specialized Commercial Refrigeration**	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								
<b>PROGRAM TOTAL</b>	<b>41</b>								
*The capstone course is HART 2336, Air Conditioning Troubleshooting.									
**Employment Certification (ER) required.									
***EPA Certification Required.									
<b>NOTE: EPA Certification and all Employment Ready Certifications are nationally recognized and offered by HVAC Excellence. <a href="http://www.hvaexcellence.org/">http://www.hvaexcellence.org/</a></b>									



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**HEATING, AIR CONDITIONING AND REFRIGERATION - RESIDENTIAL BUILDING HIGH PERFORMANCE TECHNOLOGY-RATER - 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>									
LEAD 1200 Workforce Development with Critical Thinking									
RBPT 1300 Fundamentals of Residential Building Science									
RBPT 1305 Residential Lighting, Appliances, & Plug Loads									
RBPT 1310 Residential Mechanical Systems									
<b>SECOND SEMESTER</b>									
RBPT 2320 Residential Energy Conservation Codes									
RBPT 2325 Energy Rating Systems for Homes									
RBPT 2315 Green Rating Systems for Homes									
RBPT 2330 Advanced Residential Building Science and Systems									
<b>THIRD SEMESTER</b>									
RBPT 2340 Advanced Residential Mechanical Systems									
RBPT 2355 Sustainable Neighborhood Development									

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**INDUSTRIAL ELECTRICITY - ELECTRICAL 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>											
LEAD	1200	Workforce Development with Critical Thinking									
TECM	1301	Industrial Mathematics									
ELPT	1221	Introduction to Electrical Safety and Tools									
ELPT	1311	Basic Electrical Theory									
ELPT	1325	National Electrical Code I									
ELPT	1329	Residential Wiring									
ELPT	1345	Commercial Wiring									

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### 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>									
LEAD 1200 Workforce Development with Critical Thinking									
TECM 1301 Industrial Mathematics									
ELPT 1221 Introduction to Electrical Safety and Tools									
ELPT 1325 National Electrical Code I									
ELPT 1311 Basic Electrical Theory									
ELPT 1329 Residential Wiring									
<b>SECOND SEMESTER</b>									
ELPT 1341 Motor Control									
CNBT 1300 Residential and Light Commercial Blueprint Reading									
ELMT 1301 Programmable Logic Controllers									
ELPT 1345 Commercial Wiring									
ELPT 2325 National Electrical Code II <u>OR</u>									
ELPT 1355 Electronic Applications									
<b>THIRD SEMESTER</b>									
XXXX #3## Department Approved Elective									
ELPT 2301 Journeyman Electrician Exam Review <u>OR</u>									
CNBT 1302 Mechanical, Plumbing and Electrical Systems in Construction									

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**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>									
LEAD 1200 Workforce Development with Critical Thinking									
TECM 1301 Industrial Mathematics									
ELPT 1221 Introduction to Electrical Safety and Tools									
ELPT 1311 Basic Electrical Theory									
ELPT 1341 Motor Control									
ELMT 1301 Programmable Logic Controllers									
<b>SECOND SEMESTER</b>									
ELPT 1355 Electronic Applications									
ELPT 2419 Programmable Logic Controllers I									
HYDR 1345 Hydraulics and Pneumatics									
INCR 1302 Physics of Instrumentation									
ELPT 1325 National Electrical Code I									
<b>THIRD SEMESTER</b>									
ELPT 2455 Programmable Logic Controllers II									
ELPT 2449 Industrial Automation									

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### PLUMBING TECHNOLOGY - CERTIFICATE: LEVEL I

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
<b>FIRST SEMESTER</b>									
LEAD 1200 Workforce Development with Critical Thinking									
TECM 1301 Industrial Mathematics									
PFPB 1313 Introduction to the Plumbing Trade									
PFPB 1306 Basic Blueprint Reading for Plumbers									
PFPB 2409 Residential Construction Plumbing									
<b>SECOND SEMESTER</b>									
PFPB 1319 Commercial Plumbing									
PFPB 1323 Plumbing Codes I									
CNBT 1302 Mechanical, Plumbing & Electrical Systems in Construction I									
PFPB 1321 Plumbing Maintenance and Repair									

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### PLUMBING HELPER - CERTIFICATE: LEVEL I

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
<b>FIRST SEMESTER</b>									
LEAD 1200 Workforce Development with Critical Thinking									
TECM 1301 Industrial Mathematics									
PFPB 1313 Introduction to the Plumbing Trade									
PFPB 1306 Basic Blueprint Reading for Plumbers									
PFPB 2409 Residential Construction Plumbing									