



**COE – MANUFACTURING PROGRAMS - CATALOG YEAR 2016 - 2017**

**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](#).

**MANUFACTURING**

**MACHINING TECHNOLOGY**

- Machining Technology - AAS . . . . . 2-3
- Machining Technology - Certificate: Level I . . . . . 4
- Machining Technology - Machine Shop Technology/Assistant - Certificate: Level I. 5

**MANUFACTURING ENGINEERING TECHNOLOGY**

- Manufacturing Engineering Technology - AAS . . . . . 6-7
- Manufacturing Engineering Technology - Technician - Certificate: Level II . . . 8
- Manufacturing Engineering Technology - Helper - Certificate: Level I . . . . 9

**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>	<b>CAT YR: 8/15/16-8/14/17</b>	

**MACHINING TECHNOLOGY - 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 required prior to first enrollment.									
<b>FIRST YEAR</b>									
<b>FIRST SEMESTER</b>									
LEAD 1370 Workforce Leadership and Critical Thinking									
Skills for Student Success	3								
MCHN 1343 Machine Shop Mathematics (Spring 2016)	3								
MCHN 1302 Print Reading for Machining Trades	3								
MCHN 1320 Precision Tools and Measurement	3								
MCHN 1338 Basic Machine Shop I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
HYDR 1345 Hydraulics and Pneumatics	3								
ENTC 1347 Safety and Ergonomics	3								
MCHN 1308 Basic Lathe	3								
MCHN 1313 Basic Milling Operations	3								
MCHN 1305 Metals and Heat Treatment	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
MCHN 2333 Advanced Lathe Operations	3								
MCHN 2337 Advanced Milling Operations	3								
INMT 1370 Lean Manufacturing-Machinist	3								
MCHN 2331 Operation of CNC Turning Centers <i>OR</i>									
INMT 1345 Computer Numerical Controls	3								
<b>SEMESTER TOTAL</b>	<b>12</b>								

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**MACHINING TECHNOLOGY - BASIC - CERTIFICATE: LEVEL I**

HCCS Course Requirement	cr	Transfer	Substitute	Substitute (SU)	Term	Credits	Grade	Approval	Date
	hr	Institution	Course	Transfer (TR)	Comment/Disapproval			Signature	
<b>FIRST SEMESTER</b>									
LEAD 1370 Workforce Leadership and Critical Thinking									
Skills for Student Success	3								
TECM 1301 Industrial Mathematics	3								
MCHN 1302 Print Reading for Machining Trades	3								
MCHN 1320 Precision Tools and Measurement	3								
MCHN 1338 Basic Machine Shop I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
ENTC 1347 Safety and Ergonomics	3								
MCHN 1308 Basic Lathe	3								
MCHN 1313 Basic Milling Operations **	3								
HYDR 1345 Hydraulics and Pneumatics	3								
MCHN 1305 Metals and Heat Treatment	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>30</b>								
<b>** CAPSTONE CLASS</b>									

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**MACHINING TECHNOLOGY - MACHINE SHOP TECHNOLOGY/ASSISTANT - CERTIFICATE: LEVEL II**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
<b>FIRST YEAR</b>									
<b>FIRST SEMESTER</b>									
LEAD 1370 Workforce Leadership and Critical Thinking Skills for Student Success	3								
TECM 1301 Industrial Mathematics	3								
MCHN 1302 Print Reading for Machining Trades	3								
MCHN 1320 Precision Tools and Measurement	3								
MCHN 1338 Basic Machine Shop I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
ENTC 1347 Safety and Ergonomics	3								
HYDR 1345 Hydraulics and Pneumatics	3								
MCHN 1308 Basic Lathe	3								
MCHN 1313 Basic Milling Operations	3								
MCHN 1305 Metals and Heat Treatment	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
MCHN 2337 Advanced Milling Operations	3								
MCHN 2333 Advanced Lathe Operations	3								
INMT 1370 Lean Manufacturing	3								
MCHN 2331 Operation of CNC Turning Centers <b><i>OR</i></b>									
INMT 1345 Computer Numerical Controls	3								
MCHN 2341 Advanced Machining I <b>**</b>	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>45</b>								
<b>** CAPSTONE CLASS</b>									

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**MANUFACTURING ENGINEERING TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE**

HCCS Course Requirement	cr	Transfer	Substitute	Substitute (SU)	Term	Credits	Grade	Approval	Date
TSI Testing required prior to first enrollment.									
<b>FIRST YEAR</b>									
<b>FIRST SEMESTER</b>									
LEAD 1370 Workforce Leadership and Critical Thinking									
Skills for Student Success	3								
TECM 1301 Industrial Mathematics	3								
MCHN 1302 Print Reading for Machining Trades	3								
ENTC 1347 Safety and Ergonomics	3								
MCHN 1338 Basic Machine Shop I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
HYDR 1345 Hydraulics and Pneumatics	3								
ELPT 1311 Basic Electrical Theory	3								
MCHN 1308 Basic Lathe	3								
MCHN 1313 Basic Milling Operations	3								
INMT 1345 Computer Numerical Controls	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND YEAR</b>									
<b>FIRST SEMESTER</b>									
INMT 1317 Industrial Automation	3								
INCR 1302 Physics of Instrumentation	3								
MCHN 2331 Operation of CNC Turning Centers	3								
INMT 1343 Computer Aided Design/Computer Aided Manufacturing (CAD/CAM)	3								
INMT 1370 Lean Manufacturing**	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								

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**MANUFACTURING ENGINEERING TECHNOLOGY - TECHNICIAN - CERTIFICATE: LEVEL II**

HCCS Course Requirement	cr hr	Transfer Institution	Substitute Course	Substitute (SU) Transfer (TR)	Term	Credits	Grade	Approval Signature	Date
					Comment/Disapproval				
TSI Testing required prior to first enrollment.									
<b>FIRST SEMESTER</b>									
LEAD 1370 Workforce Leadership and Critical Thinking									
Skills for Student Success	3								
TECM 1301 Industrial Mathematics	3								
MCHN 1302 Print Reading for Machining Trades	3								
ENTC 1347 Safety and Ergonomics	3								
MCHN 1338 Basic Machine Shop I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
HYDR 1345 Hydraulics and Pneumatics	3								
ELPT 1311 Basic Electrical Theory	3								
MCHN 1308 Basic Lathe	3								
MCHN 1313 Basic Milling Operations	3								
INMT 1345 Computer Numerical Controls	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>THIRD SEMESTER</b>									
MCHN 2331 Operation of CNC Turning Centers	3								
INMT 1343 Computer Aided Design/Computer Aided Manufacturing (CAD/CAM)	3								
INCR 1302 Physics of Instrumentation	3								
INMT 1317 Industrial Automation	3								
INMT 1370 Lean Manufacturing **	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>45</b>								
<b>** CAPSTONE CLASS</b>									



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**MANUFACTURING ENGINEERING TECHNOLOGY - 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 1370 Workforce Leadership and Critical Thinking									
Skills for Student Success	3								
TECM 1301 Industrial Mathematics	3								
MCHN 1302 Print Reading for Machining Trades	3								
ENTC 1347 Safety and Ergonomics	3								
MCHN 1338 Basic Machine Shop I	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>SECOND SEMESTER</b>									
HYDR 1345 Hydraulics and Pneumatics	3								
ELPT 1311 Basic Electrical Theory	3								
MCHN 1308 Basic Lathe	3								
MCHN 1313 Basic Milling Operations	3								
<b>SEMESTER TOTAL</b>	<b>15</b>								
<b>PROGRAM TOTAL</b>	<b>27</b>								