

NORTH CAROLINA COMMUNITY COLLEGE SYSTEM

April 20, 1998

H. MARTIN LANCASTER
PRESIDENT

ALAMANCE COMMUNITY COLLEGE
ANSON COMMUNITY COLLEGE
ASHEVILLE-BUNCOMBE
TECHNICAL COMMUNITY COLLEGE
BEAUFORT COUNTY
COMMUNITY COLLEGE BLADEN
COMMUNITY COLLEGE BLUE RIDGE
COMMUNITY COLLEGE BRUNSWICK
COMMUNITY COLLEGE CALDWELL
COMMUNITY COLLEGE
& TECHNICAL INSTITUTE CAPE FEAR
COMMUNITY COLLEGE CARTERET
COMMUNITY COLLEGE CATAWBA
VALLEY
COMMUNITY COLLEGE
CENTRAL CAROLINA
COMMUNITY COLLEGE
CENTRAL PIEDMONT
COMMUNITY COLLEGE CLEVELAND
COMMUNITY COLLEGE COASTAL
CAROLINA
COMMUNITY COLLEGE COLLEGE OF
THE ALBEMARLE CRAVEN
COMMUNITY COLLEGE DAVIDSON
COUNTY
COMMUNITY COLLEGE
DURHAM TECHNICAL
COMMUNITY COLLEGE EDGEcombe
COMMUNITY COLLEGE FAYETTEVILLE
TECHNICAL
COMMUNITY COLLEGE
FORSYTH TECHNICAL
COMMUNITY COLLEGE
GASTON COLLEGE
GUILFORD TECHNICAL
COMMUNITY COLLEGE HALIFAX COMMUNITY
COLLEGE HAYWOOD COMMUNITY COLLEGE
ISOTHERMAL COMMUNITY COLLEGE JAMES
SPRINT COMMUNITY COLLEGE JOHNSTON
COMMUNITY COLLEGE LENOIR COMMUNITY
COLLEGE MARTIN COMMUNITY COLLEGE
MAYLAND COMMUNITY COLLEGE
MCDOWELL TECHNICAL
COMMUNITY COLLEGE MITCHELL
COMMUNITY COLLEGE MONTGOMERY
COMMUNITY COLLEGE NASH COMMUNITY
COLLEGE PAMLICO COMMUNITY COLLEGE
PIEDMONT COMMUNITY COLLEGE PITT
COMMUNITY COLLEGE RANDOLPH
COMMUNITY COLLEGE RICHMOND
COMMUNITY COLLEGE ROANOKE-CHOWAN
COMMUNITY COLLEGE ROBESON
COMMUNITY COLLEGE ROCKINGHAM
COMMUNITY COLLEGE ROWAN-CABARRUS
COMMUNITY COLLEGE SAMPSON COMMUNITY
COLLEGE SANDHILLS COMMUNITY COLLEGE
SOUTHEASTERN COMMUNITY COLLEGE
SOUTHWESTERN COMMUNITY COLLEGE
STANLY COMMUNITY COLLEGE SURRY
COMMUNITY COLLEGE TRI-COUNTY
COMMUNITY COLLEGE VANCE-GRANVILLE
COMMUNITY COLLEGE WAKE
TECHNICAL
COMMUNITY COLLEGE WAYNE
COMMUNITY COLLEGE WESTERN
PIEDMONT
COMMUNITY COLLEGE WILKES
COMMUNITY COLLEGE WILSON
TECHNICAL
COMMUNITY COLLEGE NC
CENTER FOR APPLIED
TEXTILE TECHNOLOGY

Dr. Edward H. Wilson, President
Wayne Community College
Caller Box 8002
Goldsboro, NC 27533-8002

Dear Dr. Wilson:

I am pleased to inform you that on April 17, 1998, the State Board of Community Colleges approved your application for [A5032A] Plastics (Regional). This approval is based on the condition that equipment funds are available to the college and operation funds generated by the budget formula will permit the offering of the program without any special allocation of funds.

This approval includes collaborative agreements between Wilson, Johnston, Nash, Edgecombe, Wake, and Wayne Community Colleges. The agreements are acceptable as written and include essential information needed for a collaborative agreement as stated in Title 23 NCAC 23.0604. Copies of the agreements are enclosed. If any of these agreements become inactive, a letter of termination must be submitted by the President of Wayne Community College to the Vice President of Academic and Student Services at the System Office.

We wish you much success in the implementation of your program.

Sincerely,



H. Martin Lancaster

HML/dw
Enclosure
c: Dr. Elizabeth L. Lambert

NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
STATE BOARD OF COMMUNITY COLLEGES
RALEIGH, NORTH CAROLINA 27603-1339

Institutional Application for Vocational. Technical Curriculum

(TO BE COMPLETED BY STATE OFFICE)

COLLEGE: Wayne CC

DATE: April 20, 1998

CURRICULUM CODE: A5032A

TITLE: Plastics

This program proposal was reviewed in accordance with the "Administrative Requirements for Criteria and Procedures for Preparing Curriculum Application."

Comments

Elisabeth S. Johns, Vice President Academic/Student Service 4/21/98
Date

This curriculum proposal was approved by the State Board of Community Colleges at its meeting on April 17, 1998. Approval is contingent upon the availability of current expense and equipment funds from the college's established and approved budget.

Successful completion by a student shall be recognized by the award of:

- Certificate
- Diploma
- Associate in Applied Science Degree

Comments:

Hubert L. Lancaster, System President 04-22-98
Date

Attachment V
Collaborative Program Agreement
Manufacturing Technology/Plastics Concentration (A5032A)
Wilson, Nash, Wake, Wayne, Edgecombe, and Johnston Community Colleges

1. Each collaborating college will submit the program application.
2. Each college will award the Associate in Applied Science degree in Manufacturing Technology/Plastics concentration.
3. Each college will offer general education and related courses at its own campus; will determine the entrance requirements into the program; and will be responsible for permanent records of their students.
4. All major PLA courses will be offered at a shared facility located in Zebulon, NC; however, students will register for these courses at their home school.
5. The number of seats each college has guaranteed in the shared facility is as follows:

Wake Technical Community College	12
Edgecombe Community College	6
Johnston Community College	6
Nash Community College	6
Wayne Community College	6
Wilson Technical Community College	6
6. Participating colleges may negotiate with other colleges in the event additional seats are needed/seats are available.
7. Each collaborating college will earn the FTE generated from its students enrolled in courses in the Manufacturing Technology/Plastics Concentration program.
8. Start-up costs will be prorated based on the number of allocated seats as specified in item 5 of this collaborative.
9. On-going costs, including the lease of the facility, will be prorated based on the FTE each college generates in the shared facility.
10. Wake Technical Community College shall serve as the administrative agency for the collaborative program and shall bill the participating colleges in accordance with item 5 of this collaborative agreement.
11. Representatives of the six colleges shall establish an annual budget and Wake Technical Community College shall submit regular budget accounts to the Business Manager at each participating college.

12. Full or part-time faculty employed to teach at the shared facility shall be employees of Wake Technical Community College and shall adhere to personnel policies of Wake Tech.
13. Equipment purchased for the program shall become the property of the six colleges based on the prorata expense incurred for the equipment.
14. Costs incurred at the individual college for courses other than PL A courses shall be the responsibility of that college.
15. The chief instructional officer of each participating college shall meet during the Fall and Spring semesters to review program activity and recommend any changes in the agreement or the program to the President of his/her institution.
16. Each college shall be responsible for the annual program audit at that college.
17. The program advisory committee shall meet twice a year, alternating meeting locations among the six colleges and the leased facility.
18. The Manufacturing Technology/Plastics curriculum standard shall adhere to established System requirements and courses taught at any of the collaborating colleges or the leased facility shall adhere to faculty credential and other requirements of the Commission on Colleges, Southern Association of Colleges and Schools.
19. Any participating college may withdraw from the collaborative plan six (6) months after written notification to the other colleges and the Vice President for Academic and Student Services, North Carolina Community College System office.

By signing this agreement, each participating college certifies that appropriate and adequate resources are available and that the colleges will share joint physical facilities, equipment, materials, and instructional.

Approval and Certification Signatures of Presidents and
Board Chairmen of Collaborating Colleges
Manufacturing Technology - Plastics (A5032A)
(Reference - 23 NCAC 2E.0604)

Nash Community College certifies that appropriate and adequate resources are
Name of Collaborating College

available to offer the courses as designed in this collaborative agreement.

Nash Community College is agreement with and approves the Collaborative Name
of Collaborating College

Program agreement for the Manufacturing Technology - Plastics curriculum for Nash, Wilson,
Wayne, Edgecombe, Wake and Johnston Community Colleges.

Maid Austin 10-15-97 W M Marshall

President

" Date

Board Chairman

Date

10-15-97

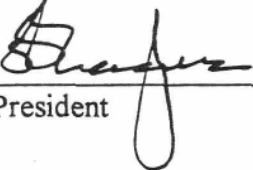
Approval and Certification Signatures of Presidents and
Board Chairmen of Collaborating Colleges
Manufacturing Technology - Plastics (A5032A)
(Reference - 23 NCAC 2E.0604)

Wilson Technical Community College certifies that appropriate and adequate resources are
Name of Collaborating College

available to offer the courses as designed in this collaborative agreement.

Wilson Technical Community College is in agreement with and approves the Collaborative
Name of Collaborating College

Program agreement for the Manufacturing Technology - Plastics curriculum for Nash, Wilson,
Wayne, Edgecombe, Wake and Johnston Community Colleges.



President

09-16-97
Date

Board Chairman

09-18-97
Date

Approval and Certification Signatures of Presidents and
Board Chairmen of Collaborating Colleges
Manufacturing Technology - Plastics (A5032A)
(Reference - 23 NCAC 2E.0604)

Wayne Community College certifies that appropriate and adequate resources are
Name of Collaborating College

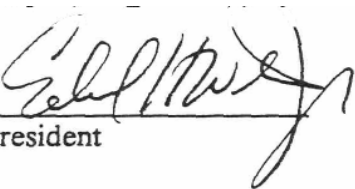
available to offer the courses as designed in this collaborative agreement.

Wayne Community College is in agreement with and approves the Collaborative
Name of Collaborating College


Program agreement for the Manufacturing Technology - Plastics curriculum for Nash, Wilson,

Wayne, Edgecombe, Wake, and Johnston Community Colleges.

Date: 9-23-97



President



Board Chairman Date: 9-23-97

Approval and Certification Signatures of Presidents and
Board Chairmen of Collaborating Colleges
Manufacturing Technology - Plastics (A5032A)
(Reference – 23 NCAC 2E.0604)

Wake Technical Community College certifies that appropriate and adequate resources are
(Name of Collaborating College)

available to offer the courses as designed in this collaborative agreement.

Wake Technical Community College is in agreement with and approves the Collaborative
(Name of Collaborating College)

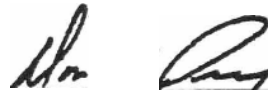
Program agreement for the Manufacturing Technology - Plastics curriculum for Nash, Wilson,

Wayne, Edgecombe, Wake, and Johnston Community Colleges.



President

Date 9-29-97



Board Chairman Date: 9-29-97


Approval and Certification Signatures of Presidents and
Board Chairmen of Collaborating Colleges
Manufacturing Technology - Plastics (A5032A)
(Reference - 23 NCAC 2E.0604)


Johnston Community College certifies that appropriate and adequate resources are
(Name of Collaborating College)


available to offer the courses as designed in this collaborative agreement.

Johnston Community College is in agreement and approves the Collaborative
(Name of Collaborating College)

Program agreement for the Manufacturing Technology - Plastics curriculum for Nash, Wilson, Wayne,
Edgecombe, Wake, and Johnston Community Colleges.


President


Date: 9-30-97


Board Chairman


Date: 9-30-97

Approval and Certification Signatures of Presidents and
Board Chairmen of Collaborating Colleges
Manufacturing Technology - Plastics (A5032A)
(Reference - 23 NCAC 2E.0604)

Edgecombe Community College certifies that appropriate and adequate resources are
(Name of Collaborating College)

available to offer the courses as designed in this collaborative agreement.

Edgecombe Community College is in agreement with and approves the Collaborative
(Name of Collaborating College)


Program agreement for the Manufacturing Technology - Plastics curriculum for Nash, Wilson, Wayne,
Edgecombe, Wake and Johnston Community Colleges.

President

Date



Board Chairman


Date: 9-17-97

Attachment VI

College Nash Community College Implementation Semester January 1998

Curriculum Program Title Manufacturing Technology Code A5032A

Concentration Plastics

Highest Level Credential Offered: AAS x Diploma ___ Certificate ___

Collaborative Program ___ with Wilson, Wake, Wayne, Johnston, Edgecombe Community Colleges (Agreements Attached)

Captive/Co-opted ___ Prison Name: _____

Prison Code: _____ Matrix Classification _____

Curriculum Description

Plastics is a concentration under the curriculum title of Manufacturing Technology. This curriculum provides training in all aspects of the polymer processing industry, one of today's fastest growing manufacturing technologies. It will prepare individuals for employment by utilizing the latest technologies in both plastics materials and plastics processing.

Course work includes rigorous study of the polymer processing industry, including materials technology, injection molding, extrusion, thermoforming, blow molding, and other related areas. Students will also gain knowledge in machine operation, maintenance, setup, design and research, quality assurance, and safety.

Graduates should qualify for employment in the design and/or production of plastic-related items including such job titles as molding technician, estimator, QC technician, setup technician, or supervisor.

This curriculum complies with the standard approved by the State Board of Community Colleges.



Submitting College President
Nash Community College

Date: 9-11-97

Board Chairman
Nash Community-College

Date: 9-11-97



Participating College President
Wilson Technical Community College

Date: 9-16-97

Board Chairman
Wilson Technical Community College

Date: 09-18-97

Attachment VI

College Nash Community College Implementation Semester January 1998

Curriculum Program Title Manufacturing Technology Code A5032A

Concentration Plastics

Highest Level Credential Offered: AAS Diploma Certificate

Collaborative Program with Wilson, Wake, Wayne, Johnston, Edgecombe Community Colleges (Agreements Attached)

Captive/Co-opted Prison Name: _____
Prison Code: _____ Matrix Classification _____

Curriculum Description

Plastics is a concentration under the curriculum title of Manufacturing Technology. This curriculum provides training in all aspects of the polymer processing industry, one of today's fastest growing manufacturing technologies. It will prepare individuals for employment by utilizing the latest technologies in both plastics materials and plastics processing.

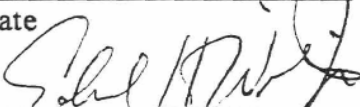
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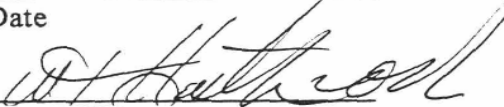
Graduates should qualify for employment in the design and/or production of plastic-related items including such job titles as molding technician, estimator, QC technician, setup technician, or supervisor.

This curriculum complies with the standard approved by the State Board of Community Colleges.


Submitting College President
Nash Community College


Board Chair man
Nash Community College

97
Date 
Participating College Pr/sident
Wayne Community College

9-11-97
Date 
Board-Chairman
Wayne Community College

Date: 09-23-97

Date: 09-23-97

Attachment VI

College Nash Community College Implementation Semester January 1998

Curriculum Program Title Manufacturing Technology Code A5032A

Concentration Plastics

Highest Level Credential Offered: AAS Diploma Certificate

Collaborative Program with Wilson, Wake, Wayne, Johnston, Edgecombe Community Colleges (Agreements Attached)

Captive/Co-opted Prison Name: _____
Prison Code: _____ Matrix Classification _____

Curriculum Description

Plastics is a concentration under the curriculum title of Manufacturing Technology. This curriculum provides training in all aspects of the polymer processing industry, one of today's fastest growing manufacturing technologies. It will prepare individuals for employment by utilizing the latest technologies in both plastics materials and plastics processing.

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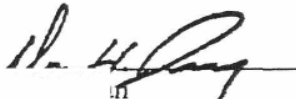
Graduates should qualify for employment in the design and/or production of plastic-related items including such job titles as molding technician, estimator, QC technician, setup technician, or supervisor.

This curriculum complies with the standard approved by the State Board of Community Colleges.



Submitting College President
Nash Community College
Date: 9-11-97

Board Chairman
Nash Community College
Date: 09-11-97



Participating College President
Wake Technical Community College

Board Chairman
Wake Technical Community College

Date: 09-29-97

Date: 09-29-97

Attachment VI

College Nash Community College Implementation Semester January 1998

Curriculum Program Title Manufacturing Technology Code A5032A

Concentration Plastics

Highest Level Credential Offered: AAS x Diploma Certificate

Collaborative Program _____ with Wilson, Wake, Wayne, Johnston, Edgecombe Community Colleges (Agreements Attached)

Captive/Co-opted _____ Prison Name: _____
Prison Code: _____ Matrix Classification _____


Curriculum Description


Plastics is a concentration under the curriculum title of Manufacturing Technology. This curriculum provides training in all aspects of the polymer processing industry, one of today's fastest growing manufacturing technologies. It will prepare individuals for employment by utilizing the latest technologies in both plastics materials and plastics processing.

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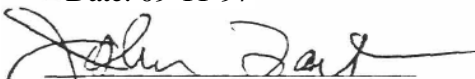
Graduates should qualify for employment in the design and/or production of plastic-related items including such job titles as molding technician, estimator, QC technician, setup technician, or supervisor.

This curriculum complies with the standard approved by the State Board of Community Colleges.


Submitting College President
Nash Community College


Board Chairman
Nash Community College

Date: 09-11-97


Participating College President
Johnston Community College


Board Chairman
Johnston Community College
Date: 09-30-97

Date: 09-30-97

Attachment VI

College Nash Community College Implementation Semester January 1998

Curriculum Program Title Manufacturing Technology Code A5032A

Concentration Plastics

Highest Level Credential Offered: AAS Diploma Certificate

Collaborative Program _____ with Wilson, Wake, Wayne, Johnston, Edgecombe Community Colleges (Agreements Attached)

Captive/Co-opted _____ Prison Name: _____
Prison Code: _____ Matrix Classification _____

Curriculum Description

Plastics is a concentration under the curriculum title of Manufacturing Technology. This curriculum provides training in all aspects of the polymer processing industry, one of today's fastest growing manufacturing technologies. It will prepare individuals for employment by utilizing the latest technologies in both plastics materials and plastics processing.

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This curriculum complies with the standard approved by the State Board of Community Colleges

Submitting College President
Nash Community College

Board Chairman
Nash Community College

Date: 09-11-97

Date: 09-11-97

Participating College President
Edgecombe Community College



Board Chairman
Edgecombe Community College

Date: 09-16-97

Date 17 Sept. 97

Expository Writing
 Algebra/Trigonometry I
 Professional Research &

Nash Community College
 Manufacturing Technology - Plastics - A5032A
 Course and Hour Requirements

Attachment VI

<u>Title</u>	<u>Class</u>	<u>Lab</u>	<u>Clin</u>	<u>Exp</u>	<u>Credit</u>
General Education Courses					
ENG111	Expository Writing	3	0	0	3
MAT 121	Algebra/Trigonometry I	3	0	0	3
ENG114	Reporting	>	0	0	3
HUM115	Critical Thinking	3	0	0	3
CHM151	General Chemistry I	3	3	0	4
PSY135	Group Processes	3	0	0	3
					19
I					
I. Major Courses		2	0	0	2
A. Core		2	6	0	4
ISC 133	Manufacturing Management Practices	2	3	0	3
DFT 111	Technical Drafting I	2	0	0	2
ISC 132	Manufacturing Quality Control	2	*>	0	3
ISC 112	Industrial Safety				14
MEC145	Manufacturing Materials & Processes	2	0	0	2
B. Concentration		2	3	0	3
PL A 110	Introduction to Plastics	2	*>	0	3
PLA 115	Polymer Processing	2	3	0	3
PLA 120	Injection Molding	2	3	0	3
PLA 210	Mold Maintenance Design				14
PLA 215	Polymeric Materials	2	3	0	3
		2	3	0	3
C. Other Major Courses		2	>	0	3
		2	>	0	>
DFT 151	CADI	3	3	0	4
MEC 111	Machine Processes I	3	2	0	4
PLA 220	Mold Flow	2	2	0	3
PLA 225	Extrusion	1	2	0	2
PLA 230	Advanced Plastics Manufacturing				25
ATR 280	Robotic Fundamentals				
HYD 110	Hydraulics/Pneumatics				
CIS 111	Basic PC Literacy				

Total Semester Hour Credits

72

Manufacturing Technology - Plastics Concentration Course and Hour Requirements

Title	Class	Lab	Clin.	Work Exp.	Credit Hours
I. General Education Courses					
ENG 111 Expository Writing					
ENG 111A Expository Writing Lab	3	0	0	0	3
ENG 114 Professional Research & Reporting	0	2	0	0	1
MAT 121 Algebra / Trigonometry I	3	0	0	0	3
CHM151 General Chemistry I	2	2	0	0	3
	3	3	0	0	4
Humanities / Fine Arts Elective	3		0	0	
<i>Select 3 SHC from the following courses:</i> ENG 1115, ENG 233, ENG 243, ENG 261 or any of the following prefixes: ART, DRA, FRE, HUM, MUS, REL, SPA					
Behavioral / Social Sciences Elective:	2	0	0	0	
<i>Select one course from the following prefixes:</i> ECO, GEO, HIS, POL, PSY, SOC					
					19
II. Major Courses					
A. Core					
Required Courses					
ISC112 Industrial Safety	2	0	0	0	2
ISC 132 Manufacturing Quality Control	2	3	0	0	3
ISC 133 Manufacturing Management Prac.	2	0	0	0	2
MEC 145 Manufacturing Materials and Processes	2	3	0	0	3
Required Subject Areas: Drafting/CAD					
DFT 111 Technical Drafting I					
					14
B. Concentration					
PLA1110 Introduction to Plastics					
PLA 115 Polymer Processing	2	0	0	0	3
PLA 120 Injection Molding Mold	2	3	0	0	3
PLA 210 Maintenance Design	2	3	0	0	3
PLA 215 Polymeric Materials	2	3	0	0	3
	2	3	0	0	3
					14
C. Other Major Courses					
DFT 151 CADI					

MEC 111	Machine processes I							
PLA 220	Mold Flow	2	3	0	0			3
PLA 225	Extrusion	2	3	0	0			3
PLA 230	Advanced Plastics Mfg.	2	3	0	0			3
ATR 2SO	Robotics Fundamentals	3	3	0	0			4
HYD 110	Hydraulics Pneumatics	3	2	0	0			4
COE 1 1 1	•Co-op Work Experience	2	3	0	0	1		3
		0	0	0	0	10		1
								2
								4

III. Other Required Courses

CIS 110	Introduction to Computers							3
								3
								74

Course and Hour Requirements

Title	Class	Lab	Clinical	Hours Experience	Work Credits
I. General Education Courses					
Communications require six SHC for degree or three SHC for diploma. Humanities/Fine Arts, Social/Behavioral Science and Natural Sciences/Mathematics all require three SHC.					
ENG 111	Expository Writing	3	0		3
ENG 114	Professional Research & Reporting	3	0		3
MAT 121	Algebra/Trigonometry I	3	0		3
CHM 151	General Chemistry I	3	3		4
OR					
CHM 131	Introduction to Chemistry	3	0		3
CHM 131 A	Lab	0	3		1
Humanities/Fine Arts		3	0		3
Social/Behavioral Sciences		3	0		3
		18	3		19
II. Major Courses					
A. Core					
1. Required Courses					
ISC 132	Manufacturing Quality Control	2	3		3
MEC 145	Manufacturing Materials & Proc	2	3		3
ISC 133	Mfg. Management Practices	2	0		2
ISC 112	Industrial Safety	2	0		2
		8	6		10
2. Required Subject Areas					
DFT 151	CAD I	2	3		3
B. Concentration					
PLA 110	Introduction to Plastics	2	0		2
PLA 115	Polymer Processing	2	3		3
PLA 210	Mold Maintenance Design	2	3		3
PLA 215	Polymeric Materials	2	3		3
PLA 120	Injection Molding	2	3		3
		10	12		14
C. Other Major Courses					
DFT 111	Technical Drafting	2	6		4
CIS 111	Basic PC Literacy	1	2		2
MEC 111	Machine Processes I	2	3		3
PLA 220	Mold Flow	2	3		3
HYD 110	Hydraulics/Pneumatics	2	3		3
ATR 280	Robotic Fundamentals	3	2		4
COE 111	Co-op Work Experience	0	10		1
PLA 225	Extrusion	2	3		3
		14	32		23
III. Other Required Courses (Maximum of 7 for AAS, 4 SHC for diploma and 1 SHC for certificate). These may include electives, orientation, study skills and other college or departmental graduation requirements.					
PLA 230	Advanced Plastics Mfg.	3	3		4
ACA 111	College Student Success	1	Q		1
		4	3		5
		Total Credits			74

Manufacturing Technology Plastics
Concentration - A5032A

COURSE AND HOUR REQUIREMENTS

<u>Tide</u>	<u>Class</u>	<u>Lab</u>	<u>Credits</u>
I. General Education Courses			
ENG 111 Expository Writing	3	0	3
ENG 114 Professional Research & Reporting	3	0	3
ECO 151 Survey of Economics	3	0	3
MAT 121 Algebra/Trigonometry I	2	2	3
Humanities/Fine Arts Elective _	<u>-</u>	<u>-</u>	<u>3</u>
			15
n. Major Courses			
A. Core			
1. Required Courses			
MEC 145 Manufacturing Materials I	2	3	3
ISC 112 Industrial Safety	2	0	2
ISC 132 Manufacturing Quality Control	2	3	3
ISC 133 Manufacturing Management Practices	<u>2</u>	<u>0</u>	<u>2</u>
	8	6	10
2. Required Subject Areas			
None			
B. Concentration			
PLA 220 Mold Flow Analysis	2	3	3
PLA 225 Extrusion	2	3	3
PLA 115 Polymer Processing	2	3	3
PLA 120 Injection Molding	2	3	3
PLA 210 Mold Maintenance/Design 23 3			
PLA 215 Polymeric Materials	2	3	3
PLA 230 Advanced Plastics Manufacturing	<u>3</u>	<u>3</u>	<u>4</u>
	15	21	22
C. Other Major Hours			
ATR 112 Introduction to Automation	2	3	3
DFT 111 Technical Drafting I	2	6	4
DFT 151 CAD I	2	3	3
PLA 110 Introduction to Plastics	2	0	2
CSC 129 Technical Programming	2	3	3
MEC 161 Manufacturing Processes I	3	0	3
MEC 161A Manufacturing Processes I Lab	0	3	1
COE 112 Co-op Work Experience	0	20	2
HYD 110 Hydraulics/Prevention I _	<u>2</u>	<u>3</u>	<u>3</u>
	15	41	24
HI. Other Required Hours			
None			

Total Semester Credit Hours 71

Course and Hour Requirements

<u>Title</u>	<u>Class</u>	<u>Lab</u>	<u>11oins Clinical</u>	<u>Work Experience</u>	<u>Credits</u>
<u>Manufacturing Technology (Plastics)</u>					
General Education Courses					
Communications require six SHC for degree or three SHC for diploma. Humanities/Fine Arts.	3	3	0	0	4
Social/Behavioral Science and Natural Sciences/Mathematics all require three SHC	2	2	0	0	3
	3	0	0	0	3
	3	0	0	0	3
CUM 151 General Chemistry I MAT 121 Algebra Trigonometry I ENG III Expository Writing ENG 1 14 Professional Research & Reporting					
Choose a Humanity/Fine Art elective(s) from the Common Course Library with the following prefixes: ENG, HIS, ART, MUS, SPA, PHI					
	3	0	0	0	3
Choose a Social/Behavioral Science elective(s) from the Common Course Library with the following prefixes: ECO, PSY, SOC, POL. GEO					
					19
II. Major Courses					
A. Core					
I. Required Courses	2	0	0	0	2
	2	3	0	0	3
ISC 133 Manufacturing Management Practices	2	0	0	0	2
	2	3	0	0	3
ISC 132 Mfg Quality Control ISC 112 Industrial Safety MEC 145	2	0	0	0	2
Manufacturing Materials and Processes	2	3	0	0	3
	2	3	0	0	3
2. Required Subject Areas	2	3	0	0	3
DFT 111 Technical Drafting I	2	3	0	0	14 3
B. Concentration (If appropriate)					
PLA 110 Introduction to Plastics					
PLA 115 Polymer Processing					
PLA 120 Injection Molding					
PLA 210 Mold Maintenance Design					
PLA 215 Polymeric Materials					



C. Other Major Courses (School a maximum of 9 SI 1C from identified prefixes \viih (lie exception of no maximum for prefixes in the core or concentration)

DIT 151 CADI	2	3	0	0	3
MEC 111 Machine Processes 1	2	3	0	0	3
PLA 220 Mold Flow	2	3	0	0	3
PLA 225 Extrusion	2	3	0	0	3
PLA 230 Advanced Plastics Mfg.	3	3	0	0	4
ATR 280 Robotics Fundamentals	3	2	0	0	4
11 YD 110 Hydraulics Pneumatics	2	3	0	0	3
COB 111 Co-op Work Experience	0	0	0	10	11
					24

HI. Other Required Courses (maximum of 7 for AAS, 4 SHC for diploma and 1 SHC for certificate) These may include electives, orientation, study skills and other college or departmental graduation requirements.

ACA 111 College Student Success	1	0	0	0	1
CIS 111 Basic PC Literacy	1	2	0	0	2
					<u>3</u>

Total
Credits 74

Course and Hour Requirements

Title	Manufacturing Technology (Plastics)	Class	Lab	Clinical	Experience	Credits
I. General Education Courses						
Communications require six SHC for degree or three SHC for diploma. I humanities/Fine Arts. Social/Behavioral Science and Natural Sciences/Mathematics all require three SHC.						
CHM 151 General Chemistry I		3	3	0	0	4
MAT 121 Algebra/Trigonometry I		2	2	0	0	3
ENG 111 Expository Writing		3	0	0	0	3
ENG 114 Professional Research & Reporting		3	0	0	0	3
Choose a Humanity/Fine Art elective(s) from the Common Course Library with the following prefixes: ENG, HIS, ART, MUS, SPA, PHI						
Choose a Social/Behavioral Science elective(s) from the Common Course Library with the following prefixes: ECO, PSY, SOC, POL GEO						3
II. Major Courses						19
A. Core						
1. Required Courses						
		2	0	0	0	2
ISC 133 Manufacturing Management Practices		2	3	0	0	3
ISC 132 Mfg Quality Control	ISC 112	2	3	0	0	3
Industrial Safety	MEC 145					14
Manufacturing Materials and Processes		2	0	0	0	2
		2	3	0	0	3
2. Required Subject Areas	DFT 111	2	3	0	0	3
		2	3	0	0	3
Technical Drafting I B. Concentration		2	3	0	0	3
						14
(If appropriate)						
PLA 110 Introduction to Plastics						
PLA 115 Polymer Processing						
PLA 120 Injection Molding						
PLA 210 Mold Maintenance Design						
PLA 215 Polymeric Materials						

C. Other Major Courses (Select a maximum of 9 SI 1C from identified prefixes with (the exception of no maximum *for* prefixes in the core or concentration')

DFT 151 CADI	2	3	0	0		3
MIC 111 Machine Processes I	2	3	0	0		3
PLA 220 Mold Flow	2	3	0	0		3
PLA 225 Extrusion	2	3	0	0		3
PLA 230 Advanced Plastics Mfg.	3	3	0	0		4
AIR 280 Robotics Fundamentals	3	2	0	0		4
11 YD 110 Hydraulics Pneumatics	2	3	0	0		3
CUE 111 Co-op Work Experience	0	0	0		10	1

24

III. Other Required Courses (maximum of 7 for AAS, 4 SHC for diploma and 1 SHC for certificate) These may include electives, orientation, study skills and other college or departmental graduation requirements.

ACA 111 College Student Success	1	0	0	0		1
CIS 111 Basic PC Literacy	1	2	0	0		2
						<u>3</u>

Total Credits 74