

COLLEGE ACADEMIC AND STUDENT SUPPORT COUNCIL
TUESDAY, JUNE 9, 2009
WOLFSON CAMPUS – ROOM 2106 – 1:30 P.M.

CHAIR: Martha Cavalaris

MEMBERS PRESENT:	John Alvarez	Marta Junco-Ivern
	Marcia Anglin	Ivonne Lamazares
	Ana Maria Bradley-Hess	Felix Lopez
	Helen Brown	Pamela Menke
	Manuel Carames	Tom Meyer
	Nelson de la Rosa	Carol Miller
	Franklin Elsea	Meera Nair
	Sergio Ferre	Yaqueline Padron
	Armando Ferrer	Lourdes Perez
	Annette Gibson	Herb Robinson
	Malou Harrison	Lois Sargent
	Harry Hoffman	Grace Telesco

MEMBERS ABSENT:	Phyllis Bochman	
	Ece Karayalcin	
	Walter Kozloski	Sent Notification
	A.J. Kreider	Sent Notification
	Magdalena Lamarre	Sent Notification
	Irene Lipof	Sent Notification
	Jacquelyn Loftus	
	Oneyda Paneque	Ronny Joseph
	Madeline Pumariega	Ramona Edwards
	Jeffrey Thomas	Sent Notification
	Paul Tisevich	Sent Notification
	Carol Tulikangas	Manny Lorenzo
	Jose Vaquez	

RESOURCES: Julian Chiu
Mollie DeHart
Rolando Montoya
Gina Victoria

PRESENTERS: Diane King
Manny Lorenzo
David Shaheen
Richard White

GUESTS: Beverly Moore-Garcia
Gita Runkle
Michael Whitt

RECORDER: Henri Roberts

1. **Call to Order**

Martha Cavalaris called the meeting to order.

2. **Introduction**

Martha Cavalaris introduced Dr. Rolando Montoya, College Provost.

3. **Approval of the May 12, 2009 CASSC Minutes**

The minutes of the May 12, 2009 meeting were approved as submitted.

4. **Comments by the College Provost**

Dr. Montoya thanked the Council for its warm welcome. He briefed the Council on the recent administrative decisions made to assure the continuing fiscal stability of the College.

5. **Curriculum**

Biotechnology

Tom Meyer introduced Diane King, who presented the proposed AS degree program in Advanced Manufacturing and the two related College Credit Certificates. She explained that the program was designed collaboratively by the School of Computer and Engineering Technologies and the Bioscience disciplines.

Executive Summary
Advanced Manufacturing

I. Introduction – The proposed Advanced Manufacturing program was created in response to the growing state and nation-wide industry need for a skilled workforce prepared for entry-level positions as Manufacturing Engineering Technicians, Quality Specialists and Automation Specialist (SOC 173027) in the manufacturing divisions of bioscience, pharmaceutical and industrial & medical device companies.

II. Program Goals - The primary goals of this proposal are to create; (1) a 12 credit hours College Credit Certificate (CCC) in Lean Manufacturing (CIP = 0615.061302), (2) a 15 credit hours College Credit Certificate (CCC) in Automation (CIP = 0615.061301), and (3) a 60 credit hours Associate in Science (AS) in Advanced Manufacturing degree (CIP = 1615.061300). The creation of this degree and certificate programs also satisfies the curriculum objectives of the College's US Department of Education, Title V grant (Biosciences Cooperative).

III. Program Needs and Benefits

- a. Demonstrated National Need – The manufacturing sector continues to account for 11% of the total US employment. The national projected employment outlook for manufacturing technicians from 2006 – 2016 is estimated to grow 10%. A 2005 survey of US manufacturing firms found that employers have a serious problem finding qualified candidates for an increasing number of new jobs. The Federal Government's High Growth Job Training Initiative in collaboration with the US Department of Labor, is a strategic effort to prepare workers for increasing job opportunities in high growth, high demand and economically vital sectors of the economy. The initiative aims to expand the pipeline of youth entering the manufacturing sector. In just two years, the export rate for this industry increased by 83%, from \$3.2 billion in 2006 to \$5.9 billion in 2008 (US Trade in Advanced Technology Products, August 2008).
- b. Demonstrated State Need – According to the Employ Florida Marketplace, the pharmaceutical manufacturing industry is projected to grow by 28.2 percent between 2007 and 2015, (<http://www.employflorida.com/indprofiledata>). According to the Biotechnology Industry Organization's

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2008 Florida State Report, in the Medical Devices and Equipment sub sector, Florida exceeds national growth rates by five percent for the number of bioscience establishments and employment. Of the patents issued in Florida, the largest category was in surgical and medical instruments. Florida ranks 8th nationally in number of related patents. This demonstrates the need for an expanded demand for workers in the bioscience and industrial devices manufacturing areas. The demand for manufacturing technician employment outlook in Florida is estimated to be 13% projected growth between 2007 and 2015. According to the FLDOE Choices Planner, the salary information for Florida manufacturing technicians (SOC 173027) is as follows:

- Average Annual Wage: \$46,634
- Entry Annual Wage: \$30,805
- Experienced Annual Wage: \$54,538
- Entry Hourly Wage: \$14.81
- Experienced Hourly Wage: \$26.22
- Average Hourly Wage: \$22.42

- c. Local organizations including South Florida Manufacturing Association, South Florida Workforce Investment Board, Noven Pharmaceuticals, Johnson & Johnson/Cordis Corporation, Kirk Pharmaceuticals, Schering-Plough Corporation, and Miami Dade County Public Schools, participated in a professional focus group activity sponsored by the Biosciences Cooperative at Miami Dade College. The purpose was to identify the skill sets needed to work in the manufacturing industry. These organizations also participate on our Advisory Committee and have documented the growing need for a skilled entry-level Bioscience manufacturing workforce in South Florida.

IV. Student Demand - MDC's Biotechnology Program staff conducted a survey of students in March 2009 to assess interest in Advanced Manufacturing education. A total of 312 students completed the survey. 80 students, (26%) stated that they would be interested in enrolling in Advanced Manufacturing courses. 91 students, (29%) indicated they would be interested in obtaining an Associates degree in Advanced Manufacturing. 62 students, (20%) indicated that they would be interested in the College Credit Certificate in Automation. 96 students, (31%) expressed interest in the College Credit Certificate in Lean Manufacturing.

V. Implementation Strategies - The anticipated date of implementation for the AS and CCC programs is spring 2009-2 (January 2010). The proposed new lab course will be taught at both the Wolfson and North Campuses. All other coursework can be taken through current offerings at all other MDC campuses. The proposed laboratory class will utilize the newly created biotechnology labs at Wolfson and North Campuses. Instructional support materials needed to teach the new courses will be funded by the existing Biosciences Cooperative grant. We anticipate enrolling 30 students in the AS program and 20 students in the CCC programs the first year. Any additional costs of instruction due to increased course enrollment will be offset by the Biosciences Cooperative grant funds. An interdisciplinary, intercampus group of faculty, administrators, and professional consultants have addressed curricular competencies, learning outcomes, course titles, course numbers, and pre-requisites. Existing engineering and biology faculty will continue to teach all currently offered courses. The Bioscience Cooperative Grant, if necessary, will provide funding for the practical training needs of faculty to upgrade their skill levels to teach the three new courses. A new SACS credential for engineering and natural sciences faculty to teach the new courses has been submitted.

VI. Curriculum

- a. The College Credit Certificate (CCC - 12 credits) – in Lean Manufacturing prepares students for entry-level employment as Quality Specialists, Lean Specialists or related work in a manufacturing setting. The

program will provide the knowledge and skill sets necessary for careers in manufacturing. The program focuses on how to plan, procure, schedule resources, including people, in order to execute efficient, quality production operations. Manufacturing related issues like lean and six sigma, inventory control, and regulations are covered. The CCC can also provide supplemental training for adult students previously or currently employed in the manufacturing industry. These courses will apply toward the AS degree in Advanced Manufacturing.

- b. College Credit Certificate (CCC - 15 credits) – in Automation prepares students for entry-level employment with an occupational title as an Automation or Applied Automation Specialist in various specialized areas, or to provide supplemental training for persons previously or currently employed in these occupations. Skills learned include how to operate and troubleshoot industrial automation systems, how to apply the principals of robotics to industrial automation systems, and how to use proficiently human interfaces to control automatic systems. The CCC can also provide supplemental training for adult students previously or currently employed in the manufacturing industry. These courses will apply toward the AS degree in Advanced Manufacturing.
- c. The Associate of Science (AS, 60 credits) -Advanced Manufacturing degree is designed to teach students the basic principles, concepts, and techniques necessary for effective work in the industrial device and pharmaceutical manufacturing industries. The program will provide students with the opportunity to acquire the knowledge and skill sets necessary for careers in manufacturing. Students will learn the basic concepts of advanced manufacturing operations and processes, including sourcing materials, production planning and process monitoring, and distribution activities. Students will acquire broad, transferable skills including ethical and environmental issues, manufacturing, patenting, instrumentation and Standard Operating Procedures, (SOP) validation. Students will learn the basic operations and concepts of programmable logic controllers (PLCs), how to maintain PLCs in industrial environments, and principles of computer-controlled machines and processes. The program prepares graduates for employment opportunities as Manufacturing Engineering Technicians and Quality Specialists in the bioscience and pharmaceutical manufacturing industries. The program culminates with a required capstone course based on the individual student’s career interests and goals. Students are required to obtain Department Chairperson’s approval to register for one of the following: EGN-1949, Co-op Work Experience or BSC-2943L, Bioscience Internship.

New Program

Advanced Manufacturing Technology

Add New Courses

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
ETI1622	Concepts of Lean and Six Sigma	3	1, 3	2009-2

Course Description: This course is designed for students who are preparing for careers in the manufacturing industry. Students will learn the basic concepts, frameworks, and techniques used in six sigma, including total quality philosophies, the calculation of six sigma and other vital statistics, tools of lean six sigma, and knowledge of various methodologies (3 hrs lecture). A.S. degree only.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
ETI1644	Advanced Manufacturing Supply Chain	3	1, 3	2009-2

Course Description: This course is designed to provide the fundamental concepts of advanced manufacturing supply chain management (SCM) principles. Students will learn how to use manufacturing planning and control systems to coordinate material, labor, capacity and other resources to optimize

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manufacturing operations. Students also learn the key features of automated systems that can be used to manage the supply chain process. (3 hrs lecture). A.S. degree only.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
ETI1040L	Introduction to Bioscience Manufacturing Lab	3	1, 3	2009-2

Course Description: In this laboratory course students will learn the basic principles of the industry, large-scale process development and the future of bioscience. Students also learn about current Good Manufacturing Practices (GMPs), and the nature and delivery system of products. Co-requisite: ETI 1040 (2hrs lab), A.S. degree only.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
ETI2403	Advanced Manufacturing Technology	3	1, 3	2009-2

Course Description: This is a course for students intending to work in manufacturing environments. Students will learn the basic concepts about advanced manufacturing operations and processes, including sourcing materials, production planning and process monitoring, and control to distribution activities. Students also review the facility and regulatory requirements needed to support manufacturing operations. Activities may include facility tours and site visits. (3hrs lecture). A.S degree only.

Add Existing Course

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
BSC2943L	Bioscience Internship	3	1, 3	2009-2

Course Description: This internship course is a capstone for students majoring in bioscience and related programs. Students will learn to apply acquired knowledge and skills in the bioscience workplace to gain employment. Pre-requisite: Successful completion of required program course work and department approval. (Variable hours: 3-6 credits based on work assignment and hours worked.) A.S. degree only.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
EGR1949	Engineering Co-Operative Work Experience	3	1,2,3,5,6,7,8	2009-2

Course Description: This is a capstone course designed for students majoring in engineering programs. Students will learn to apply the skills and knowledge that they have acquired through their program of study in a real work environment. Pre-requisite: Successful completion of required program course work and department approval. AS credit only. (Variable hours: 1 - 4 credits based on work assignment and hours worked.) A.S. degree only.

**Associate of Science Degree
Advanced Manufacturing
Total credits required for the degree is 60
(CIP= 1615.061300)
(SOC= 17-3027)**

The AS in Advanced Manufacturing will provide students with the opportunity to acquire the knowledge and skill sets necessary for careers in manufacturing with an emphasis in industrial device and pharmaceutical manufacturing. The program prepares students for employment as a Manufacturing Engineering Technician or Production Technician in manufacturing settings.

Course Title	Credits	Pre-requisites	Co-requisites
GENERAL EDUCATION REQUIREMENTS (15 credits)			

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ENC-1101 English Composition I	3	None	None
SPC-1026 Fundamentals of Speech Comm.	3	None	None
PHI-2604 Critical Thinking & Ethics	3	ENC-1101	None
CLP-1006 Psychology of Personal Effectiveness	3	None	None
MAC-1105 College Algebra	3	MAT 1033 or College Placement Test	None

REQUIRED PROGRAM COURSES (41 credits)

ETI-1622 Concepts of Lean and Six Sigma	3	None	None
ETI-1644 Advanced Manufacturing Supply Chain	3	None	None
ETI-1701 Industrial Safety	3	None	None
ETI-1181 Introduction to Quality Assurance	3	None	None
ETI-2403 Advanced Manufacturing Technology	3	None	None
ETM-1315C Applied Pneumatics & Hydraulics	3	MAC-1105	None
ETI-1040 Introduction to Bioscience Manufacturing	3	None	None
ETI-1040L Introduction to Bioscience Manufacturing Lab	2	None	ETI-1040
MTB-1322 Technical Mathematics 2	3	MAC-1105	None
EET-1015C Direct Current Circuit	4	MAC-1105	None
EET-1025C Alter. Current Circ.	4	EET-1015C	MTB-1322
EET-1141C Electronics I	4	EET-1025C	None
EST-2542C Programmable Logic Controllers I	3	EET-1141C	None
Capstone Course Requirement (4 credits)			
BSC-2943L Bioscience Internship	4	Requires department approval	
OR			
EGN-1949 Co-op Work Experience	4	Requires department approval	
Total credit hours required for the degree =	60		

New course

**Associate of Science Degree
Advanced Manufacturing
Total credits required for the degree is 60.
(CIP= 1615.061300)**

Course Title	Credits	Pre-requisites	Co-requisites
SEMESTER 1			
MAC-1105 College Algebra	3	MAT-1033 or CPT	None
ENC-1101 English Composition I	3	None	None
ETI-1040 Introduction to Bioscience Manufacturing	3	None	None
ETI-1040L Introduction to Bioscience Manufacturing Lab	2	None	ETI-1040

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SEMESTER 2			
CLP-1006 Psychology of Personal Effectiveness	3	None	None
EET-1015C Direct Current Circuit	4	MAC-1105	None
ETI-2403 Advanced Manufacturing Technology	3	None	None
SPC-1026 Fundamentals of Speech Comm.	3	None	None
	13		
SEMESTER 3			
EET-1025C Alternating Current Circuits	4	EET-1015C	MTB-1322
ETI-1622 Concepts of Lean and Six Sigma	3	None	None
ETI-1701 Industrial Safety	3	None	None
MTB-1322 Technical Mathematics 2	3	MAC-1105	None
	13		
SEMESTER 4			
PHI-2604 Critical Thinking & Ethics	3	ENC-1101	None
EET-1141C Electronics I	4	EET-1025C	None
ETI-1644 Advanced Manufacturing Supply Chain	3	None	None
ETI-1181 Introduction to Quality Assurance	3	None	None
	13		
SEMESTER 5			
ETM-1315C Applied Pneumatics & Hydraulics	3	MAC-1105	None
EST-2542C Programmable Logic Controllers I	3	EET-1141C	None
BSC-2943L Bioscience Internship	4	Requires department approval	
OR			
EGN-1949 Co-op Work Experience	4	Requires department approval	
	10		
TOTAL	60		

**College Credit Certificate in
Lean Manufacturing
Total credits required for the certificate is 12
CIP Number: 0615.061302
SOC Code: 17-3027**

This certificate prepares students for initial employment with an occupational title as a Quality Specialist or Lean Specialist in various specialized areas. It also can provide supplemental training for persons previously or currently employed in these occupations. These courses can be applied toward the Associate of Science in Advanced Manufacturing.

Course	Course Title	Credits	Pre-requisite	Co-requisite
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COURSES (12 credits)

ETI-1622	Concepts of Lean and Six Sigma	3	None	None
ETI-1181	Introduction to Quality Assurance	3	None	None
ETI-1644	Advanced Manufacturing Supply Chain	3	None	None
ETI2403	Advanced Manufacturing Technology	3	None	None

College Credit Certificate in Automation

Total credits required for the certificate is 15

CIP Number: 0615.061301

SOC Code: 17-3027

This certificate prepares students for initial employment with an occupational title as an Automation or Applied Automation Specialist in various specialized areas. It can also provide supplemental training for persons previously or currently employed in these occupations. These courses can be applied toward the Associate of Science in Advanced Manufacturing.

Course	Course Title	Credits	Pre-requisite	Co-requisite
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COURSES (15 credits)

ETI-1040	Introduction to Bioscience Manufacturing	3	None	None
ETM-1315C	Applied Pneumatics and Hydraulics	3	MAC-1105	None
ETI-1701	Industrial Safety	3	None	None
ETI-2403	Advanced Manufacturing Technology	3	None	None
MAC-1105	College Algebra	3	CPT	None

**UNANIMOUS
APPROVAL
27 IN FAVOR
0 OPPOSED**

6. **School of Computer and Engineering Technologies**
AS Program Revisions
Computer Information Technology (25055)
Add new courses as major course requirements
Recommended Course User Fee \$55.00

Tom Meyer introduced Richard White, School Director, who presented revisions to the Computer Information Technology, Electrical Engineering Technology, Biomedical Engineering Technology, and Electrical Power Technology AS degree programs as well as changes to the College Credit Certificate in

Information Technology Support.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
CGS2108	Advanced Desktop Applications	4	1,2,3,5,6,7,8	2009-1

Course Description: This is an advanced level course for major and non-major students who have completed CGS 1060, Introduction to Microcomputer Usage. Students will learn advanced computer skills using software applications, such as word processing, spreadsheets, database, presentation graphics, and communications and scheduling software. Students will also learn advanced file management techniques, deal with security issues, and troubleshoot hardware and software. Pre-requisite: CGS1060. A.S. degree credit only. Laboratory fee. (3 hr. lecture; 2 hr. lab)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
CTS1526	Intro. to Web Page Development	4	1,2,3,5,6,7,8	2009-1

Course Description: This introductory course covers the basics of web design and development. Students will learn about the World Wide Web, Hypertext Markup Language (HTML), Extensible Hypertext Markup Language (XHTML), Cascading Style Sheets (CSS) and JavaScript using popular web authoring tools such as Dreamweaver. Students will also learn the basic functions of HTML, XHTML, CSS and JavaScript and how to develop and maintain a website. Prerequisite: CGS1060. Laboratory fee. AS degree credit only. (3 hr. lecture, 2 hr. lab)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
CTS1740	A+ Computer Essentials & Support	4	1,2,3,5,6,7,8	2009-1

Course Description: This is an intermediate level course designed for students preparing for A+ certification as a support technician. Students will learn how to install, configure, upgrade and replace computer system components; how to troubleshoot processors, memory, storage devices, adapter cards, peripherals and other system components; how to install, configure and troubleshoot operating systems, laptops, portable devices, printers, scanners, network devices and security measures; and how to provide professional IT support and customer service. Pre-requisite(s): CGS1560. Laboratory fee. A.S. degree credit only. (3 hr lecture, 2 hr lab)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
CTS2153	Supporting Windows Users & Applications	4	1,2,3,5,6,7,8	2009-1

Course Description: This is an advanced course designed to help students prepare for the Microsoft Certified IT Professional Support Technician certification. Students will learn how to install, configure and manage Windows applications in a networked Windows environment and how to support enterprise users. Students will also deploy Windows and applications using various methods, resolve installation and compatibility issues, establish group policies and user profiles, perform support functions, troubleshoot user and application issues, secure the desktop and network from unauthorized use, install software upgrades and updates, perform systems monitoring and documentation, and develop customer service skills. Prerequisite(s): CTS 1328. Laboratory Fee. A.S. degree credit only. (3 hr. lecture, 2 hr. lab)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
CTS2154	IT Help Desk Support	4	1,2,3,5,6,7,8	2009-1

Course Description: This course is designed to prepare students as entry-level help desk computer support technicians. Students will learn skills needed to support computer users within the business organization and to provide exceptional customer service, including how to identify the appropriate tools, technologies, and processes to assess and meet computer user needs, essential communications

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skills, the IT function within the business organization, and career opportunities in computer user support. Pre-requisite(s): CGS1060; CGS2108. Laboratory fee. A.S. degree credit only. (3 hr lecture, 2 hr lab)

Add existing courses as major course requirements

CEN1301 Supporting MS Clients (State mandated change to CTS1328)
CEN1511 Networking Technologies (State mandated change to CTS1134)
CET1600 Networking Fundamentals Essentials

Add existing courses as electives

CET1610 Router Technology
CET2615 Advanced Router Technology
CET2620 Project Based Learning

Delete courses from program, retain as electives

CGS1501 Microcomputer Word Processing
CGS1511 Spreadsheets
CGS1541 Database Management
CGS180 Desktop Publishing
CTS2550 PowerPoint
CGS1871 Intro to Multimedia

Delete course from program

MKA Intro to Customer Service

Change course title

CGS1560 Microcomputer Operating Systems (**Old**)
A+ Computer Operating Systems (**New**)

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27 IN FAVOR
0 OPPOSED**

**ASSOCIATE IN SCIENCE DEGREE
PROGRAM OF STUDY: COMPUTER INFORMATION TECHNOLOGY (25055)
EFFECTIVE TERM: Fall 2009 (2009-1)**

EXISTING PROGRAM SHEET SHOWING PROPOSED CHANGES

I. GENERAL EDUCATION REQUIREMENTS

1. COMMUNICATIONS (3.00 credits)

[ENC 1101](#) - English Composition 1 (3 credits)

2. ORAL COMMUNICATIONS (3.00 credits)

[SPC 1026](#) - Fundamentals of Speech Communications (3 credits)

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3. HUMANITIES (3.00 credits)

- [PHI 2604](#) - Critical Thinking/Ethics (3 credits)

4. BEHAVIORAL/SOCIAL SCIENCE (3.00 credits)

- [CLP 1006](#) - Psychology of Personal Effectiveness (3 credits)

5. MATH/SCIENCE (3.00 credits)

- [MAC 1105](#) - College Algebra (3 credits)

6. COMPUTER COMPETENCY

Test type(s) needed:

- [CGS 1060](#) - Introduction to Microcomputer Usage (4 credits)

7. MAJOR COURSE REQUIREMENTS (36.00 credits)

- [CGS 1060](#) - Introduction to Microcomputer Usage (4 credits)
- CGS2108 Advanced Desktop Applications (4 credits)

- [CGS 1560](#) - A+ Computer Operating Systems (4 credits)
- CEN1301 Supporting Microsoft Clients (4 credits)
- CEN1511 Networking Technologies or CET1600 Cisco Networking Fundamentals (4 credits)
- CTS1526 Introduction to Web Page Development (4 credits)
- CTS1740 A+ Computer Essentials & Support (4 Credits)
- CTS2154 IT Help Desk Support (4 credits)
- CTS 2153 Supporting Windows Users & Applications (4 credits)

8. MAJOR COURSE ELECTIVE (12.00 credits)

Must take 12.0 credits from the following group.

- CEN*
- CGS*
- CIS*

- CET1610, CET2615, CET2620
- CTS*
- COP*
- CAP*

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COLLEGE CREDIT CERTIFICATE
PROGRAM OF STUDY: INFORMATION TECHNOLOGY SUPPORT (66044)
EFFECTIVE TERM: Fall 2009 (2009-1)

PROPOSED CHANGES TO EXISTING CERTIFICATE

1. MAJOR COURSE REQUIREMENTS (28.00 credits)

- | | |
|---|--|
| <input type="checkbox"/> CGS 1501 - Microcomputer Wordprocessing (4 credits) | <input type="checkbox"/> CGS 1580 - Microcomputer Desktop Publishing (4 credits) |
| <input type="checkbox"/> CGS 1511 - Microcomputer Spreadsheets (4 credits) | <input type="checkbox"/> CGS 1871 - Introduction to Multimedia (4 credits) |
| <input type="checkbox"/> CGS 1541 - Microcomputer Database Management (4 credits) | <input type="checkbox"/> CTS 2550 - Powerpoint/Outlook (4 credits) |
| <input type="checkbox"/> CGS 1560 - Using Microcomputer Operating Systems (4 credits) | |

1. MAJOR COURSE REQUIREMENTS (28.00 credits)

- | | |
|--|---|
| <input type="checkbox"/> CTS1134 (formerly CEN1511) Networking Technologies | <input type="checkbox"/> CTS1526 Introduction to Web Page Development (4 credits) |
| or | |
| <input type="checkbox"/> CET1600 CISCO Networking Fundamentals (4 credits) | <input type="checkbox"/> CTS1740 A+ Computer Hardware (4 Credits) |
| <input type="checkbox"/> CTS1328 (formerly CEN1301) Supporting Microsoft Clients (4 credits) | <input type="checkbox"/> CTS2154 IT Help Desk Support (4 credits) |
| <input type="checkbox"/> CGS 1560 A+ Computer Operating Systems (4 credits) | <input type="checkbox"/> CTS 2153 Supporting Windows Users & Applications (4 credits) |
-

COLLEGE CREDIT CERTIFICATE
PROGRAM OF STUDY: INFORMATION TECHNOLOGY SUPPORT (66044)
EFFECTIVE TERM: Fall 2009 (2009-1)

PROPOSED NEW PROGRAM SHEET

1. MAJOR COURSE REQUIREMENTS (28.00 credits)

- | | |
|---|---|
| <input type="checkbox"/> CTS 1134 (formerly CEN1511) Networking Technologies OR CET1600 CISCO Networking Fundamentals (4 credits) | <input type="checkbox"/> CTS1526 Introduction to Web Page Development (4 credits) |
| <input type="checkbox"/> CTS 1328 (formerly CEN1301) Supporting Microsoft Clients (4 credits) | <input type="checkbox"/> CTS1740 A+ Computer Hardware (4 Credits) |
| <input type="checkbox"/> CGS 1560 A+ Computer Operating Systems (4 credits) | <input type="checkbox"/> CTS2154 IT Help Desk Support (4 credits) |
| | <input type="checkbox"/> CTS 2153 Supporting Windows Users & Applications (4 credits) |

Biomedical Engineering Technology (26053)

Delete Course from program

BSC2020 Human Biology-Fundamentals of Anatomy/Physiology
Substitute with BSC*- any Biology course.

ASSOCIATE IN SCIENCE DEGREE
PROGRAM OF STUDY: BIOMEDICAL ENGINEERING TECHNOLOGY (26053)
EFFECTIVE TERM: Fall 2009 (2009-1)

PROGRAM SHEET SHOWING PROPOSED CHANGES

I. GENERAL EDUCATION REQUIREMENTS

1. COMMUNICATIONS (3.00 credits)

- [ENC 1101](#) - English Composition 1 (3 credits)
-

2. ORAL COMMUNICATIONS (3.00 credits)

- [SPC 1026](#) - Fundamentals of Speech Communications (3 credits)
-

3. HUMANITIES (3.00 credits)

- [PHI 2604](#) - Critical Thinking/Ethics (3 credits)
-

4. BEHAVIORAL/SOCIAL SCIENCE (3.00 credits)

- [CLP 1006](#) - Psychology of Personal Effectiveness (3 credits)
-

5. MATH/SCIENCE (3.00 credits)

- [MAC 1105](#) - College Algebra (3 credits)
-

6. COMPUTER COMPETENCY

Test type(s) needed:

- [CGS 1060](#) - Introduction to Microcomputer Usage (4 credits)
-

7. MAJOR COURSE REQUIREMENTS (49.00 credits)

- | | |
|--|---|
| <input type="checkbox"/> BSC* | <input type="checkbox"/> EET 1141C - Semiconductor Fundamentals (4 credits) |
| <input type="checkbox"/> CET 2114C - Digital Computer Circuit Analysis 1 (4 credits) | <input type="checkbox"/> EET 2101C - Electronic Devices (4 credits) |
| <input type="checkbox"/> CET 2123C - Microprocessors (4 credits) | <input type="checkbox"/> EST 2436C - Biomedical Instrumentation 1 (3 credits) |
| <input type="checkbox"/> CHM 1033 - Chemistry for Health Sciences (3 credits) | <input type="checkbox"/> EST 2438C - Biomedical Instrumentation 2 (3 credits) |
| <input type="checkbox"/> CHM 1033L - Chemistry for Health Sciences Lab (1 credit) | <input type="checkbox"/> ETD 1340 |
| <input type="checkbox"/> EET 1015C - Direct Current Circuits (4 credits) | <input type="checkbox"/> HIM 2472 - Medical Terminology (3 credits) |
| <input type="checkbox"/> EET 1025C - Alternating Current Circuits (4 credits) | <input type="checkbox"/> MTB 1322 - Technical Mathematics 2 (3 credits) |
| <input type="checkbox"/> EET 1082 - Introduction to Electronics (3 credits) | |
-

8. PROGRAM ELECTIVE (4.00 credits)

- | | |
|--|---|
| <input type="checkbox"/> CET 2142C - Computers 2 (4 credits) | <input type="checkbox"/> ETD 2350 - Computer Graphics (3 credits) |
| <input type="checkbox"/> EET 1037C - Electronic Computer Simulations (3 credits) | <input type="checkbox"/> MTB 1321 - Technical Mathematics 1 (3 credits) |
| <input type="checkbox"/> EET 1142C - Transistor Circuits (4 credits) | |

**ASSOCIATE IN SCIENCE DEGREE
PROGRAM OF STUDY: BIOMEDICAL ENGINEERING TECHNOLOGY (26053)
EFFECTIVE TERM: Fall 2009 (2009-1)**

PROPOSED NEW PROGRAM SHEET

I. GENERAL EDUCATION REQUIREMENTS

1. COMMUNICATIONS (3.00 credits)

- [ENC 1101](#) - English Composition 1 (3 credits)
-

2. ORAL COMMUNICATIONS (3.00 credits)

- [SPC 1026](#) - Fundamentals of Speech Communications (3 credits)
-

3. HUMANITIES (3.00 credits)

- [PHI 2604](#) - Critical Thinking/Ethics (3 credits)
-

4. BEHAVIORAL/SOCIAL SCIENCE (3.00 credits)

- [CLP 1006](#) - Psychology of Personal Effectiveness (3 credits)
-

5. MATH/SCIENCE (3.00 credits)

- [MAC 1105](#) - College Algebra (3 credits)
-

6. COMPUTER COMPETENCY

Test type(s) needed:

- [CGS 1060](#) - Introduction to Microcomputer Usage (4 credits)
-

7. MAJOR COURSE REQUIREMENTS (49.00 credits)

- | | |
|--|---|
| <input type="checkbox"/> BSC* | <input type="checkbox"/> EET 1141C - Semiconductor Fundamentals (4 credits) |
| <input type="checkbox"/> CET 2114C - Digital Computer Circuit Analysis 1 (4 credits) | <input type="checkbox"/> EET 2101C - Electronic Devices (4 credits) |
| <input type="checkbox"/> CET 2123C - Microprocessors (4 credits) | <input type="checkbox"/> EST 2436C - Biomedical Instrumentation 1 (3 credits) |
| <input type="checkbox"/> CHM 1033 - Chemistry for Health Sciences (3 credits) | <input type="checkbox"/> EST 2438C - Biomedical Instrumentation 2 (3 credits) |
| <input type="checkbox"/> CHM 1033L - Chemistry for Health Sciences Lab (1 credit) | <input type="checkbox"/> ETD 1340 - Computer Aided Drawing & Design (3 credits) |
| <input type="checkbox"/> EET 1015C - Direct Current Circuits (4 credits) | <input type="checkbox"/> HIM 2472 - Medical Terminology (3 credits) |
| <input type="checkbox"/> EET 1025C - Alternating Current Circuits (4 credits) | <input type="checkbox"/> MTB 1322 - Technical Mathematics 2 (3 credits) |
| <input type="checkbox"/> EET 1082 - Introduction to Electronics (3 credits) | |
-

8. PROGRAM ELECTIVE (4.00 credits)

- | | |
|--|---|
| <input type="checkbox"/> CET 2142C - Computers 2 (4 credits) | <input type="checkbox"/> ETD 2350 - Computer Graphics (3 credits) |
| <input type="checkbox"/> EET 1037C - Electronic Computer Simulations (3 credits) | <input type="checkbox"/> MTB 1321 - Technical Mathematics 1 (3 credits) |
| <input type="checkbox"/> EET 1142C - Transistor Circuits (4 credits) | |

Electrical Power Technology

Add Pre-requisites MAC1105 and PHY1025

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
EET1580	Power Plant Science	4	1,2,3,5,6,7,8	2008-3

Course Description: This course is designed to familiarize students who are preparing for careers in nuclear power plant maintenance technology with the fundamentals of nuclear plant sciences. Students learn about basic electrical science, properties of reactor plant materials, basic atomic and nuclear physics, heat transfer and fluid flow, reactor safety design, and plant chemistry. Pre-requisites: MAC1105, PHY1025. A.S. degree credit only. (2 hr lecture)

Electronics Engineering Technology

Course reclassification from type 02 to 01

Effective Term 2009-2

CET2114C	Digital Computer Circuit Analysis 1
CET2123C	Microprocessors
CET2142C	Advanced Digital Circuits
EET1015C	DC Circuits
EET1025C	AC Circuits
EET1141C	Electronics 1
EET2101C	Electronics 2
EET2351C	Electronics Communications 2 – Digital

Delete Courses

Effective Term 2009-1

EET2305	FCC License Prep
EET2305C	Communications & FCC Exam

Add New Course

Recommended course user fee \$55.00

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
EET2323C	Electronic Communications 1 – Analog	4	1,2,3,5,6,7,8	2009-2

Course Description: This course is designed for students majoring in Electronics Engineering Technology, Telecommunications Engineering Technology, and related disciplines. Students will learn the principles of radio wave transmission and reception, including AM and FM transmitters, receivers, single sideband, television and digital data transmission lines, wave propagation antennas and microwaves. Pre-requisite: EET1141C; Co-requisite: EET2101C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

Change Course Numbers/Titles

Pre-Pre-and/or Co-requisite

Effective Term 2009-2

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
CET2114C	Digital Computer Analysis 1 (Old)	4	1,2,3,5,6,7,8	2009-2
CET1114C	Digital Circuits (New)			

Course Description: This is an introductory course in digital circuits for students majoring in engineering technology fields. Students learn how to apply electronic principles to digital computer circuits and systems. Students also learn how to simplify logical circuits using Boolean algebra, build

CASSC Meeting

June 9, 2009

digital circuits, and perform other laboratory activities. Pre-requisite(s): MAC1105. Co-requisite: EET1015C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
EET2351	Fundamentals of Digital and Data Communications 1 (Old)	4	1,2,3,5,6,7,8	2009-2
EET2351C	Electronic Communications 2 – Digital (New)			

Course Description: This course is designed to give students majoring in Electronics Engineering Technology and related engineering technologies a theoretical and practical background in the basic concepts and applications of digital and data communications. Students will learn analog-to-digital (A/D) and digital-to-analog (D/A) conversions; data communications codes and standards; wired and wireless digital communications; modulation, transmission impairment, the telephone system, modems, multiplexers, and electrical interface standards. Hands-on laboratory activities are included. Pre-requisites: CET 1114C, EET 1025C. Pre/Co-requisite: EET2323C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
EET1025C	Alternative Current Circuits	4	1,2,3,5,6,7,8	2009-2

Course Description: This is a foundation course in alternating current required for all students in electronics engineering technology and related disciplines. Students will learn vector notation, circuits, impedance, phase shift, networks, transformers, and resonance. Students will apply and verify theories and principles through hands-on, laboratory experiments utilizing modern testing equipment. Pre-requisite: EET 1015C; co-requisite: MAC1147 or MAC1114 or MTB1322. Laboratory fee. (2 hr. lecture; 4 hr. lab)

**UNANIMOUS
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ASSOCIATE IN SCIENCE DEGREE
PROGRAM OF STUDY: ELECTRONICS ENGINEERING TECHNOLOGY (26039)
EFFECTIVE TERM: Spring 2010 (2009-2)

PROPOSED CHANGES

I. GENERAL EDUCATION REQUIREMENTS

1. COMMUNICATIONS (3.00 credits)

- [ENC 1101](#) - English Composition 1 (3 credits)
-

2. ORAL COMMUNICATIONS (3.00 credits)

- [SPC 1026](#) - Fundamentals of Speech Communications (3 credits)
-

3. HUMANITIES (3.00 credits)

- [PHI 2604](#) - Critical Thinking/Ethics (3 credits)
-

4. BEHAVIORAL/SOCIAL SCIENCE (6.00 credits)

Must take 3.0 credits from the following group.

- [CLP 1006](#) - Psychology of Personal Effectiveness (3 credits)

--- And ---

Must take 3.0 credits from the following group.

- | | |
|---|--|
| <input type="checkbox"/> AMH 2010 - History of the United States to 1877 (3 credits) | <input type="checkbox"/> POS 2041 - American Federal Government (3 credits) |
| <input type="checkbox"/> AMH 2020 - History of the United States since 1877 (3 credits) | <input type="checkbox"/> WOH 2012 - History of World Civilizations to 1715 (3 credits) |
| <input type="checkbox"/> ECO 2013 - Principles of Economics (Macro) (3 credits) | <input type="checkbox"/> WOH 2022 - History of World Civilizations from 1715 (3 credits) |

The following course(s) are not allowed for credit in this area.
All Labs

5. MATH/SCIENCE (7.00 credits)

- | | |
|--|--|
| <input type="checkbox"/> MAC 1105 - College Algebra (3 credits) | <input type="checkbox"/> PHY 2053L - Physics (without Calculus) Lab (1 credit) |
| <input type="checkbox"/> PHY 2053 - Physics (without Calculus) (3 credits) | |
-

6. COMPUTER COMPETENCY

Test type(s) needed:

- [CGS 1060](#) - Introduction to Microcomputer Usage (4 credits)
-

7. MAJOR COURSE REQUIREMENTS (38.00 credits)

Must take 30.0 credits from the following group.

- | | |
|---|---|
| <input type="checkbox"/> CET1114C Digital Circuits (4 credits) EXISTING COURSE NUMBER CHANGE | <input type="checkbox"/> EET 1037C - Electronic Computer Simulations (3 credits) |
| <input type="checkbox"/> CET 2123C - Microprocessors (4 credits) | <input type="checkbox"/> EET 1141C - Electronics 1 (4 credits) EXISTING COURSE ALIGN TITLE WITH TITLE IN ODYSSEY |
| <input type="checkbox"/> EET 1015C - Direct Current Circuits (4 credits) | <input type="checkbox"/> EET 2101C - Electronics 2 (4 credits) EXISTING COURSE ALIGN TITLE WITH TITLE IN ODYSSEY |

- | | |
|---|---|
| <input type="checkbox"/> CET1114C Digital Circuits (4 credits) EXISTING COURSE NUMBER CHANGE | <input type="checkbox"/> EET 1037C - Electronic Computer Simulations (3 credits) |
| <input type="checkbox"/> CET 2123C - Microprocessors (4 credits) | <input type="checkbox"/> EET 1141C - Electronics 1 (4 credits) EXISTING COURSE ALIGN TITLE WITH TITLE IN ODYSSEY |
| <input type="checkbox"/> EET 1015C - Direct Current Circuits (4 credits) | <input type="checkbox"/> EET 2101C - Electronics 2 (4 credits) EXISTING COURSE ALIGN TITLE WITH TITLE IN ODYSSEY |
| <input type="checkbox"/> EET 1025C - Alternating Current Circuits (4 credits) | <input type="checkbox"/> MTB 1322 - Technical Mathematics 2 (3 credits) |

--- And ---

Must take 4.0 credits from the following group.

- | | |
|---|---|
| <input type="checkbox"/> COP1334 - Introduction to Programming in "C" (4 credits) STATE MANDATED NUMBER CHANGE | <input type="checkbox"/> CGS 2423 - "C" For Engineers (4 credits) |
|---|---|

The following course(s) are not allowed for credit in this area.
All Labs

--- And ---

Must take 4.0 credits from the following group.

- | | |
|---|---|
| <input type="checkbox"/> REMOVE FROM ODYSSEY
EET2323C Electronic Communications 1 (4 credits) ADD NEW COURSE | <input type="checkbox"/> EXISTING COURSE; NUMBER CHANGE; NEW COMPETENCIES; MOVE TO ELECTIVES
CET2142C – Advanced Digital Circuits (4 credits) EXISTING COURSE; |
|---|---|

8. OTHER ELECTIVES (8.00 credits)

- [CET 1171](#) - Micro-Computer Service and Maintenance 1 (3 credits)
- [CET 1172C](#) - Micro-Computer Service and Maintenance 2 (3 credits)
- [CET 2142C](#) - Advanced Digital Circuits (4 credits)
- [EET 1082](#) - Introduction to Electronics (3 credits)
- [EET 1949](#) - Co-op Work Experience 1: EET (3 credits)

-
- EET2323C Electronic Communications 1 (4 credits) **ADD NEW COURSE**
- EET2351C – Electronic Communications 2 (4 credits) **EXISTING COURSE NUMBER CHANGE**

Biotechnology (22027)
Course Reclassification from type 02 to 01
Change Course Number
Effective Term 2009-2

Campus: 1,2,3,5,6,7,8
ETI1181 Introduction to Quality Assurance
EET1172 (New)

7. **Social Science Discipline**
Revised Course Descriptions
Course Deletion

Manny Lorenzo introduced Prof. David Shaheen, who presented the revised course descriptions for four history courses. He also presented the request to delete SLS1310—Introduction to Health Careers.

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
AMH2010	History of the United States to 1877	3	1,2,3,5,6,7,8	2009-1

Course Description: Students will learn of the history of the United States to 1877 by examining the founding, growth, and development of America from the colonial era through Reconstruction. (3 hr. lecture)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
AMH2020	History of United States since 1877	3	1,2,3,5,6,7,8	2009-1

Course Description: This course focuses on the social, economic, cultural, and political developments in the United States since 1877. The student will gain knowledge of changes and continuities in the history of the United States since the late nineteenth century. (3 hr. lecture)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
WOH2012	History of Civilizations to 1789	3	1,2,3,5,6,7,8	2009-1

Course Description: This course covers the history of World Civilizations from the prehistoric period to the 18th century. Students will learn the major political, social, economic, and cultural structures of civilizations and their development through 1789. (3 hr. lecture)

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Campus</u>	<u>Eff. Term</u>
WOH2022	History of Civilizations since 1789	3	1,2,3,5,6,7,8	2009-1

Course Description: The student will examine the historical development of world civilizations since 1789. Students will learn of historical processes and developments in social, cultural, political, and economic contexts since the late 18th century (3 hr lecture).

Course Deletion
Effective Term 2009-1

SLS1310 Introduction to Health Careers

Rationale: Course has been deleted from State Numbering System and has not been offered at MDC since 2005-1

**UNANIMOUS
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0 OPPOSED**

8. **Announcements**

Presentation

On behalf of Rolando Montoya, College Provost, Norma Martin Goonen, outgoing Provost for Academic and Student Affairs, and the membership of College CASSC, Pamela Menke, Associate Provost for Academic Affairs, recognized Armando Ferrer for his long and distinguished service on

CASSC Meeting

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College CASSC and wished him well in his new endeavor as the Interim President of the Kendall Campus.

Student Services

Armando Ferrer requested that CASSC members encourage and remind students to register for summer B courses.

Malou Harrison announced that fall registration started on Wednesday, June 17, 2009 and requested the council to encourage students to register as early as possible.

Randy Boaz Memorial Competition

Carol Miller invited CASSC's members to participate at The 9th Annual Randy Boaz Memorial ALS (Advanced Life Support) Competition that will take place at the Medical Center Campus on Tuesday, June 16, 2009, from 9:00 a.m. – 4:00 p.m. This competition is in memory of the late longtime City of Miami paramedic and MDC instructor Randy Boaz. Proceeds will benefit the Randy Boaz Scholarship Fund.

The meeting was adjourned at 3:30 p.m.