



April 20, 2020

M E M O R A N D U M

TO: Jim Murdaugh, Ph.D.
President

FROM: Madeline Pumariega, M.Ed.
Executive Vice President and Provost

SUBJECT: Academic Curriculum Changes

Item Description

This item presents proposed new programs, program changes, new courses, and course changes.

Overview and Background

The Curriculum and Innovation Committee members review and make recommendations for Board approval for new program and courses. Due to changes by the State Board of Education as well as the revision of programs to meet workforce demands, there are several changes that are being proposed.

The College is proposing a new Cyber Security A.S. degree to meet the need for professionals to develop new ways to combat cyber threats and defend against spamming, phishing, malware, viruses, and other information security threats that are important to our community. There is a projected 38% growth for the state of Florida according to the Department of Economic Opportunity. This new program will lead to an industry certification. The College is also proposing to revise the Entrepreneurship College Credit Certificate program. The revised program will provide students the opportunity to develop business plans as well as become knowledgeable in policy and accounting, and taxation to become successful entrepreneurs.

TCC is also proposing two new courses to meet the local demand for trained professionals in the Hemp Industry. Students will learn the biology and plant science of cannabis plants and they will learn Florida policy and regulation related to the Hemp Industry. The new courses will become part of a Hemp College Credit Certificate program which is under development. Additionally, TCC is proposing two new courses to introduce students to Drone Technology. Students will learn to build and repair unmanned systems as well as the multiple applications and industries that utilize unmanned systems technology. The new courses will become part of a Drone Technology A.S. degree which is under development.

Funding/ Financial Implications

None

Past Actions by the Board

The Board approves the new programs, program changes, new courses, and course changes each year.

Recommended Action

That the Board approves the recommendation for new programs, program changes, new courses, and course changes as attached.

NEW PROGRAM

Cyber Security, A.S. (60 credit hours)

TCC is proposing an Associate in Science degree in Cyber Security to meet the need for professionals to develop new ways to combat cyber threats and defend against spamming, phishing, malware, viruses, and other information security threats that are important to our community. There is a projected 38% growth for the state of Florida according to the Department of Economic Opportunity. The median hourly wage is \$43.00 per hour. There are industry certifications for this program associated with the new courses for this degree.

General Education courses:

- ENC1101 College Composition (3)
- Humanities State Core (3)
- Mathematics State Core (3)
- Natural Sciences State Core (3)
- Social Sciences State Core (3)

Program Courses:

- CGS1000 Introduction to Computer Technology (3)
- CIS2352 Ethical Hacking (3)
- CNT2401 Introduction to Network Security (3)
- CIS2381 Computer Hacker Forensic Investigator (3)
- CTS2123 Network Defense Counter Measures (3)
- CTS1131 Microcomputer Architecture (3)
- CET1600 Open System Architecture I (3)
- CET1610 Open System Architecture II (3)
- CET2615 Open System Architecture III (3)
- CET2620 Open System Architecture IV (3)
- CGS2540 Database Concepts (3)
- CTS2311 Introduction to Linux (3)
- CJL2130 Criminal Evidence and Procedure (3)
- CCJ1600 Deviant Behavior (3)
- COP1000 Programming Concepts (3)

PROGRAM CHANGES

Network Security: Cyber Forensics Certificate (30 credit hours)

Based on recommendations from local employers on the Network Security Advisory Board, TCC is proposing to remove a course that has out-of-date content and to add a course to provide students with relevant content on network security.

Add courses:

CET2615 Open Systems Architecture III (3)

Delete courses:

CTS1134 Networking and Telecommunication (3)

Network Infrastructure Certificate (21 credit hours)

Based on recommendations from local employers on the Network Security Advisory Board, TCC is proposing to remove a course that has out-of-date content and to add a course to provide students with an introduction to network security as they start the certificate program.

Add courses:

CNT2401 Introduction to Network Security (3)

Delete courses:

CTS1134 Networking and Telecommunication (3)

Network Support Technician Certificate (21 credit hours)

Based on recommendations from local employers on the Network Security Advisory Board, TCC is proposing to remove a course that has out-of-date content and to add a course to provide students with relevant content on network security.

Add courses:

CET2615 Open System Architecture III (3)

Delete courses:

CTS1134 Networking and Telecommunication (3)

Network Systems Technology, A.S. (60 credit hours)

Based on recommendations from local employers on the Network Security Advisory Board, TCC is proposing to add and remove courses in order to provide relevant content on network security. The changes are also to move the required courses into the new Cyber Security A.S. degree and to focus this program on network security.

Add Program courses:

CET2615 Open System Architecture III (3)
CET2620 Open System Architecture IV (3)
CGS2540 Database Concepts (3)
MAR1350 Marketing the Individual (3)

Add Elective courses:

CIS2352 Ethical Hacking (3)
CIS2381 Computer Hacker Forensic Investigator (F3)
CTS2123 Network Defense and Counter Measures (3)
CGS1820 Web Page Authoring (3)
Any COP course (3)
CTS2225C Microsoft Specialist: Excel (3)
CTS2401C Microsoft Specialist: Access (3)
IDS2941 Technology and Professional Programs Internship (3)

Delete Program courses:

CTS1134 Networking and Telecommunication (3)
CIS2352 Ethical Hacking (3)
CIS2381 Computer Hacker Forensic Investigator (3)
CTS2123 Network Defense and Counter Measures (3)

Delete Elective courses:

MAN2021 Intro to Management (3)
COP2220 C++ Programming (3)

Computer Programming and Analysis Certificate (33 credit hours)

Based on recommendations from local employers on the Computer Programming Advisory Board, TCC is proposing to add an intermediate programming course in order to better prepare students for the workforce and remove the introduction course which repeats content from a current course in the program.

Add courses:

COP2360 Introduction to C# Programming (3)

Delete courses:

CGS1000 Introduction to Computer Technology (3)

Computer Programming Specialist Certificate (33 credit hours)

Based on recommendations from local employers on the Computer Programming Advisory Board, TCC is proposing to add an intermediate programming course in order to better prepare students for the workforce and remove the introduction course which repeats content from a current course in the program.

Add courses:

COP2360 Introduction to C# Programming (3)

Delete courses:

CGS1000 Introduction to Computer Technology (3)

Business Entrepreneurship Certificate (12 credit hours)

TCC is proposing to make revisions to the program to better meet students' needs. This program will provide an innovative approach to entrepreneurial education to springboard our students to success and our service area to economic revitalization. The program removes electives and provides a very prescriptive pathway to prepare students to become successful entrepreneurs.

Proposed Program Title Change: Entrepreneurship

Add Program courses:

ENT2430 Legal Environment for Entrepreneurs (3)

ENT2411 Accounting and Taxation for Entrepreneurs (3)

CGS2069 Starting a Business on the Internet (3)

Delete Program courses:

ACG2021 Financial Accounting (3)

Delete Elective courses:

MAR2011 Principles of Marketing (3)

MAN2021 Introduction to Management (3)

GEB1011 Introduction to Business (3)

MNA2130 Business Communication (3)

MNA1161 Introduction to Customer Service (3)

PROGRAM DELETIONS

Based on review of curriculum content and assessment, the Help Desk/Technical Support programs are recommended for deletion. The programs no longer lead to employment in our local community. The Surgical Technology Specialist Certificate program is being proposed for deletion based on the Surgical Technology Accreditation requirement. Students will be required to obtain an AS degree and will no longer be employable with a certificate.

Help Desk/Technical Support, A.S.

Help Desk/Technical Support Certificate

Surgical Technology Specialist Certificate

NEW COURSES

Course ID	Course Name	Rationale for New Course
ENT2430	Legal Environment for Entrepreneurs	New course for Entrepreneurship Certificate program revision.
ENT2411	Accounting and Taxation for Entrepreneurs	New course for Entrepreneurship Certificate program revision.
ASC1560	Introduction to Unmanned Aerial Systems (UAS)	New course to introduce students to Drone Technology.
ASC1564	Unmanned Aerial Systems Mission Applications	New course to introduce students to Drone Technology.
CCJ2765	Cannabis Law and Regulation	New course to meet the market demand for trained professions in the Hemp industry.
PLS1101	Introduction to Cannabis Plant Science	New course to meet the market demand for trained professions in the Hemp industry.
CHM1020L	Chemistry for General Education Lab	Adding a non-majors chemistry lab to satisfy FSU lab requirement, currently students enroll in majors chemistry.

COURSE DELETIONS

Course ID	Course Name	Rationale for Course Deletion
CGS1555	Internet	This course is recommended for deletion because the content is no longer relevant to students entering the workforce.
GRA2512C	Corporate Identity	This course is recommended for deletion because the content is no longer relevant to students entering the workforce.
GRA2100	Cg Characters Production	This course is recommended for deletion because the content is no longer relevant to students entering the workforce.
CGS2560	Introduction to Operating Systems	Course was part of a technical certificate that was deleted.
COP1332	Intro to VB.Net Programming	Course was part of a technical certificate that was deleted.
CTS1134	Networking and Telecommunication	Course was part of a technical certificate that was deleted.

COURSE REVISIONS

Course ID	Course Name	Type of Change	Current	Proposed	Rationale for Change
GRA1111C	Graphic Design I	Co-requisite	ART1201C	None	Remove barrier for course registration. Content was not relevant to be successful in the course.
GRA2103C	Computer Based Design I	Co-requisite	GRA2121	None	Remove barrier for course registration. Content was not relevant to be successful in the course.
GRA215C	Computer Based Design II	Co-requisite	GRA2121	None	Remove barrier for course registration. Content was not relevant to be successful in the course.
DIG2000	Intro to Digital Media	Contact Hour	4	3	Contact hour change to align credit and contact hours.
COP1000	Programming Concepts	Course Description	This course is designed to give students an understanding of Python programming language to expose students to applications where Python programming is effective such as application development, scripting, systems administration. Python has easy to understand syntax which allows	This is a computer literacy course designed for students interested in becoming computer programmers. In addition to literacy concepts such as basic terminology, the evolution of programming and of the computer, subjects related to creating more	The new course format will help students explore the benefits and limitations of the study of programming.

			programmers to develop programs faster and more efficiently. Due to Python's ease of use, students will gain expertise with many details of the language as well as programming fundamentals.	proficient programming students will be introduced. These topics include file management, the various purposes of current languages, program design tools and approaches, and the current outlook for programming professionals. In addition, basic problem solving using simple code structures will be introduced using the Python language.	
CNT2401	Introduction to Network Security	Pre-requisite	CGS1060	CGS1000	Prerequisite change to better align the skills needed for the course.
CET1600	Open System Architecture I	Course Title	Open System Architecture I	Introduction to Networks	Name change to better reflect the purpose of the course.
CET1610	Open System Architecture II	Course Title	Open System Architecture II	Switching, Routing, and Wireless Essentials	Name change to better reflect the purpose of the course.
CET2615	Open System Architecture III	Course Title	Open System Architecture III	Enterprise Networking, Security, and Automation	Name change to better reflect the purpose of the course.
CET2620	Open System Architecture IV	Course Title	Open System Architecture IV	The Internet of Things	Name change to better reflect the purpose of the course.

CTS1131	Microcomputer Architecture	Course Title	Microcomputer Architecture	PC Maintenance	Name change to better reflect the purpose of the course.
CGS1000	Introduction to Computer Technology	Course Description	<p>Overview of major fields within the computer technology area. Concepts and terminology from computer programming, computer networking, multimedia and other areas will be covered. Hands-on exercises are included with lecture material. The student is provided with a background in the major computer technology fields and can use this course to help pursue a career in a specific field of interest or to simply become more aware of today's trends.</p>	<p>This course has no specific prerequisites. The course is aimed at those considering a career in IT and computer-related fields. This class is designed to help students acquire the knowledge and skills to set up and use a computer securely and keep it in good working order as well as provide informal support for simple computer networks. The course will also assist in preparation of the CompTIA IT Fundamentals certification exam as well as for future IT certification exams.</p>	<p>CompTIA exam sets the stage for students to take future CompTIA/industry exams.</p>
CGS1060	Computer and Internet Literacy	Course Description	<p>This course builds on previous computer experience covering a broad range of computing knowledge and</p>	<p>This course teaches important computer and digital technology concepts and skills necessary to</p>	<p>Focusing on cloud-based G-Suite – production software will enable students with any type of hardware to learn how to leverage</p>

			<p>skills that proves competency in the following areas: computer hardware and software fundamentals (including the use of Windows), key productivity applications (including network fundamentals, e-mails, and the effective use of the Internet as a communication tool and information resource). Collectively, these areas are known as IC3 digital literacy skills and are recognized globally with IC3 certification that can be obtained in this class. Students will develop computer skills to aid them with college studies and workforce readiness.</p>	<p>succeed in careers and in life. Course topics range from computer literacy basics, to today's current technologies, to the information systems on which today's businesses and organizations depend. This course is designed to provide relevant technology coverage for all degree programs.</p>	<p>production software.</p>
COP2805	Java Programming II	Course Description	<p>This is a second-semester course in Java programming, designed as a follow-on to COP2800. Topics include applets, interfaces, packages, properties, exception</p>	<p>This course is a second semester course in Java programming designed as a follow-up to COP2800. Topics include Graphical User Interface (GUI) programming using JavaFX,</p>	<p>To provide a description of the current topics related to Java Programming.</p>

			<p>handling, native methods, multimedia mechanisms, multithreading and networking capabilities, and continuation of Java's object-oriented features with emphasis on class implementation. Advanced graphical user interface design using Java's swing package with emphasis on event handling by use and development of Java beans, database and network applications.</p>	<p>Java generics and collections (lists, stacks, queues, maps, and sets), text and binary I/O, database programming, along with a continuation of object-oriented programming.</p>	
SBM2000	Introduction to Entrepreneurship	Pre-requisite and Course Description	<p>Pre-requisite: document exemption, appropriate placement scores, or completion of Dev. Ed. Reading, writing and mathematics</p> <p>Course Description: An overview of the role of entrepreneurial business with special emphasis on practical applications and activities related to solving problems in entrepreneurship. Nonbusiness</p>	<p>Pre-requisite: none</p> <p>Course Description: Introduction to the study of starting a new business from the viewpoint of the entrepreneur. You will be introduced to entrepreneurial concepts; developing entrepreneurial resources; understanding accounting concepts for small businesses and startups;</p>	<p>To provide students with the opportunity to enroll in the course upon entering the college because no pre-requisite knowledge is needed. The description is being changed to align with the revised program.</p>

			<p>majors evaluate the skills and commitment required for planning the marketing, financial and managerial activities of a small business. Topics include opportunity recognition and development, feasibility studies, customer service, and fundamentals of business plan development.</p>	<p>demonstrating money management skills; describing and conducting business records management; planning and developing marketing, promotional, and pricing strategies; analyzing business risk; and identifying and analyzing legal considerations. Emphasis is on the effective establishment of a new enterprise and the starting management of a small business.</p>	
CHM1030	General Chemistry for Allied Health	Course Number	CHM1030	CHM1032	<p>This proposed change reverts the course number to that of a one semester General Organic and Biochemistry course. TCC changed the course number and added CHM1031L to accommodate an AS program which no longer exists. CHM1031 and CHM1031L have been removed from the catalog. It is</p>

					appropriate to change the number to correspond to the lecture course number change.
CHM1030L	General Chemistry for Allied Health Lab	Course Number	CHM1030L	CHM1032L	This proposed change reverts the course number to that of a one semester General Organic and Biochemistry course. TCC changed the course number and added CHM1031L to accommodate an AS program which no longer exists. CHM1031 and CHM1031L have been removed from the catalog. It is appropriate to change the number change. The addition of a General Chemistry for Liberal Studies Laboratory to parallel the Liberal studies lecture will allow dropping of the CHM1020 references.