Delgado COMMUNITY COLLEGE

CURRICULUM COMMITTEE MEETING

Friday, February 1, 2019, 2:00 p.m.

City Park Campus, Student Life Center, Bayou St. John (Building 23, Second Floor)

AGENDA

I. **Call to Order**

II. **Roll Call**

III. **Call for Public Comments**

IV. **Minutes of meeting of October 26, 2018**

V. **Curriculum Operations Report – Tim Stamm**

VI. **New Business**

a) **Business & Technology/TECH**
New Course: TECH-119: Technology and Ethics (3-0-3 / 45). Creation of a new course, TECH-119: Technology and Ethics. Course description: "Ethical, policy and social aspects of information technology, the business within information technology, and the foundations of ethical decisions. Issues related to relationships in business, information acquisition, access and stewardship, software and intellectual property will be addressed. Areas of social concern will include decisions, liability, freedom, privacy and control. The ultimate goal of the course is to give students an ethical perspective on the multiple challenges created by business and the diffusion of computer technology in the modern home and workplace."

b) **Business & Technology/ELET**
Change of Course Description: ELET-101: Electrical Circuits I. Course Description: "Basic principles and components used in the electrical/electronics industry as well as an introduction to computer programming using BASIC. Introduction to the key concepts of the discipline. An overview of various electrical-electronics engineering technology specializations and job opportunities within the fields will be provided. Students will gain an appreciation for the required program curriculum and will be introduced to campus library resources and the Internet to write papers and give presentations." Current description: "Direct current fundamentals involving series, parallel, and combination circuits, as well as concepts of resistance, capacitance, and inductance. P-SPICE computer analysis,

Basic and C++ programming used; each section of course has mandatory laboratory assignment."

c) **Business & Technology/ELET**
Change of Course Requisite Requirements: ELET-101: Electrical Circuits I.
Change the prerequisites of ELET-101: Electrical Circuits I to state: "MATH-098 or higher." Current prerequisite: none. Delete Co-requisite. Current Co-requisite: ELET-103.

d) **Business & Technology/ELET**
Change of Course Description: ELET-160: Programming for Engineering Technology. Course Description: "Programming techniques and methods as they relate to electrical and computer hardware." Current description: "Programming techniques and methods as they relate to engineering and computer hardware topics."

e) **Business & Technology/ELET**
Change of Course Lecture, Credit, and/Contact Hours: ELET-160: Programming for Engineering Technology. Change the Lecture, Credit, and Contact hours of ELET-160: Programming for Engineering Technology *from* 2-3-3 / 75 *to* 3-3-4 / 90.

f) **Business & Technology/ELET**
Change of Course Prerequisite Requirements: ELET-160: Programming for Engineering Technology. Change the prerequisites of ELET-160: Programming for Engineering Technology to state: "MATH-130." Course currently has no prerequisite requirements.

g) **Business & Technology/ELET**
Change of Course Description: ELET-260: Instrumentation and Control Systems.
Course Description: Theory and operation of transducers for measurement of pressure, flow, level, and temperature. Students will analyze common electrical and mechanical devices used in automation. Covers automatic process controls including On-Off and Proportional/Integral/Derivative (PID), and Programmable Logic Controllers (PLCs) operation and programming. Current description: "Theory and operation of transducers for measurement of pressure, flow, liquid level, and temperature. Common mechanical and electrical devices analyzed. Covers automatic process controls, on-off proportion rate and reset, pneumatic and electrical systems."

h) **Business & Technology/ELET**
Change of Course Description: ELET-287: Programmable Logic Controllers (PLCs). Course Description: "Study of the hardware, software, and communications pathways of Programmable Logic Controllers (PLC). Analyze common industrial control schemes and implement them in a typical PLC control

system." Current description: "Applications and operation of PLC's including design of logic diagrams using ladder logic. Preventive maintenance and troubleshooting."

i) **Business & Technology/ELET**
New Course: ELET-288: Programming in C++ (3-3-4 / 90). Creation of a new course, ELET-288: Programming in C++. Course Description: "Fundamental procedural programming concepts as applied to the programming language C++. Programming principles and constructs, such as data types, common control flow structures, basic data structures, and console input/output will be presented."

j) **Business & Technology/ELET**
Change of Course Title: ELET-291: Microprocessors and Advanced Digital Systems. Change the title of ELET-291: Microprocessors and Advanced Digital Systems *from* ELET-291: Microprocessors and Advanced Digital Systems *to* ELET-291: Microprocessors and Advanced Digital Systems Capstone.

k) **Business & Technology/ELET**
Change of Course Description: ELET-291: Microprocessors and Advanced Digital Systems Capstone. Course Description: "Introduction to microprocessor architecture, addressing and programming techniques, interfacing of input/output memory devices, and microprocessor applications. Experiments in operations and programming of microcomputers, hardware analysis, timing, and design." Current description: "Introduction to microprocessor architecture, addressing and programming, input/output memory devices, and applications. Includes experiments in micro-computer programming, hardware analysis, timing, and design."

l) **Business & Technology/ELET**
Change of Course Description: ELET-271: Digital Circuits. Course Description: "Introduction to analysis, troubleshooting, and basic design of pulse and switching networks used in computers with emphasis on Integrated circuits, TTL, CMOS ICs, Op Amp, A/D and D/A converters, Arithmetic circuits, counters, and number systems." Current description: "Analysis and design of pulse and switching circuits used in digital computers."

m) **Business & Technology/ELET**
Change of Course Prerequisite Requirement: ELET-271: Digital Circuits. Change the prerequisites of ELET-271: Digital Circuits to state: "ELET-101: Electrical Circuits I." Currently, the course has no prerequisite requirements.

n) **Business & Technology/ELET**
Change of Degree Designation: Associate of Science in Electrical-Electronics Engineering Technology. Change the degree designation of the A.S. in Electrical-Electronics Engineering Technology *from* Associate of Science *to* Associate of Applied Science. Change of degree designation more accurately reflects the student learning outcomes and purpose of the program.

o) **Business & Technology/ELET**
Change of Program Title: Associate of Applied Science in Electrical-Electronics Engineering Technology *from* Electrical-Electronics Engineering Technology *to* Electrical-Electronics Applied Engineering Technology. Revised title reflects the applied nature of the degree designation change from A.S. (designed for transfer to baccalaureate degree as pre-Engineering) to A.A.S. (designed for immediate entry into the workforce).

p) **Business & Technology/ELET**
Program Revision: Creation of a concentration within in the A.A.S. in Electrical-Electronics Applied Engineering Technology. Concentration in Electrical Engineering. Student Learning Outcomes: Apply and explain the operation and/or programming of digital electronics and microprocessors; Write, test, troubleshoot, and operate programmable logic controllers and PLC programs; Apply circuit analysis and design, and programming to the building, testing, operation, and maintenance of electrical systems.

q) **Business & Technology/ELET**
Change of Course Description: ELET-102: Digital Circuits. Course Description: "Principles of alternating current (AC) electricity, including generation and characteristics; the effect of the electrical circuit properties of resistance inductance, and capacitance on AC; the analysis of series, and parallel circuits, series-parallel arrangements, and complex networks. Single phase and polyphase, nonsinusoidal waveforms, and transformers. Electronic Workbench –MULTISIM Circuit Analysis simulation tools will be utilized. Students will make at least two oral presentations on their laboratory experience." Current description: "Alternating current principles including single and poly-phase circuits, nonsinusoidal waveforms and transformers. Includes Fournier analysis and use of P-SPICE computer software."

r) **Business & Technology/ELET**
Change of Course Prerequisite Requirements: ELET-102: Digital Circuits. Change the prerequisite requirements of ELET-102: Digital Circuits to state: "ELET-101: Electrical Circuits I." Current prerequisites: "ELET-101 and ELET-103."

s) **Business & Technology/ELET**
Change of Course Description: ELET-155: Electronics I. Course Description: "Theory and operation of solid-state components, starting with the most basic form: the p-n junction. Laboratory experiments are performed to reinforce lectures. Practical design and analysis of electronic solid-state systems, small signal analysis of active signal amplification will be explained. Students are expected to make at least two oral/written presentations on their laboratory experience." Current description: "Fundamentals of electronic devices, circuit analysis of power supplies, amplifiers, and other basic circuits."

t) **Business & Technology/ELET**
Program Revision: Creation of a concentration within in the A.A.S. in Electrical-Electronics Applied Engineering Technology. Concentration in Electronics Engineering. Student Learning Outcomes: Analyze and solve technical problems related to electronics engineering by applying principles of advanced mathematics and science; Troubleshoot electronic circuits or systems, generate, and perform test procedures; Design, build, test, and troubleshoot electronic circuits, equipment, systems, and subsystems in accordance with job requirements, functional specifications, and relevant standards; Modify, maintain, repair, and recommend electronic equipment and systems in accordance with relevant operational guidelines.

u) **Business & Technology/ELET**
Program Revision: Creation of a concentration within in the A.A.S. in Electrical-Electronics Applied Engineering Technology. Concentration in Computer Engineering. Student Learning Outcomes: Use math, science, and basic computer engineering skills; Explain the design of computer architectures and integrated systems having major hardware and software components; Analyze a problem, and identify and define the computing requirements appropriate to its solution; Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.

v) **Business & Technology/ELET**
Change of Course Description: ELET-283: Electronic Communications. Course Description: "Overview of Electronics Communications theory and laboratory experience including transmitting and receiving techniques using Amplitude, Frequency and Phase Modulation. In this course the students will be provided a complete set of a discrete components to build a 'Super-Heterodyne AM Receiver.'" Current description: "Electronics communications theory and laboratory experience including transmitting and receiving techniques using amplitude, frequency, and phase modulation."

w) **Business & Technology/ELET**
Change of Course Description: ELET-285: Industrial Electronics. Course Description: "Overview of control of industrial machinery and processes through electronic circuits and systems. Includes devices and techniques to sense, measure, and control physical parameters with state-of-the-art industrial process control. Explains system design and troubleshooting." Current description: "Control of industrial machinery and processes through electronic circuits and systems. Includes devices and techniques to sense, measure, and control physical parameters with state-of-the-art industrial process control. Explains system design and troubleshooting."

x) **Business & Technology/ELET**
New Course: ELET-290: Integrated Circuits and Interfacing (3-3-4 / 90). Creation of a new course, ELET-290: Integrated Circuits and Interfacing. Course Description: "State-of-the-art mixed-signal interfaces such as transmitters and receivers front-ends in wireless and wireline communications transceivers. Introduction to background and foreground calibration techniques for digitally-assisted transceivers."

y) **Business & Technology/ELET**
New Course: ELET-292: Data Communications and Internetworking (3-3-4 / 90). Creation of a new course, ELET-292: Data Communications and Internetworking. Course Description: "State-of-the-art mixed-signal interfaces such as transmitters and receivers front-ends in wireless and wireline communications transceivers. Introduction to background and foreground calibration techniques for digitally-assisted transceivers."

z) **Business & Technology/ELET**
New Course: ELET-294: Networking and Internet Technologies (3-3-4 / 90). Creation of a new course, ELET-294: Networking and Internet Technologies. Course Description: "Overview of computer network and internet technologies from an engineering perspective. Emphasizes the distinction between various logical concepts and entities such as networks, the Internet at large, and the World Wide Web. Universal protocols and services such as SMTP, HTTP, DNS, and SNMP are explored. In addition, students will learn to deconstruct and identify components of common technologies. The context of these technologies within society and business is also introduced. Topics include the sematic web, the mobile web, and search engine technologies used for Internet information retrieval."

aa) **Business & Technology/ELET**
Program Revision: Creation of a concentration within in the A.A.S. in Electrical-Electronics Applied Engineering Technology. Concentration in Solar Engineering.
Student Learning Outcomes: Compute basic solar irradiance characteristics; Explain circuit properties of photovoltaic cells; Discuss the physical parameters of solar cell operation; Describe the properties of solar cells and modules and the basic design properties affecting their performance; Design a photovoltaic system to meet specific requirements; Describe thin-film and multijunction PV cells; Explain the role of solar concentrators.

bb) **Business & Technology/ELET**
New Course: ELET-295: Solar Fundamentals (3-4-4 / 105). Creation of a new course, ELET-295: Solar Fundamentals. Course description: "Design and applications of solar energy engineering. Fundamentals of solar energy conversion, photovoltaic and photothermal engineering, optical systems, photoelectrochemical cells for hydrogen generation, and energy storage and distribution systems. Covers solar energy insolation and global energy needs, current trends in solar plants, thin film solar cells, and solar cell material science."

cc) **Business & Technology/ELET**
New Course: ELET-296: Solar Photovoltaic Systems (3-4-4 / 105). Creation of a new course, ELET-296: Solar Photovoltaic Systems. Course description: "Design and installation of solar photovoltaic (PV) systems and their applications both off-grid and on-grid. Centralized solar power plants and distributed topologies will be considered."

dd) **Business & Technology/ELET**
New Course: ELET-297: Solar PV System Design and Installation (3-4-4 / 105)
Creation of a new course, ELET-297: Solar PV System Design and Installation. Course description: "Training in the design, installation and maintenance of grid connected residential photovoltaic systems. Topics covered include: Overview of PV Systems, Sunshine basics, how PV works, components of a PV system, setup, configuration, sizing, wiring and controls, relevant sections of NEC, zoning laws and building codes pertaining to PV systems, interconnection requirements, specific parameters of concern to utilities in grid connected systems, practical experiments and demonstrations of different aspects of PV, site visit with detailed explanation of maintenance and troubleshooting. Based on Job Task Analysis of NABCEP."

ee) **Business & Technology/ELET**
Change of Program Description: Associate of Applied Science in Electrical-Electronics Applied Engineering Technology.

ff) **Science & Mathematics/WWTC**
Instructional Area Termination: Technical Competency Area in Water Production Operator I. Terminate the T.C.A. in Water Production Operator I; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

gg) **Science & Mathematics/WWTC**
Instructional Area Termination: Technical Competency Area in Water Production Operator II. Terminate the T.C.A. in Water Production Operator II; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

hh) **Science & Mathematics/WWTC**
Instructional Area Termination: Technical Competency Area in Water Production Operator III. Terminate the T.C.A. in Water Production Operator III; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

ii) **Science & Mathematics/WWTC**
Instructional Area Termination: Technical Competency Area in Water Production Operator IV. Terminate the T.C.A. in Water Production Operator IV; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

jj) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Water Treatment Operator I. Terminate the T.C.A. in Water Treatment Operator I; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

kk) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Water Treatment Operator II. Terminate the T.C.A. in Water Treatment Operator II; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

ll) **Science & Mathematics/WWTC**

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mm) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Water Treatment Operator IV. Terminate the T.C.A. in Water Treatment Operator IV; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

nn) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Water Distribution Operator I. Terminate the T.C.A. in Water Distribution Operator I; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

oo) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Water Distribution Operator II. Terminate the T.C.A. in Water Distribution Operator II; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

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qq) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Water Distribution Operator IV. Terminate the T.C.A. in Water Distribution Operator IV; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

rr) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Wastewater Collection Operator I. Terminate the T.C.A. in Water Collection Operator I; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

ss) **Science & Mathematics/WWTC**

Instructional Area Termination: Technical Competency Area in Wastewater Collection Operator II. Terminate the T.C.A. in Water Collection Operator II; while successful completion of the course comprising the T.C.A. results in state, local, and/or national certification/licensure/registry, the total credit hours do not meet thresholds as defined for approved credentials. Note: Division has submitted proposals for new instructional program(s) to address the needs of Water/Wastewater Technology.

tt) **Science & Mathematics/WWTC**

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uu) **Science & Mathematics/WWTC**

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vv) **Science & Mathematics/WWTC**

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ww) **Science & Mathematics/WWTC**

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xx) **Science & Mathematics/WWTC**

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zz) **Science & Mathematics**

Change of Credential Designation/Program Revision: Technical Competency Area in Water Production Operator I-IV. Change the credential designation of the T.C.A. in Water Production Operator I-IV *from* T.C.A. in Water Production Operator I-IV *to* Career and Technical Certificate (C.T.C.) in Water Production Operator. Program Description: "The goal of the program is to aid in the development of a workforce pipeline for water production operators and to prepare new and existing water production operators for the Louisiana State Operator Certification Exam. Upon the completion of this certificate program, the student will be able to obtain employment as an entry-level water production operator or advance in current employment or new based on their current operator certification level in industry or government settings. At the local, regional, and state level there is an understaffed, aging, and retiring water operator workforce. This set of technical competencies has been developed based on the needs expressed by the New Orleans Sewerage and Water Board and several public and private entities that are concerned about the present and future of our water services." Note publication of curriculum outline and suggested program sequence in the College Catalog.

aaa) **Science & Mathematics**

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bbb) **Science & Mathematics**
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ccc) **Science & Mathematics**
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ddd) **Science & Mathematics**

Change of Credential Designation/Program Revision: Technical Competency Area in Wastewater Treatment Operator I-IV. Change the credential designation of the T.C.A. in Wastewater Treatment Operator I-IV *from* T.C.A. in Wastewater Treatment Operator I-IV *to* Career and Technical Certificate (C.T.C.) in Wastewater Treatment Operator. Program Description: "The goal of the program is to aid in the development of a workforce pipeline for wastewater treatment operators and to prepare new and existing wastewater treatment operators for the Louisiana State Operator Certification Exam. Upon the completion of this Certificate program, the student will be able to obtain employment as an entry-level wastewater treatment operator or advance in current employment or new based on their current operator certification level in industry or government settings. At the local, regional, and state level there is an understaffed, aging and retiring wastewater treatment operator workforce. This set of technical competencies has been developed based on the needs expressed by the New Orleans Sewerage and Water Board and several public and private entities that are concerned about the present and future of our water services." Note publication of curriculum outline and suggested program sequence in the College Catalog.

eee) **Business & Technology/MANG/Retail**

Final Approval of Curriculum: Certificate of Technical Studies in Retail Management. Final approval of the curriculum outline, to include suggested course sequence, program description, and Student Learning Outcomes. Program Description: "The purpose of the Retail Management Certificate program is to prepare individuals working in the retail industry, and related fields, for the industry training needs in supervision and management, marketing, financial management, and business planning. The curriculum encompasses several business essentials and emphasizes the skill sets needed for effective management and communication in the work environment. All courses in the Certificate program may be applied to the Associate of Applied Science Degree in Business & Management, with a concentration in Retail Management." Student Learning Outcomes: "Upon successful completion of the Retail Management Certificate program, the learner will be able to: Identify and describe basic theories, principles, practices, and terminology related to each functional area of business; Perform basic functions appropriate to each functional area of business; Communicate effectively using oral, written and non-verbal techniques, to include the use of technology, in the gathering and presentation of information."

fff) **Business & Technology/BUMG**

Change of Program Description: Addition of Cross-reference to C.T.S. in Retail Management.

VII. Consent Agenda

a) **Business & Technology/ELET**
Master Syllabus Revision/Update: ELET-274: Electrical Machinery and Controls.

b) **Business & Technology/MARK**
Master Syllabus Revision: MARK-213: Retailing. Update the format and student learning outcomes.

c) **Business & Technology/BUAD**
Program Revision: Associate of Applied Science in Business & Management.
Revision of the A.A.S. in Business & Management, with a concentration in Entrepreneurship/Small Business Management. ADD: BUSG-102: Customer Service to the list of approved electives. Total concentration hours and Total program hours remain the same.

d) **Business & Technology/MANG**
Master Syllabus Revision: MANG-220: Introduction to Operations Management. Update the content and learning outcomes to better map to IBC and new C.T.S. in Certified Logistics Technology.

e) **Business & Technology/MANG**
Master Syllabus Revision: MANG-230: Warehouse and Inventory Management. Update the content and learning outcomes to better map to IBC and new C.T.S. in Certified Logistics Technology.

f) **Business & Technology/MANG**
Master Syllabus Revision: MANG-206: Introduction to Logistics. Update the content and learning outcomes to better map to IBC and new C.T.S. in Certified Logistics Technology.

VIII. Old Business

IX. Next Meeting February 22, 2019

X. Adjournment