



NORTH CAROLINA COMMUNITY COLLEGE SYSTEM

R. Scott Ralls, Ph.D.

President

July 20, 2015

MEMORANDUM

TO: Presidents
Chief Academic Officers

FROM: Wesley E. Beddard, Associate Vice President
Programs

SUBJECT: State Board Action on July 17, 2015
Revised Curriculum Standards

On July 17, 2015, the State Board of Community Colleges approved the requested revision to the following curriculum standard:

Aviation Management and Career Pilot Technology (A60180)

Please be aware that you must implement the revised standard no later than one year after the effective term. You must update your college's electronic program of study and receive approval from the System Office prior to implementation of the revised programs.

An outline of the specific curriculum standard revisions and the revised curriculum standard are attached for your convenience. You may view all curriculum standards and courses by visiting the Academic Programs website at:

<http://www.nccommunitycolleges.edu/academic-programs>

If you have any questions concerning the State Board action items, please contact Jennifer Frazelle at 919.807.7120 or frazellej@nccommunitycolleges.edu.

WB/JF/gr

Attachments

c: Dr. Lisa M. Chapman
Ms. Jennifer Frazelle
Ms. Elizabeth Self
Program Coordinators

CC15-020
Email

**Outline of Curriculum Standard Revisions
State Board of Community Colleges – July 17, 2015**

Aviation Management and Career Pilot Technology (A60180):

In the Aviation Management and Career Pilot Technology curriculum standard core:

- Created the following three new subject areas:
 - Aviation Management
 - Pilot (Manned)
 - Pilot (Unmanned Aircraft Systems)

- Added newly approved UAS (*Unmanned Aircraft Systems*) courses to the Pilot (*Unmanned Aircraft Systems*) Subject Area. *Tier IA funding has been approved for the new UAS prefix.*

- Added BUS (business) course option to the *Aviation Management* Subject Area

- Removed *AER 113 History of Aviation* from *Required Courses*

Please note, the revision results in an increase in required Technical Core hours for the AAS from 22-23 SHC.

- Revised the curriculum description to include references to Unmanned Aircraft Systems.

- Utilized the Career Cluster curriculum standard model.

**UAS 110 Intro to UAS Operations, UAS 150 UAS Flight Simulation, UAS 152 Remote UAS Sensing and Control, and UAS 230 UAS Aerial Photo Surveys are new courses approved by the Curriculum Review Committee at their May 27, 2015 meeting.*

Curriculum Standard for Transportation Operations:

Career Cluster: Transportation, Distribution, and Logistics

Cluster Description: The planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Pathway: Transportation Operations

Effective Term: Fall 2015(2015*03)

Program Majors Under Pathway

Program Major / Classification of Instruction Programs (CIP) Code	Credentia Level(s) Offered	Program Major Code
Aviation Management & Career Pilot Technology CIP Code: 49.0102	AAS/Diploma/Certificate	A60180

Pathway Description: The Aviation Management and Career Pilot Technology curriculum prepares individuals for a variety of aviation and aviation-related careers including the commercial airlines, general aviation, the aerospace industry, the military, unmanned aircraft systems industries, and state and federal aviation organizations.

Course work includes fundamentals of flight, aerodynamics, aircraft performance, meteorology, navigation, federal regulations, aviation management, unmanned aircraft systems, and instrument and commercial ground training, flight and simulator training, and entrepreneurship or business management training.

Graduates may earn a commercial pilot certificate with an instrument rating, specialize in aviation management or in unmanned air systems, and may find employment as commercial, corporate, and military pilots, fixed base operators and airport managers, as pilots or technicians in the unmanned aircraft systems industry, or as flight instructors, and flight dispatchers.

Program Description: Choose one of the following 4th paragraphs to use in conjunction with the first three paragraphs of the pathway description above for documentation used to identify each Program Major:

N/A

I. General Education Academic Core

[Curriculum Requirements for associate degree, diploma, and certificate programs in accordance with 1D SBCCC 400.97(3)]: Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.

Aviation Management & Career Pilot Technology

General Education Academic Core	AAS	Diploma	Certificate
Minimum General Education Hours Required:	15 SHC	6 SHC	0 SHC

Courses listed below are recommended general education courses for this curriculum standard. Colleges may choose to include additional or alternative general education courses to meet local curriculum needs.

**Recommended certificate and diploma level curriculum courses. These courses may not be included in associate degree programs.*

Communications:			6 SHC	3-6 SHC	Optional
*COM 101	Workplace Communication	3 SHC			
COM 110	Introduction to Communication	3 SHC			
COM 120	Intro Interpersonal Com	3 SHC			
COM 231	Public Speaking	3 SHC			
*ENG 101	Applied Communications I	3 SHC			
*ENG 102	Applied Communications II	3 SHC			
ENG 110	Freshman Composition	3 SHC			
ENG 111	Writing and Inquiry	3 SHC			
ENG 114	Professional Research & Reporting	3 SHC			
ENG 116	Technical Report Writing	3 SHC			
Humanities/Fine Arts:			3 SHC	0-3 SHC	Optional
*HUM 101	Values in the Workplace	2 SHC			
HUM 110	Technology and Society	3 SHC			
HUM 115	Critical Thinking	3 SHC			
HUM 230	Leadership Development	3 SHC			
PHI 230	Introduction to Logic	3 SHC			
PHI 240	Introduction to Ethics	3 SHC			
Social/Behavioral Sciences:			3 SHC	0-3 SHC	Optional
ECO 151	Survey of Economics	3 SHC			
ECO 251	Prin of Microeconomics	3 SHC			
GEO 110	Introduction to Geography	3 SHC			
GEO 111	World Regional Geography	3 SHC			
GEO 131	Physical Geography I	4 SHC			
*PSY 101	Applied Psychology	3 SHC			
*PSY 102	Human Relations	2 SHC			
PSY 118	Interpersonal Psychology	3 SHC			
PSY 135	Group Processes	3 SHC			
PSY 150	General Psychology	3 SHC			
*SOC 105	Social Relationships	3 SHC			
SOC 210	Introduction to Sociology	3 SHC			
SOC 215	Group Process	3 SHC			
Natural Sciences/Mathematics:			3 SHC	0-3 SHC	Optional
MAT 110	Mathematical Measurements	3 SHC			
MAT 121	Algebra/Trigonometry I	3 SHC			
MAT 143	Quantitative Literacy	3 SHC			
MAT 152	Statistical Methods I	3 SHC			
MAT 171	Precalculus Algebra	3 SHC			
MAT 223	Applied Calculus	3 SHC			
MAT 271	Calculus I	4 SHC			

II. Major Hours. AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work-based learning may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. Below is a description of each section under Major Hours.

- A. Technical Core.** The technical core is comprised of specific courses which are required for all Program Majors under this Curriculum Standard. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the curriculum core courses or core subject area of the AAS program.
- B. Program Major(s).** The Program Major must include a minimum of 12 semester hours credit from required subjects and/or courses. The Program Major is in addition to the technical core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core.

Aviation Management & Career Pilot Technology	AAS	Diploma	Certificate
Minimum Major Hours Required:	49 SHC	30 SHC	12 SHC
<p>A. Technical Core:</p> <p>AER 110 Air Navigation 3 SHC AER 111 Aviation Meteorology 3 SHC AER 112 Aviation Laws and FARs 2 SHC AER 150 Private Flight Theory 3 SHC</p> <p>Required Subject Areas: Select one. <i>For AAS Degree select one program track:</i></p> <p>Aviation Management: AER 114 Aviation Management 3 SHC <i>And</i> Select 9 SHC from the following prefixes: AER and/or BUS</p> <p>Pilot (Manned): AER 151 Flight-Private Pilot 1 SHC AER 160 Instrument Flight Theory 3 SHC AER 161 Flight-Instrument Pilot 2 SHC AER 170 Commercial Flight Theory 3 SHC AER 171 Flight-Commercial Pilot 3 SHC</p> <p>Pilot (Unmanned Aircraft Systems): UAS 110 Intro to UAS Operations 3 SHC UAS 150 UAS Flight Simulation 3 SHC UAS 152 Remote UAS Sensing and Control 3 SHC UAS 230 UAS Aerial Photo Surveys 3 SHC</p>	23 SHC	12 SHC	
<p>C. Other Major Hours. To be selected from the following prefixes: ACC, AER, BUS, CIS, CSC, CTS, DBA, ECM, ECO, INT, LOG, MKT, NOS, OST, PHY, UAS, and WBL</p> <p><i>Up to three semester hour credits may be selected from the following prefixes: ARA, ASL, CHI, FRE, GER, ITA, JPN, LAT, POR, RUS and SPA.</i></p>			
<p>III. Other Required Hours <i>A college may include courses to meet graduation or local employer requirements in a certificate (0-1 SHC), diploma (0-4 SHC), or an associate in applied science (0-7 SHC) program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.</i></p>			
<p>IV. Employability Competencies</p> <p>Fundamental competencies that address soft skills vital to employability, personal, and professional success are listed below. Colleges are encouraged to integrate these competencies into the curriculum by embedding appropriate student learning outcomes into one or more courses or through alternative methods.</p> <p>A. Interpersonal Skills and Teamwork – The ability to work effectively with others, especially to analyze situations, establish priorities, and apply resources for solving problems or accomplishing tasks.</p> <p>B. Communication – The ability to effectively exchange ideas and information with others through oral, written, or visual means.</p> <p>C. Integrity and Professionalism – Workplace behaviors that relate to ethical standards, honesty, fairness, respect, responsibility, self-control, criticism and demeanor.</p>			

- D. Problem-solving** – The ability to identify problems and potential causes while developing and implementing practical action plans for solutions.
- E. Initiative and Dependability** – Workplace behaviors that relate to seeking out new responsibilities, establishing and meeting goals, completing tasks, following directions, complying with rules, and consistent reliability.
- F. Information processing** – The ability to acquire, evaluate, organize, manage, and interpret information.
- G. Adaptability and Lifelong Learning** – The ability to learn and apply new knowledge and skills and adapt to changing technologies, methods, processes, work environments, organizational structures and management practices.
- H. Entrepreneurship** – The knowledge and skills necessary to create opportunities and develop as an employee or self-employed business owner.

An **Employability Skills Resource Toolkit has been developed by NC-NET for the competencies listed above. Additional information is located at: <http://www.nc-net.info/employability.php>*

***The **North Carolina Career Clusters Guide** was developed by the North Carolina Department of Public Instruction and the North Carolina Community College system to link the academic and Career and Technical Education programs at the secondary and postsecondary levels to increase student achievement. Additional information about Career Clusters is located at: http://www.nc-net.info/NC_career_clusters_guide.php or <http://www.careertech.org>.*

Summary of Required Semester Hour Credits (SHC) for each credential:

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit (SHC)	64-76	36-48	12-18