NC COMMUNITY **COLLEGES**
CREATING SUCCESS

CURRICULUM PROCEDURES REFERENCE MANUAL

Section 22

Special Curriculum Program Application

for

Health Science: Therapeutic and Diagnostic Services

Emergency Medical Science (D45910)
Medical Assisting (D45920)
Nursing Aide (D45970)

Pharmacy Technology (D45940)
Phlebotomy (D45950)
Therapeutic Massage (D45960)

Approved by the State Board of Community Colleges on October 18, 2013

Health Science: Therapeutic and Diagnostic Services

On October 18, 2013, the State Board of Community Colleges approved a new standard, with six program majors, designed to prepare students for careers in Health Science:

Health Science: Therapeutic and Diagnostic Services

Emergency Medical Science (D45910)   Pharmacy Technology (D45940)

Medical Assisting (D45920)   Phlebotomy (D45950)

Nursing Aide (D45970)*   Therapeutic Massage (D45960)

Previously Nursing Assistant (D45930)

Colleges were often coding pre-health students as General Occupational Technology (GOT)(A55280), Associate in General Education (AGE)(A10300), or using a health science curriculum standard code with an additional, local suffix. After receiving numerous inquiries about coding for pre-health science students, a committee of health science directors was called upon to assist with the development of a solution.

Presidents, administrators and all health science deans were then invited to dialogue and provide suggestions for the new curriculums standard which has numerous advantages to previous coding, including:

- Program majors, which are designed to be terminal degrees, allowing graduates to qualify for entry-level jobs related to the selected program major
- Program majors which qualify for Perkins funding
- Additional Career and College Promise pathway options for high school students
- A guidance tool which assists students in the selection of specific course versus broad course selections which may not lead to employment.
- A guidance tool which assists students in the selection of courses that provide a foundation for success in nursing and the allied health programs.
- Program coding which provides a means for accurate data collection for students enrolled in pre-health science programs.

In order to utilize one of the program majors, the college must have approval to offer the primary curriculum program. Example: A college must have approval for Medical Assisting (A45400) in order to file a program of study for Medical Assisting (D45920). The process for receiving approval for any of the six program majors is very simple:

1. Complete and submit the attached form to indicate which program majors your college would like to offer.
2. Once you receive an approval letter, file an electronic program of study (POS) in Colleague.

Please allow up to three weeks for processing.

Health Science: Therapeutic and Diagnostic Services Request Form

In order to utilize one of the following program majors, **the college must have approval to offer the primary curriculum program.** *Example: A college must have approval for Medical Assisting (A45400) in order to file a program of study for Medical Assisting (D45920).*

Please indicate (by checking) the program majors that your college would like to offer:

Emergency Medical Science (D45910) ☐

Medical Assisting (D45920) ☐

Nurse Aide (D45970) ☐

Pharmacy Technology (D45940) ☐

Phlebotomy (D45950) ☐

Therapeutic Massage (D45960) ☐

A college may offer a certificate or diploma under the above program majors once approved at the diploma level.

Our college currently has approval for the primary curriculum program(s) and would like to receive approval to offer the related program major(s) that we have indicated above.

Note: Local Board certification is <u>not</u> required for this program.

_____
College

_____   _____
Signature of President   Date

Please fax, mail or email scanned form with signature to: Dr. Lori H. Byrd, Associate Director
Academic Programs
5016 Mail Service Center
Raleigh, NC 27699-5016
Fax: 919-807-7173
byrdl@nccommunitycolleges.edu

Curriculum Standard for Health Science: Therapeutic and Diagnostic Services

Career Cluster: Health Science **

Cluster Description: Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.

Pathway: Therapeutic and Diagnostic Services		**Effective Term** Spring 2015	
Program Majors Under Pathway			
Program Major / Classification of Instruction Programs (CIP) Code		**Credential Level(s) Offered**	**Program Major Code**
Emergency Medical Science	CIP Code 51.0904	Diploma/Certificate	D45910
Medical Assisting	CIP Code 51.0801	Diploma/Certificate	D45920
Nurse Aide	CIP Code 51.3902	Diploma/Certificate	D45970
Pharmacy Technology	CIP Code 51.0805	Diploma/Certificate	D45940
Phlebotomy	CIP Code 51.1009	Diploma/Certificate	D45950
Therapeutic Massage	CIP Code 51.3501	Diploma/Certificate	D45960

Pathway Description:

This curriculum is designed to prepare students for careers in the Health Sciences.

Students will complete general education courses that provide a foundation for success in nursing and allied health curricula. Students may select a career pathway that will prepare them for an entry level position in health care. Courses may also provide foundational knowledge needed in the pursuit of advanced health science degrees or programs.

Graduates should qualify for an entry-level job associated with the program major such as Emergency Medical Technician (EMT) or Advanced Emergency Medical Technician (AEMT), Medical Assistant, Nurse Aide, Pharmacy Technician, Phlebotomist, or Massage Therapist dependent upon the selected program major.

*Program Major 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:***

In order to utilize one of the program majors below, the college must have approval to offer the primary curriculum program and file an electronic program of study (POS). (Example: A college must have approval for Medical Assisting (A45400) in order to file a POS for Medical Assisting (D45920)).

Emergency Medical Science: A program that prepares graduates to enter the workforce as Emergency Medical Technicians or Advanced Emergency Medical Technicians. The course of study provides the student an opportunity to acquire basic life support knowledge and skills by utilizing classroom instruction, practical laboratory sessions, and hospital/field internships. Students progressing through the program may be eligible to apply for both state and national certification exams. Employment opportunities include ambulance services, fire and rescue agencies, air medical services, specialty areas of hospitals, industry, educational institutions, and government agencies.

Medical Assisting: A program that prepares multi-skilled health care professionals qualified to perform administrative, clinical, and laboratory procedures. Course work includes instruction in scheduling appointments, medical records, introductory insurance procedures, computer operations; assisting with examinations/treatments, performing routine laboratory procedures, electrocardiography, and supervised medication administration. Graduates of CAAHEP-accredited medical assisting programs may be eligible to

sit for the American Association of Medical Assistants' Certification Examination to become Certified Medical Assistants. Employment opportunities include physicians' offices, health maintenance organizations, health departments, and hospitals.

Nurse Aide: The Nurse Aide curriculum prepares individuals to work under the supervision of licensed nursing professionals in performing nursing care and services for persons of all ages. Topics include growth and development, personal care, vital signs, communication, nutrition, medical asepsis, therapeutic activities, accident and fire safety, household environment and equipment management, family resources and services, and employment skills. Upon completion, the student may be eligible for listing as a Nurse Aide I and other selected Nurse Aide registries as determined by the local program of study.

Pharmacy Technology: A program that prepares individuals to assist the pharmacist in duties that a technician can legally perform and to function within the boundaries prescribed by the pharmacist and the employment agency. Course work includes preparing prescription medications, mixing intravenous solutions and other specialized medications, maintaining inventories, and packaging medications in unit-dose or med-card form. Employment opportunities include retail, hospitals, nursing homes, research laboratories, wholesale drug companies, and pharmaceutical manufacturing facilities. Graduates from the program may be eligible to take the National Certification Examination to become a certified pharmacy technician.

Phlebotomy: A program that prepares individuals to obtain blood and other specimens for the purpose of laboratory analysis. Course work includes proper specimen collection and handling, communication skills, and maintaining patient data. Graduates may qualify for employment in hospitals, clinics, physicians' offices, and other health care settings and may be eligible for national certification as phlebotomy technicians.

Therapeutic Massage: A program that prepares graduates to work in direct client care settings to provide manipulation, methodical pressure, friction and kneading of the body for maintaining wellness or treating alterations in wellness throughout the lifespan. Courses work includes content in normal human anatomy and physiology, therapeutic massage, and ethical/legal issues. Employment opportunities include hospitals/rehabilitation centers, health departments, home health, medical offices, nursing homes, spas/health/sports clubs, and private practice. Graduates may be eligible to take the Massage and Bodywork Licensing Exam or the National Certification for Therapeutic Massage and Bodywork.

I. General Education Academic Core

[*Curriculum Requirements for associate degree, diploma, and certificate programs in accordance with 1D SBCCC 400.10*]: *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.*

Health Science: Therapeutic and Diagnostic Services

Recommended General Education Academic Core	AAS	Diploma	Certificate
Minimum General Education Hours Required:		**6 SHC**	

	AAS	Diploma	Certificate
*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.*			
Communication:			
ENG 111 Expository Writing 3 SHC			
ENG 112 Argument-Based Research 3 SHC		**3-6+ SHC**	
COM 120 Intro Interpersonal Com 3 SHC			
COM 231 Public Speaking 3 SHC			
Humanities/Fine Arts:			
HUM 115 Critical Thinking 3 SHC			
PHI 230 Introduction to Logic 3 SHC		**0-3+ SHC**	
PHI 240 Introduction to Ethics 3 SHC			
Social /Behavioral Sciences:			
*PSY 150 General Psychology 3 SHC			
PSY 241 Developmental Psy 3 SHC		**0-3+ SHC**	
Natural Sciences/Mathematics:			
BIO 165 Anatomy & Physiology I 4 SHC			
BIO 166 Anatomy & Physiology II 4 SHC			
BIO 168 Anatomy & Physiology I 4 SHC			
BIO 169 Anatomy & Physiology II 4 SHC			
BIO 163 Basic Anatomy & Physiology 5 SHC		**0-3+ SHC**	
BIO 175 General Microbiology 3 SHC			
BIO 275 Microbiology 4 SHC			
CHM 131 Introduction to Chemistry 3 SHC			
CHM 131A Introduction to Chemistry Lab 1 SHC			
MAT 110 Mathematical Measurement & Literacy 3 SHC			
MAT 143 Quantitative Literacy (proposed new course) 3 SHC			
PHY 110 Conceptual Physics 3 SHC			
PHY 110A Conceptual Physics Lab 1 SHC			
*Please note PSY 150 General Psychology is a required core course for the Phlebotomy Pathway.			

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 each prefix listed, with the exception of prefixes listed in the core.

Health Science: Therapeutic and Diagnostic Services	AAS	Diploma	Certificate
Minimum Major Hours Required:		**30 SHC**	
A. Technical Core: (3-8 SHC)			
MED 120 Survey of Medical Terminology 2 SHC or			
MED 121 Medical Terminology I 3 SHC &			
MED 122 Medical Terminology II 3 SHC			
MED 180 CPR Certification 1 SHC or			
HSC 120 CPR 1 SHC or			
HEA 112 First Aid & CPR 2 SHC or			
HSC 110 Orientation to Health Careers 1 SHC or			
HSC 140 Transcultural Healthcare 2 SHC			
B. Program Major(s): (12-22 SHC) *(Select one Program Major)*			
Emergency Medical Science (16 SHC)			
EMS 110 EMT 8 SHC			
EMS 120 Advanced EMT 6 SHC			
EMS 121 AEMT Clinical Practicum 2 SHC			
Medical Assisting (22 SHC)			
MED 110 Orientation to Medical Assisting 1 SHC			
MED 118 Medical Law and Ethics 2 SHC			
MED 130 Administrative Office Procedures I 2 SHC			
MED 131 Administrative Office Procedures II 2 SHC			
MED 140 Exam Room Procedures I 5 SHC			
MED 150 Lab Procedures I 5 SHC			
MED 260 Medical Clinical Practicum 5 SHC			
Nurse Aide (12-18 SHC)			
Required Courses:			
NAS 101 Nurse Aide I 6 SHC			
Required Subject Areas:			
Select a minimum of 6 SHC:			
NAS 102 Nurse Aide II 6 SHC			
NAS 103 Home Health Care Nurse Aide 6 SHC			
NAS 106 Geriatric Aide 6 SHC			
NAS 107 Medication Aide 1 SHC			
Pharmacy Technology (19 SHC)			
PHM 110 Introduction to Pharmacy 3 SHC			
PHM 111 Pharmacy Practice I 4 SHC			
PHM 115 Pharmacy Calculations 3 SHC			

PHM 118 Sterile Procedures	4 SHC		
PHM 120 Pharmacology I	3 SHC		
PHM 140 Trends in Pharmacy	2 SHC		
Phlebotomy (12 SHC)			
PBT 100 Phlebotomy Technology	6 SHC		
PBT 101 Phlebotomy Practicum	3 SHC		
PSY 150 General Psychology	3 SHC		
Therapeutic Massage (22 SHC)			
MTH 110 Fundamentals of Massage	10 SHC		
MTH 120 Ther Massage Applications	10 SHC		
MTH 125 Ethics of Massage	2 SHC		

C. Other Major Hours.

T*o be selected from the following prefixes:* BIO, CHM, CIS, EMS, HEA, HSC, MAT, MED, MTH, NAS, NUT, PBT, PHM, PHY, PSY, SOC, and WBL.

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.

III. Other Required Hours

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.

IV. Employability Competencies

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.

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.

B. Communication – The ability to effectively exchange ideas and information with others through oral, written, or visual means.

C. Integrity and Professionalism – Workplace behaviors that relate to ethical standards, honesty, fairness, respect, responsibility, self-control, criticism and demeanor.

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**