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NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
Peter Hans, President

March 4, 2020

MEMORANDUM

TO: Presidents
Chief Academic Officers

FROM: Wesley E. Beddard, Associate Vice President
Programs

SUBJECT: State Board Action on February 21, 2020
New Curriculum Standard

On February 21, 2020, the State Board of Community Colleges approved curriculum courses and a curriculum standard for the following new curriculum program:

Orthopaedic Technology (A45790)

A Tier I funding classification for the new Orthopaedic Technology (OTC) curriculum prefix has been approved.

If you have any questions concerning the State Board action item, please contact Dr. Lisa Eads at 919.807.7133 or eadsl@nccommunitycolleges.edu. An outline of the new courses, new curriculum standard is attached for your convenience. You may view all curriculum standards and courses by visiting the Programs website at:

http://www.nccommunitycolleges.edu/academic-programs/curriculum-standards

WB/LE/gr
Attachments
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CURRICULUM STANDARD

Effective Term
Fall 2020
*[2020*03]*

Curriculum Program Title	**Orthopaedic Technology**	Program Code	**A45790**
Concentration	**(not applicable)**	CIP Code	***51.0923***

Curriculum Description

The Orthopaedic Technology program prepares individuals for employment in clinical and surgical settings assisting the orthopaedic team. Students completing the curriculum will be eligible to sit for the Orthopedic Technology certification examination. This program also provides necessary background for the supplemental certification.

Students will become proficient in plaster and synthetic casting techniques and applications, removing casts properly applying traction, detect deficiencies in the procedure and supplies, make indicated adjustments for casts, and assist the orthopaedic surgeon in the OR.

Employment opportunities are available in a variety of clinical settings including orthopaedic clinics, hospitals, independent surgical centers, and ambulatory care settings.

*Curriculum Requirements**

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

I. **General Education.** 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.

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. *(See second page for additional information.)*

III. **Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science 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.

	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**

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

A. Core. The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. 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 subject/course core of the AAS program.

B. Concentration *(if applicable).* A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course 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 or concentration. 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.

Orthopaedic Technology A45790

	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. CORE *A diploma offered under this AAS degree requires a minimum of 12 SHC extracted from the core courses of the AAS degree designated with ** **Required Courses:** OTC 110 Intro to Orthopaedic Technology 3 SHC OTC 112 General Patient Care 3 SHC OTC 115 Ortho Anatomy and Physiology 3 SHC OTC 120 Basic Radiologic Concepts 3 SHC OTC 210 Ortho Equipment 3 SHC OTC 215 Casting and Splinting I 3 SHC OTC 212 Physical Assessment 3 SHC OTC 220 Custom Bracing 3 SHC OTC 225 Casting and Splinting II 3 SHC OTC 280 Professional Practice 3 SHC **Clinical Education:** OTC 150 Clinical Practice I 5 SHC OTC 250 Clinical Practice II 5 SHC OTC 260 Clinical Practice III 8 SHC	**48 SHC**	**30 SHC**	**12 SHC**
B. CONCENTRATION *(Not applicable)*			
C. OTHER MAJOR HOURS *To be selected from the following prefixes:* BIO, BUS, CHM, HIT, HSC, MED, OST, PHM, PSY, and WBL *Up to two semester hour credits may be selected from ACA.* *Up to three semester hour credits may be selected from the following prefixes: ARA, ASL, CHI, FRE, GER, IRI ITA, JPN, LAT, POR, RUS and SPA.*			

Proposed Orthopaedic Technology (OTC) Courses

Effective Term – Fall 2020 [2020*03]

Core Courses

OTC 110 Intro to Orthopaedic Technology

Class 3 Lab 0 Clinical 0 Work 0 Credit 3

This course introduces the different roles in the Orthopaedic Care Team, specifically the scope of practice and specific duties of the Orthopaedic Technologist. Topics include role of the Orthopaedic Technologist, scope of practice, standards of patient care, introduction to basic equipment and monitors, and types of splinting and casting. Upon completion, the student should be able to describe the roles and functions of the members of the orthopaedic care team, and have a basic knowledge of orthopaedics and its associated equipment.

OTC 112 General Patient Care

Class 2 Lab 2 Clinical 0 Work 0 Credit 3

This course introduces patient care in an orthopaedic environment. Topics include communication skills, orthopaedic terminology and abbreviations, medication fundamentals critical to orthopaedics, OSHA standards, patient safety, patient transfers, and patient education. Upon completion, students should be able to describe the fundamentals of orthopedic patient care, as well as perform basic procedures such as obtaining vital signs and wound care.

OTC 115 Ortho Anatomy and Physiology

Class 3 Lab 0 Clinical 0 Work 0 Credit 3

This course introduces the anatomy and physiology of the musculoskeletal system and related structures Topics include structural make-up, group composition, relationships, and location of each bone. Upon completion, students should be able to describe musculoskeletal anatomy and the basic physiology and pathology of injury and disease.

OTC 120 Basic Radiologic Concepts

Class 2 Lab 2 Clinical 0 Work 0 Credit 3
This course introduces viewing and interpreting radiographic images, including viewing images,

terminology, and discussing fractures with colleagues. Topics include viewing and interpretation of plain orthopaedic radiographs, MRI's, and other types of permanent imaging relating to orthopaedics, terminology relating directly to the skeletal system and fracture healing, and describing a fracture as it relates to the radiographic image. Upon completion, students should be able to interpret orthopaedic radiographic images.

OTC 210 Ortho Equipment

Class 2 Lab 3 Clinical 0 Work 0 Credit 3

This course provides the basic principles of orthopedic equipment, including complications and contraindications. Topics include halo for skull fixation, external fixator devices, specialty surgical implants, different types of traction, traction set-up and application, operating room equipment, wound VAC devices, bone stimulators, fluoroscopy machines, and ultrasound imaging. Upon completion, students should be able to recognize and demonstrate basic principles of use for orthopedic equipment.

OTC 212 Physical Assessment

Class 2 Lab 2 Clinical 0 Work 0 Credit 3

This course introduces a comprehensive overview of knowledge, terminology, and application used for orthopaedic patient physical assessment. Topics include life span differences, assessment of acute and chronic patient orthopaedic problems, the application and use of various orthopaedic devices, and how to do custom measurements. Upon completion, students should be able to assess a patient’s orthopaedic condition and identify the best orthopaedic device, considering the potential complications and contraindications.

OTC 215 Casting and Splinting I

Class 2 Lab 3 Clinical 0 Work 0 Credit 3

This course is designed to introduce the basics of cast material selection, casting techniques, cast removal, and properly fitting patients for external aid devices. Emphasis is placed on anatomy specific to orthopaedic issues, types and functions of different types of casts, proper material selection, basic casting application skills, safe cast removal, use of external aide devices, and providing patient instructions for at-home care. Upon completion, students should be able to identify the best type of cast for different orthopedic issues, describe the anatomy specifically related to casting and splinting, apply a basic cast, provide patients with proper at-home care instructions, and be able to safely remove a cast.

OTC 220 Custom Bracing

Class 2 Lab 3 Clinical 0 Work 0 Credit 3

This course is designed to prepare individuals to properly apply a customized brace to a patient based on a specific medical diagnosis. Emphasis is placed on custom brace fitting techniques and measurements, matching the correct brace to the medical diagnosis, how to avoid brace complications, identification of contraindications, and medical coding and reimbursement related to bracing. Upon completion, students should be able to apply a customized brace to a patient based on the medical diagnosis, and instruct patient on at-home brace care.

OTC 225 Casting and Splinting II

Class 2 Lab 3 Clinical 0 Work 0 Credit 3

This course is designed to build upon basic casting techniques and knowledge. Topics include advanced casting techniques such as windowing of a cast, protecting pins and external hardware, pin care, and wound care. Upon completion, students should be able to independently window a cast, apply a cast while protecting pins and external hardware, instruct patient on proper pin care, and provide wound care to a casted area.

OTC 280 Professional Practice

Class 3 Lab 0 Clinical 0 Work 0 Credit 3

This course covers practical considerations of entering the workforce as an orthopedic technologist, including job search skills, and review and preparation to sit for the national licensure exam in orthopaedic technology. Emphasis should be placed on resume building, interview skills, as well as locating suitable practice locations for a student's interests and career. Upon completion, students are eligible to apply for the licensure exam and obtain employment as an orthopaedic technologist.

Core Clinical Education

OTC 150 Clinical Practice I

Class 0 Lab 0 Clinical 15 Work 0 Credit 5

This course provides a concentrated clinical experience in an orthopaedic office or hospital setting. Emphasis is placed on the graduated responsibility of the trainee, with progression

towards independent performance of tasks. Upon completion, students should be able to incorporate their new orthopaedic technologist skills into a clinical practice scenario.

OTC 250 Clinical Practice II

Class 0 Lab 0 Clinical 15 Work 0 Credit 5

This course is designed to provide a concentrated clinical experience in an orthopaedic healthcare setting. Students will apply advanced orthopaedic technology knowledge and skills on real-world patients. Emphasis is placed on transferring the skills from the classroom and laboratory settings and applying them to real orthopaedic patients while gaining autonomy in knowledge and skills and under the direct supervision of an orthopaedic clinical supervisors and orthopaedic provider. Upon completion, students should be able to perform intermediate level orthopaedic technologist duties while under the supervision on the orthopaedic clinical supervisor.

OTC 260 Clinical Practice III

Class 0 Lab 0 Clinical 24 Work 0 Credit 8

This course is designed to facilitate application of advanced course concepts and skills in an orthopaedic healthcare setting. Emphasis is placed on transferring the skills from the classroom and laboratory settings and applying them to real orthopaedic patients while gaining autonomy in their skills and under the direct supervision of an orthopaedic clinical supervisors and orthopaedic provider. Upon completion, students should be able to perform professional level orthopaedic technologist duties while under the supervision on the orthopaedic clinical supervisor.