CURRICULUM STANDARD

Effective Term
Fall 2015
*[2015*03]*

Curriculum Program Title	**Nuclear Technology**	Program Code	**A50460**
Concentration	**(not applicable)**	CIP Code	***41.0205***

Curriculum Description

The Nuclear Technology curriculum prepares individuals to become qualified reactor field technicians who are employed by licensed nuclear reactor facilities.

Course work includes theory and application related to industrial and engineering technology disciplines including nuclear reactor theory, reactor systems, industrial and nuclear safety, instrumentation, electrical generation, automation and robotics, and may include quality control, welding, and various metallurgical inspection procedures.

Upon completion, graduates should qualify as entry-level nuclear reactor technicians and have academic preparations to advance into other industrial or engineering technician positions within the commercial nuclear power industry.

*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.

Nuclear Technology A50460

					AAS	Diploma	Certificate
Minimum Major Hours Required					**49 SHC**	**30 SHC**	**12 SHC**
A. CORE					**29-30 SHC**	**12 SHC**	
A diploma offered under this AAS degree requires a minimum of 12 SHC extracted from the required subject/course core of the AAS degree.							
Required Courses:							
NUC	110	Nuclear Reactor Systems	3 SHC				
NUC	120	Nuclear Reactor Theory	4 SHC				
Required Subject Areas:							
Computers. Choose one:							
CIS	110	Introduction to Computers	3 SHC				
CIS	115	Intro to Prog & Logi	3 SHC				
CSC	133	C Programming	3 SHC				
Fluids/Hydraulics. Choose one:							
HYD	110	Hydraulics/Pneumatics I	3 SHC				
MEC	265	Fluid Mechanics	3 SHC				
Physics. Choose one set:							
PHY	131	Physics–Mechanics	4 SHC	*and*			
PHY	132	Physics–Elec and Magnetism	4 SHC				
		OR					
PHY	151	College Physics	4 SHC	*and*			
PHY	152	College Physics II	4 SHC				
Nuclear Systems/Operations. Choose a group (8 –9 shc):							
NUC	210	Nuclear Steam Plant Systems	4 SHC				
NUC	220	Nuclear Primary Plant Systems	4 SHC	***or***			
ISC	130	Intro to Quality Control	3 SHC				
NUC	130	Applied NDE-Nuclear	2 SHC				
WLD	112	Basic Welding Processes	2 SHC				
WLD	143	Welding Metallurgy	2 SHC				

Approved by the State Board of Community Colleges on January 18, 2008; CRC Revised-Electronic Only 03/26/09; SBCC Revised 04/16/10; SBCC Revised 05/20/11: SBCC Revised 07/20/12; Editorial Revision12/18/12; SBCC Revised 1/16/15; Prefix Addition 08/01/15; CRC Revised—Electronic Only 02/23/17; CRC Revised—Electronic Only 05/25/17; CCRC Revised--Electronic Only (RISE Initiative) 10/24/19.

B.	**CONCENTRATION** *(Not applicable)*			
C.	**OTHER MAJOR HOURS** *To be selected from the following prefixes:* ATR, CHM, CIS, CSC, ELC, ELN, HYD, ISC, MAT, MEC, NUC, PCI, PHY, WBL, and WLD *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, ITA, JPN, LAT, POR, RUS and SPA.*			