

COLLEGE: Lehigh Carbon Community College
HIGH SCHOOL(S): LCTI
 Northwestern Lehigh HS, Salisbury Township HS
 Emmaus HS, Southern Lehigh HS, Whitehall HS

CLUSTER: Science, Technology, Engineering and Math Cluster
PATHWAY: Nanofabrication Manufacturing Technology
PROGRAM: Associate of Applied Science Degree in
 Nanofabrication Manufacturing Technology

	GRADE	ENGLISH	MATH	SCIENCE	SOCIAL STUDIES	REQUIRED COURSES			
						CAREER AND TECHNICAL EDUCATION COURSES			
SECONDARY	9	Applied Communication I (1 cr)	Algebra I (A/B) (1 cr)	Conceptual Earth/Space (1 cr)	U.S. History (1 cr)	Futures I Career Course (1 cr)			*Semi-conductor Processors 51-9141.00
	Mandatory State PSSA Test in Writing								
	10	Applied Communication II (1 cr)	Practical Geometry (1 cr)	Applied Biology (1 cr)	Government (1 cr)	PE / Health (1-2 cr)		Electrical & Electronics Repairers, Commercial & Industrial Equipment 49-2094.00	Electrical Engineering Technicians 17-3023.03
	11	Applied Communication III (1 cr)	Math or Science Elective (1 cr)	Applied Chemistry (1 cr)	World Cultures (1 cr)	PE / Health (1-2 cr)	Futures II Career Course (1 cr)	Radio Mechanics 49-2021.00	Electronic Home Entertainment Equipment Installers & Repairers 49-2097.00
	Mandatory State PSSA Test in Reading, Math, and Writing								
ADULT LEARNER ENTRY POINTS	12	Applied Communication IV (1 cr)	Applied Trig./Alg. (1 cr)	Applied Physics (1 cr)	Economics/ Applied (1 cr)		Math or Science Elective (1 cr)	♦ Elective College Courses (3 cr)	Production Inspectors Testers Graders Sorters Samplers Weighers 51-9061.05
	If students do not pass PSSA in 11th grade an alternate PSSA can be given or the district can affirm mastery of required concepts by courses completed								
	Year 1 1st Semester	•ENG 105 College English I (3 cr)	MAT 130 Industrial Math (3 cr)			BGT 110 Fundamentals of Technology (3 cr)	♦, • ELE 120 D.C. Circuits (4 cr)	♦, ■, • ELE 130 Digital Fundamentals (4 cr)	
	Year 1 2nd Semester	•ENG 107 Technical Reporting (3 cr)	•BIO 112 Introduction to Biotechnology (4cr)	CHE 108 Essentials of Chemistry (4 cr)	•Elective Social Sciences / Humanities (3 cr)	♦, • ELE 165 A.C. Circuits (4 cr)			
	Year 2 1st Semester		PHY 110 Elements of Physics (4 cr)		•Elective Social Sciences / Humanities (3 cr)	•ELE 210 Electronic Circuits (4 cr)	•SMT 210 Introduction to Nanoscience (3 cr)		•ELE 275 Integrated circuits (4 cr)
POSTSECONDARY	Year 2 2nd Semester					•SMT 211 Materials Safety and Equipment Overview for Nanofabrication (3 cr)	•SMT 212 Basic Nanofabrication Processes (3 cr)	•SMT 213 Thin Film in Nanofabrication (3 cr)	•SMT 214 Lithography for Nanofabrication (3 cr)
	Year 2 2nd Semester					•SMT 215 Materials Modification in Nanofabrication (3 cr)	•SMT 216 Characterization, Packaging, and Testing of Nanofabricated Structures (3 cr)		



Funded by the U. S. Department of Education
 (V051B020001)

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Required Courses

Recommended Elective Courses

Career and Technical Education Courses * Courses are arranged by Job titles and are competency based Can be started any time beginning in 9th grade O'Net can be reached via a hyperlink by clicking on these job titles for more job related information

Credit-Based Transition Programs (e.g. Dual/Concurrent Enrollment, Articulated Courses, 2+2 (H=High School to Com. College) (C=Com. College to 4-Yr Institution) (T=Opportunity to test out)

Penn State Capstone Semester

Mandatory Assessments, Advising, and Additional Preparation