DIGITAL PRINTING TECHNOLOGY

The 3D Printing Technician – Level I certificate prepares individuals to design for and apply 3D printing technology, also known as additive manufacturing, towards a host of basic applications. Areas of study will incorporate a foundational understanding of the technology, the equipment, thermoplastics and other materials, design applications, related software, business applications, scanning technology, and other related concepts. Upon completion of the certificate, students will be versed in the broad impact of the technology and prepared for an entry level career within an industry that applies 3D printing technology in some fashion.

Certificate

3D Printing Technician- Level I - 1506073059

(*Offered at Somerset Community College*)

DPT	100	Introduction to 3D Printing Technology OR	3
DPT	102	3D Printing Technology Fundamentals AND	(2)
CIT	105	Introduction to Computers	(3)
BAS	160	Introduction to Business OR	3
BAS	170	Entrepreneurship	(3)
DPT	150	Introduction to Engineering Mechanics for 3D Printing	3
DPT	280	Special Projects for 3D Printing, Level I	1
Elective: Any technical, entry level course within a field where 3D printing applications exist			3
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Total			**16-18**

Course Descriptions

DPT 100 (3 credit hours)
Course ID: 015703
Introduction to 3D Printing Technology
Provides an introduction to the world of Three Dimensional printing (3DP) and its applications in conjunction with computer technology. Introduces topics including computer hardware and software, 3D printing technology, file management, the Internet, e-mail, the social web, sustainability, security, and computer and intellectual property ethics. Presents basic use of application, programming, systems, and utility software.
Lecture/Lab: 3.0 credits (60 contact hours)
Components: Lecture
Attributes: Digital Literacy, Technical

DPT 102 (2 credit hours)
Course ID: 016604
3D Printing Technology Fundamentals
Provides an introduction to the world of three-dimensional (3D) printing or additive manufacturing (AM) and its applications. Introduces topics including 3D printing technologies, basic use of 3D applications, programming, systems, 3D-scanning, and utility software. Pre-requisite or Co-requisite: CIT 105,

demonstration of digital literacy competency by exam or certificate, or other approved course with digital literacy status.
Lecture/Lab: 2.0 credits (45 contact hours).
Components: Lecture
Attributes: Technical

DPT 150 (3 credit hours)
Course ID: 016605
Introduction to Engineering Mechanics for 3D Printing
Provides an introduction to simplified engineering mechanical principles as they apply to 3D printing, or additive manufacturing, designs and products. Requires students to apply concepts related to simple force and stress analysis, material property selection, and deformation to their designs for the purpose of improving functional performance and overall printing success. Explores finishing and post processing techniques to enhance the final appearance and marketability of their printed work.
Pre-requisite: DPT 100 or DPT 102.
Lecture/ Lab: 3.0 credits (60 contact hours).
Components: Lecture
Attributes: Technical

DPT 280 (1 credit hours)
Course ID: 016606
Special Projects for 3D Printing, Level I
Allows the student to gain intermediate level experience in their prospective fields through projects and tasks assigned by the instructor and based on applications the student may one day experience as a professional. Focuses on various assignments and curriculum as determined by the program instructor.
Pre-requisite: DPT 100 or DPT 102.
Lecture/Lab: 1.0 credits (30 contact hours)
Components: Lecture
Attributes: Technical