Name _____

Learner ID _____

School/College/University _____

SAMPLE

Manufacturing

Career Cluster Plan of Study for► Learners ► Parents ► Counselors ► Teachers/Faculty

This Career Cluster Plan of Study (based on Manufacturing Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. *This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Math	Science	Social Studies/ Sciences	Other Required Courses Other Electives Recommended Electives Learner Activities	*Career and Technical Courses and/ or Degree Major Courses for Manufacturing	SAMPLE Occupations Relating to This Career Cluster
	Interest Inventory Administered and Plan of Study Initiated for all Learners							
SECONDARY	9	English/ Language Arts I	Algebra I	Earth or Life or Physical Science	State History Civics	All plans of study should meet local and state high school graduation requirements and college entrance requirements. Certain local student organization activities are also important including public speaking, record keeping and work-based experiences.	**Introduction to Manufacturing Occupations	► Assembler ► Boilermaker ► Design Engineer ► Environmental Engineer ► Foundry Worker ► Freight, Stock and Material Mover ► Health and Safety Representative ► Industrial Machinery Mechanic ► Inspector ► Labor Relations Manager ► Logistician ► Manufacturing Technician ► Pattern and Model Maker ► Production Manager ► Quality Control Technician ► Safety Engineer ► SPC Coordinator ► Tool and Diemaker ► Traffic Manager ► Welder
SECONDARY	10	English/ Language Arts II	Geometry	Biology	U.S. History		**Information Technology Applications	
SECONDARY	11	English/ Language Arts III	Algebra II	Chemistry	World History Economics		**Employment in Manufacturing Occupations	
SECONDARY	College Placement Assessments-Academic/Career Advisement Provided							
SECONDARY	12	English/ Language Arts IV	Trigonometry or Statistics or other math course	Physics	Psychology		**Applications in Manufacturing Technology	
	Articulation/Dual Credit Transcripted-Postsecondary courses may be taken/moved to the secondary level for articulation/dual credit purposes.							
POSTSECONDARY	Year 13	English Composition English Literature	Algebra	Chemistry Physics	American Govt. Psychology	All plans of study need to meet learners' career goals with regard to required degrees, licenses, certifications or journey worker status. Certain local student organization activities may also be important to include.	**Safety in the Workplace	
POSTSECONDARY	Year 14	Speech/ Oral Communication	Computer Applications	Biological Science Physcial Science	American History Geography		Continue courses pertinent to the pathway selected.	
POSTSECONDARY	Year 15	Continue courses in the area of specialization.						
POSTSECONDARY	Year 16						Complete Manufacturing Major (4-Year Degree Program)	

**See course descriptions on page 2.

SAMPLE

Manufacturing
Course Descriptions

(Course content may be taught as concepts within other courses.)

#1

Introduction to Manufacturing Occupations: This course provides students an opportunity to experience various professional organized skill areas. These experiences are designed to be similar to occupations actually existing in the commercial/industrial workplace. This may be taught as a career exploration course in conjunction with other foundation Career Cluster courses.

#2

Information Technology Applications : Students will use technology tools to manage personal schedules and contact information, create memos and notes, prepare simple reports and other business communications, manage computer operations and file storage, and use electronic mail and Internet applications to communicate, search for and access information.

#3

Employment in Manufacturing Occupations: Students will study the roles and responsibilities of various occupations related to manufacturing. Students will research available sources to acquire knowledge of how to maintain a safe and productive workplace including following local, federal and company regulations to perform environmental and safety inspections. Students will develop strategies for communicating with coworkers and/or external customers to ensure production meets business requirements and learn strategies for maintaining equipment, tools and workstations. A work-based learning component is encouraged.

#4

Applications in Manufacturing Technology: This course prepares students for careers in manufacturing and for postsecondary education. The main focus is a core structure study in hydraulics, pneumatics, electrical, material testing, sensors, electric and pneumatic robot operations, and an introduction to programmable logic controllers, measurement, and materials characterization. A work-based learning component is provided.

#5

Safety in the Workplace: Students will develop in-depth skills for maintaining a safe and productive environment including following regulations to perform inspections, participate in emergency response teams to perform emergency drills, identify unsafe conditions and take corrective actions, and provide a safety orientation to train other employees in safe practices and emergency procedures. Students will ensure that equipment is being used safely in the lab and the workplace by training others to use and test equipment safely, suggesting processes and procedures to support safety; fulfill safety and health requirements for maintenance, installation and repair; and monitor equipment and operator performance to assure workplace safety and compliance with both company and national regulations.

SAMPLE