

2011 - 2012 Program of Study - Secondary

Submitted by CTPD Name: Stark Career Academy

CTPD Number: 115

Secondary Program Information

Career Field: Engineering & Science Technologies (EST)

School District Name: Canton Local

Pathway Name: Science (EST)

School District IRN: 049833

Specialization Name (if applicable): (PLTW) Computer Integrated Manufacturing

Building (location) Name: Canton South High School

EMIS Subject Code: 171815/171816

Building (location) IRN: 004812

Local Program Name: Engineering Science - PLTW

For JVSD only: specify grade level(s) and building location for associate schools component:

Grade		School Name	
Courses	10	Credits	26

Identify the # or range of **POTENTIAL** college courses and credits in the career field:

Required or Elective Academic Courses and Other Courses										Career and Technical Education Courses						
Grade	English	Code	Math	Code	Science	Code	Social Studies	Code	Course	Code	Course	Code	CTE Course	Code	CTE Course	Code
9	English I	RA	Algebra	RA	Physical Science	RA	World Studies	RA	Health, PE	RE			Intro Engineering Design	CC		
10	English II	RA	Geometry	RA	Biology/LAB	RA	American History	RA	Speech, PE	RE			PLTW-Intro Engineering Design or Princ of Engineering	CC		
11	English III	RA	Algebra II	RA	Chemistry/LAB	RA	Government Economics	RA					PLTW-Principles of Engineering	CC	PLTW- Digital Electronics	CC
12	English IV	RA	Pre-Calc/Trig	RA	Physics	RA	Psych/Soc	RA					PLTW- CIM Engineering	CC	PLTW- Engineering Design & Development	CC

Contact Person: Nicki Howard

Title: Director of Secondary Programs

Phone: 330-484-8000 X507

E-mail: howard@cantonlocal.org

Date Completed: 3/1/2011

Specify Industry Credential Opportunities (if applicable):

CODES (use all that apply)

RA: Required Courses

RE: Recommended Electives

CT2: Eligible for CT2 Credit

*CC: College Credit Opportunities based on articulation or dual/concurrent enrollment agreements in career field

2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: Stark State College

College Major: (if applicable) Design Engineering Tech College Degree: (if applicable) AAS

Specify Industry Credential Opportunities (if applicable): _____

Certificate, Adult and/or Apprenticeship Program: (if applicable) _____

Secondary Program Name: Engineering Science - PLTW(CIM) Secondary School Name: Canton South High School District Name: Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	Engineering Drawing DET121	RT TAG	College Composition ENG124	RA	Engineering Technology Seminar ETD121	RT	College Algebra MTH125	RA	Trigonometry MTH128	RA	Comp Apps for Tech Prof ECA122	RA CC	Basic AutoCAD DET125	RT CC		
Year 1 2nd Sem.	Descriptive Geometry DET122	RT TAG CC	Working Drawings DET124	RT	Pre-Calculus MTH126	RA	Physics I PHY121	RA TAG	Static & Strength of Materials MET124	RT TAG						
Year 2 1st Sem.	Geometric Dimensioning & Tolerancing DET226	RT	Eff Speaking COM121 or Inter-group Communications COM123	RA TAG	Manufacturing Processess MET225* or Machine Tools AIT122	RT *CC TAG CT2	Concepts of Calculus MTH221	RA	Design Elective I (CAD)*	RT	*DET126 DET230 DET131					
Year 2 2nd Sem.	Technical Project Mechanical & Design MET226	RT	Machine Design MET228	RT	Technical Report Writing ENG221	RT	Arts/Humanities Social Science Elective	RE	Design Elective II (CAD)*	RT						

Contact Person: Frank Fuller

Title: Dept Chair/Assistant Prof Engineering

Phone: 330-494-6170 X4636

E-mail: ffuller@starkstate.edu

POTENTIAL number or range of college credits available to secondary pathway students upon admission:

Date Completed: 3/1/2011

CODES (use all that apply)

RT: Required Technical Courses **CT2:** Eligible for CT2 Credit

RA: Other Required Courses **TAG:** Eligible for TAG Credit

RE: Recommended Electives

CC: Other College Credit Opportunities (based on articulation or dual/concurrent enrollment agreements with partner high school)

2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: _____

Stark State College

College Major: *(if applicable)* Electrical Engineering Technology

College Degree: *(if applicable)* AAS

Specify Industry Credential Opportunities *(if applicable)*: _____

Certificate, Adult and/or Apprenticeship Program: *(if applicable)* _____

Secondary Program Name: Engineering Science -
PLTW(CIM)

Secondary School Name: Canton South High School

District Name: _____

Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	Programming Logic & Problem Solving ECA127	RT	DC Circuit Analysis EET120	RT TAG CC	Engineering Technology Seminar ETD121	RT CC	College Composition ENG124	RA	College Algebra MTH125	RA	Trigonometry MTH128	RA				
Year 1 2nd Sem.	AC Circuit Analysis EET122	RT TAG	Electronic Devices & Circuits EET123	RT TAG	Electrical Machines EET126	RT	Pre-Calculus MTH126	RA	Physics I PHY121	RA TAG						
Year 2 1st Sem.	Basic AutoCAD DET125	RT TAG CC	NEC & Electrical Systems Design EET128	RT	Effective Speaking COM121	RA TAG	Concepts of Calculus MTH221	RA	Technical Report Writing ENG221	RA	Visual Basic Programming ECA128	RT				
Year 2 2nd Sem.	Transmission & Distribution EET226	RT	PLC & Industrial Controls II EET228	RT	Industrial Electronics EET232	RT	Technical Project Electrical EET233	RT	Arts/ Humanities/ Social Science Elective	RE	Optics EET129	RT	Circuit Manufacturing Techniques EET125	RT		

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2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: _____

Stark State College

College Major: *(if applicable)* Applied Industrial Technology

College Degree: *(if applicable)* AAS

Specify Industry Credential Opportunities *(if applicable)*: _____

Certificate, Adult and/or Apprenticeship Program: *(if applicable)* _____

Secondary Program Name: Engineering Science -
PLTW(CIM)

Secondary School Name: Canton South High School

District Name: _____

Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	Comp. Appl. For Tech. Prof. ECA122	RA CC	Intro to Algebra MTH101	RA	College Composition ENG124	RA	Material Science MET123	RT	Blueprint Reading MST121	RT CC	Engineering Technology Seminar ETD121	RT CC				
Year 1 2nd Sem.	College Algebra MTH125	RA	Trigonometry MTH128	RA	Hydraulic & Pneumatic Systems MST134	RT	Electrical Circuits & Devices EST130	RT	Industrial Management Concepts IET121	RT						
Year 2 1st Sem.	Technical Report Writing ENG221	RA	Physics I PHY121	RA TAG	Effective Speaking COM121	RA TAG	Intro to Robotics IET228	RT TAG CC	Manufacturing Processes MET225	RT CC TAG CT2						
Year 2 2nd Sem.	Mechanical Drive Components MST221	RA	Arts/ Humanities/ Social Science Elective	RE	Technical Elective	RT										

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2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: Stark State College

College Major: (if applicable) Mechanical-Fuel Cell **College Degree: (if applicable)** AAS

Specify Industry Credential Opportunities (if applicable): _____

Certificate, Adult and/or Apprenticeship Program: (if applicable) _____

Secondary Program Name: Engineering Science - PLTW(CIM) Secondary School Name: Canton South High School District Name: Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	Engineering Technology Seminar ETD121	RA CC	Intro to Alternative Engery & Fuel Cells MET229	RT CC	Basic AutoCAD DET125	RT TAG CC	General Chemistry I CHM141	RA TAG	College Algebra MTH125	RA	Trigonometry MTH128	RA	College Composition ENG124	RA		
Year 1 2nd Sem.	Statics & Strength of Materials MET124	RT TAG	Analysis & Applications of Types of Fuel Cells MET230	RT	Pre-Calc MTH126	RA	Programming Logic & Problem Solving ECA127	RT	Physics I PHY121	RA TAG						
Year 2 1st Sem.	Effective Speaking COM121	RA TAG	Fluid Power MET222	RT TAG	Fuel Cell Systems MET231	RT	Advanced AutoCAD DET230	RT	Concepts of Calculus MTH221	RA						
Year 2 2nd Sem.	Electical Ciciuts & Devices EST130	RT	Thermodynamics & Heat Transfer MET227	RT	Fuel Cell Project MET232	RT	Technical Report Writing ENG221	RA	Manufacturing Processes or Machine Tools MET225# or AIT122	RT #TAG #CC #CT2	Arts/ Humanities/ Social Science Elective	RE				

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2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: Stark State College

College Major: (if applicable) Mechanical Engineering Tech College Degree: (if applicable) AAS

Specify Industry Credential Opportunities (if applicable): _____

Certificate, Adult and/or Apprenticeship Program: (if applicable) _____

Secondary Program Name: Engineering Science - PLTW(CIM) Secondary School Name: Canton South High School District Name: Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	Engineering Technology Seminar ETD121	RA CC	Material Science MET123	RT	Engineering Drawing DET121	RT CC	College Composition ENG124	RA	College Algebra MTH125	RA	Trigonometry MTH128	RA	Comp. Appl. For Tech Prof ECA122	RA CC		
Year 1 2nd Sem.	Statics & Strength of Materials MET124	RT TAG	Manufacturing Processes or Machine Tools MET225# or AIT122	RT #TAG #CC #CT2	Pre-Calc MTH126	RA	Basic AutoCAD DET125 or Pro Engineer DET131	RT TAG	Physics I PHY121	RA TAG						
Year 2 1st Sem.	Effective Speaking COM121	RA TAG	Machine Design MET228	RT	Advanced Strength of Materials MET221	RT TAG	Fluid Power MET222	RT TAG	Concepts of Caculus MTH221 Analytical Geometry MTH223	RT TAG						
Year 2 2nd Sem.	Dynamics MET223	RT	Electrical Circuits & Devices EST130	RT	Thermodynamics & Heat Transfer MET227	RT	Technical Project-Mechanical & Design MET226	RT	Technical Report Writing ENG221	RA	Arts/ Humanities/ Social Science Elective	RE				

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2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: _____

Stark State College

College Major: *(if applicable)* Electronic Engineering Technology

College Degree: *(if applicable)* AAS

Specify Industry Credential Opportunities *(if applicable)*: _____

Certificate, Adult and/or Apprenticeship Program: *(if applicable)* _____

Secondary Program Name: Engineering Science - PLTW(CIM)

Secondary School Name: Canton South High School

District Name: _____

Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	Programming Logic & Problem Solving ECA127	RT	DC Circuit Analysis EET120	RT TAG CC	Engineering Technology Seminar ETD121	RT CC	College Composition ENG124	RA	College Algebra MTH125	RA	Trigonometry MTH128	RA	Basic AutoCAD DET125	RT CC		
Year 1 2nd Sem.	Electronic Devices & Circuits EET123	RT	Circuit Manufacturing Techniques EET125	RT	Visual Basic Programming ECA128	RT	Pre-Calc MTH126	RA	AC Circuit Analysis EET122	RT TAG	Physics I PHY121	RA TAG				
Year 2 1st Sem.	Pulse & Digital Integrated Circuits EET262	RT TAG CC	Optics EET129	RT	Working Interfacing EET248	RT TAG	Electronic Circuits I EET230	RT TAG	Concepts of Calculus MTH221	RA						
Year 2 2nd Sem.	Technical Report Writing ENG221	RA	Digital Communication & Systems Analysis EET225	RT	Industrial Electronics EET232	RT	Technical Project Electronic EET235	RT	Effective Speaking COM121	RA TAG	Arts/ Humanities/ Social Science Elective	RE				

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2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: Stark State College

College Major: (if applicable) Electric Power Utility Technology College Degree: (if applicable) AAS

Specify Industry Credential Opportunities (if applicable): _____

Certificate, Adult and/or Apprenticeship Program: (if applicable) _____

Secondary Program Name: Engineering Science - PLTW(CIM) Secondary School Name: Canton South High School District Name: Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	Comp Appl. For Tech Prof ECA122	RT CC	College Composition ENG124	RA	Overhead Line Technology (EUT121) or Substation Technology I (EUT123)	RT										
Year 1 2nd Sem.	College Algebra MTH125	RA	Trigonometry MTH128	RA	DC Circuit Analysis EET120	RT TAG CC	Effective Speaking COM121	RA TAG	Overhead Line Technology II (EUT122) or Substation Technology III (EUT124)	RT						
Summer	Eng Tech Div- Independent study ETD202	RT														
Year 2 1st Sem.	Principles of Physics PHY101	RA	Basic Economics BUS122	RA	AC Circuit Analysis EET122	RT TAG	Business Law & Ethics ACC130	RA TAG	Overhead Line Technology III (EUT221) or Substation Technology II (EUT224)	RT						
Year 2 2nd Sem.	Transmission & Distribution EET226	RT	Technical Report Writing ENG221	RA	Industrial Management Concepts IET121	RT	Switchgear, Transformers & Controls EST129	RT	Overhead Line Technology IV (EUT222) or Substation Technology VI (EUT225)	RT						

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2011 - 2012 Program of Study - Postsecondary Semesters

Postsecondary Institution: Stark State College

College Major: (if applicable) Civil Engineering Technology College Degree: (if applicable) _____

Specify Industry Credential Opportunities (if applicable): _____

Certificate, Adult and/or Apprenticeship Program: (if applicable) _____

Secondary Program Name: Engineering Science - PLTW(CIM)

Secondary School Name: Canton South High School

District Name: _____

Canton Local Schools

	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code	Course	Code
Year 1 1st Sem.	College Compositon ENG124	RA	College Algebra MTH125	RA CC	Trigonometry MTH128	RA CC	Building Materials & Construction Methods CET121	RT TAG	Architectural Drafting I CET122	RT	Engineering Technology Seminar ETD121	RT CC	Comp Appl. For Tech. Prof. ECA122	RA CC		
Year 1 2nd Sem.	Pre-Calc MTH126	RA	Statics & Strength of Materials MET124	RT TAG	Architectural Drafting II CET123	RT	Basic AutoCAD DET125	RT CC TAG	Physics I PHY121	RA TAG CC						
Year 2 1st Sem.	Technical Report Writing ENG221	RA	Concepts of Calculus MTH221	RT	Surveying I CET227	RT	Structural Design I CET223	RT	Land Planning & Design CET232	RT	Construction Management, Job Cost & Safety CET235	RT				
Year 2 2nd Sem.	Effective Speaking COM121	RA TAG	Estimating CET226	RT	Site & Building Service Systems CET225	RT	Architectural Design CET233	RT	A/E CAD CET234	RT	Arts/ Humanities/ Social Science Elective	RE				

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