MISO3: 10105 Course Title : Exploring Technology
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	Time	Assessment	Activity Description	ND STL Standards & Benchmarks
Introduction to technology	1 Week	Written Test, Rubric	Lecture, discussion, video,	1 A-D, 2 A-F, 3 A-C, 4 A-D, 5 A-C,
Safety in the laboratory	1 Week	Written Test, Rubric	Demonstration, written work	6 A-D, 7 A-D, 19 A-C,E,F
Mechanical Power	8 Days	Written Test, Rubric	Self Instruction Module	12 A,D, 13 A,D, 16 A-E
Fluid Power	8 Days	Written Test, Rubric	Self Instruction Module	12 A,D, 13 A,D, 16 A-E
Basic Electricity	8 Days	Written Test, Rubric	Self Instruction Module	16 A-D
Basic Electronics	8 Days	Written Test, Rubric	Self Instruction Module	16 A-D
Lighter Than Air Transportation	8 Days	Written Test, Rubric, Project	Self Instruction Module	18 A,B,D
Illustrative Design	8 Days	Written Test, Rubric, Project	Self Instruction Module	16 F-I
Desk Top Publishing	8 Days	Written Test, Rubric, Project	Self Instruction Module	16 F-I
Robotics	8 Days	Written Test, Rubric	Self Instruction Module	15 B, 17 G,I
Wood working	8 Days	Written Test, Rubric, Project	Self Instruction Module	8 A-C, 12B
Metal working	8 Days	Written Test, Rubric, Project	Self Instruction Module	8 A-C, 12B
Geodesic Dome Home	8 Days	Written Test, Rubric, Project	Self Instruction Module	11 A-D, 20 A-D
Magnetic Levitation	8 Days	Written Test, Rubric, Project	Self Instruction Module	8 A-C, 9 B-C, 10 A-C, 18 A,B,D
Laser Technology	8 Days	Written Test, Rubric	Self Instruction Module	14 A, 15 B
Rocketry	8 Days	Written Test, Rubric, Project	Self Instruction Module	18 A,B,D
CNC Production	8 Days	Written Test, Rubric, Project	Self Instruction Module	13 A-D, 17 A-F, 19 B,D,G

MISO3: 10157 Course Title: Communications Technology
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	Time	Assessment	Activity Description	ND STL Standards & Benchmarks
Introduction to Communications	1 Week	Written Test	Lecture, discussion, video, written work	1 A-D, 2 A-F, 3 A-C, 4 A-D, 5 A-C,
Design elements / principles	1 Week		Lecture, discussion, video, written work	6 A-D, 7 A-D, 9 A-D, 19 A-C,E,F
Desk Top Publishing	4 Weeks	Project	The Saga of Casey booklet	10 A-D,17 F-K
			Resturatant Ad	
			Notepads	
			Use the plotter	
			Calling Card	
			Face on currency	
Relief Printing	1 Week	Project	Rubber Stamp	
Screen Process Printing	1 Week	Project	Design a textile printed product	
Sublimation Process Printing	1 Week	Project	Design a product using this process	
Illustrative design using Vinyl	1 Week	Project	Design a product using this process	
Other applications	3 Weeks	Project	Sand carving	8 A-D, 11 A-F, 12 A-E
			Decals	
			Iron on Transfer	
			Aluminum plate	

Communications CAM	1 Week	Project	Embroidery	
Introduction to CAD	3 Weeks	Practical evaluation	Mutilated blocks	8 A-D, 9 A-D, 11 A-E
The Moving Image	1 Week	Project	Basic animation using Hypercard	

MISO3: 10093 Course Title: Applying Technology
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	**Time**	**Assessment**	**Activity Description**	**ND STL Standards & Benchmarks**
Introduction to engineering	2 Weeks	Written Test, Rubric, Project	Lecture, discussion, demonstrations	1 A-D, 2 A-F, 3 A-C, 4 A-D, 5 A-C,
			video, multimedia presentations	6 A-D, 7 A-D, 8 A-D, 9 A-D, 10 A-D,
Introduction to properties		Written Test, Rubric, Project	Computer tutorials, demonstrations	11 A-F, 12 A-D, 13 A-D, 16 A-E,
Introduction to materials		Written Test, Rubric, Project	Paper tower	18 A,E, 19 A-C,E, 20 B,E
Introduction to forces		Written Test, Rubric, Project	Paper foundation	
Review of problem solving	2 Weeks	Written Test, Rubric, Project	Paper bridge	
	1 Week	Written Test, Rubric, Project	Kelvin krasher	
	1 Week	Written Test, Rubric, Project	Shake and Quake (Balsa tower)	
Bridge building	1 Week	Written Test, Rubric, Project	Noodle or balsa bridges	
Energy, Power, Transportation	1 Week	Written Test, Rubric, Project	Hoover crafts	
Introduction to Flight	1.5 Weeks	Written Test, Rubric, Project	Bottle rockets	
	1.5 Weeks	Written Test, Rubric, Project	Wright Flyer	
Dragster Design	3 Weeks	Written Test, Rubric, Project	Design a CO2 Powered vehicle	13 A-D,17 A-F,18 A-E,19 B,D.G
Energy transfers	2 Weeks	Written Test, Rubric, Project	Firemouse 1	
Potential / Kinetic energy		Written Test, Rubric, Project	Firemouse 3	
		Written Test, Rubric, Project	Firemouse 2	
		Written Test, Rubric, Project	All terrain vehicle	

MISO3: 10516 Course Title: Technology and Enterpreneurship (Manufacturing)
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	**Time**	**Assessment**	**Activity Description**	**ND STL Standards & Benchmarks**
Introduction to Manufacturing	1 Week	Written work, rubric	Research, Develop, Design, Market,	1 A-D, 2 A-F, 3 A-C, 4 A-D, 5 A-C,
Reach and Development	2 Weeks	Written work, rubric	Reproduce, Produce and saleable	6 A-D, 7 A-D, 8 A-D, 9 A-D, 10 A-D
Production Tooling	2 Weeks	Written work, rubric	product. Include written portfolio,	11 A- F, 12 A-E, 13 A-D,17 F-K,
Production Planning and Control	2 Weeks	Written work, rubric	Balance sheets, safety program,	19 A-C,E,F
Quality control / Assurance	1 Week	Written work, rubric	route sheets, flow charts, marketing	
Personnel Management	1 Week	Written work, rubric	and sales brochures among others	
The Manufacturing process	6 Weeks	Written work, rubric, project		
Marketing	1 Week	Written work, rubric		
Financial Control	1 Week	Written work, rubric		
Careers	.5 Week	Written work		
Dissolving the Organization	.5 week	Written work, rubric		

MISO3: 10250 Course Title: Communications Technology Graphic Arts Photography/Media Technology
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	Time	Assessment	Activity Description	ND STL Standards & Benchmarks
Introduction to Photography	1 Week	Written work	Lecture, discussion, demonstrations	1 A-D, 2 A-F, 3 A-C, 4 A,B,D, 5 A-C,
History of the process	1 Week	Written work, evaluation	video, multimedia presentations	6 A-D, 7 A-D, "17 F-K
Tools and equipment	2 Weeks	Written work	Student essay (written report)	10 A,
Composition	1 Week	Written work		
Film	1 Week	Written work		
Exposing your first roll	1 Week	Written work, evaluation		
Film development	1 Week	Written work, rubric		
Darkroom practices	1 Week	Written work		
Producing enlargements	4 Weeks	Written work, rubric	Students will complete a portfolio with a	
Finishing a print	2 Weeks	Written work, rubric	minimum numbers of suitable for framing	
Digital cameras	1 Week		prints	
Finishing a digital print(s)	1 Week	Written work, rubric		

MISO3: 10259 Course Title: Drafting/Design Technology
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	Time	Assessment	Activity Description	ND STL Standards & Benchmarks
Introduction to CAD	.5 Week	Written Test	Lecture, discussion, demonstrations	1 A-D, 2 A-F, 3 A-C, 4 A,B,D, 5 A-C,
One view drawings	1 Week	Rubric	video, multimedia presentations	6 A-D, 7 A-D, "17 F-K, 19 A-C,E,F,
Multiview drawings	2 Weeks	Rubric		20 A,B,E
Dimensioning	.5 Week	Rubric	Student will assemble a portfolio which	
Working drawings	2 Weeks	Rubric	includes all of their plates	
Pictorial drawings	2 Weeks	Rubric		
Sectional drawings	2 Weeks	Rubric		
Fasteners	1 Week	Rubric		
Detail drawings	1 Week	Rubric		
Architectural Drawings	2 Weeks	Rubric		
Introduction to AutoCADLt	2 Weeks	Rubric		
Introduction to ProDesktop	2 Weeks	Rubric		

MISO3: 10124 Course Title: Material Processes (Metalworking)
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	Time	Assessment	Activity Description	ND STL Standards & Benchmarks
Introduction to metal working	.5 Week	Written Test	Lecture, discussion, demonstrations	1 A-D, 2 A-F, 3 A-C, 4 A,C,D, 5 A-C,
Metal as resource	.5 Week	Written Test	video, multimedia presentations	6 A-D, 7 A-D, 8 A-D, 10 A-C, 11 A-F,
Metal product Industries	.5 Week	Written Test	text material	12 B-D,13 C,D, 17 A, 19 A-C,E,F,
Properties / Characteristics	.5 Week	Written Test		20 B,C,D,E

Production of Steel	.5 Week	Written Test	
Production of non ferrous metals	.5 Week	Written Test	
Metals Laboratory safety	1 Week	Written Test	
Machine tool safety	1 Week	Written Test	
Welding practices	3 Weeks	Rubric	Welding position assignments
Machining practices	2 Weeks	Rubric	Riveting hammer, depth gauge
CNC Machining practices	2 Weeks	Rubric	Student developed product
Project development	7 Weeks	Rubric	Student developed product

MISO3: 10124 Course Title: Material Processes (Non metallic materials)
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	Time	Assessment	Activity Description	ND STL Standards & Benchmarks
Introduction to Wood working	.5 Week	Written work	Lecture, discussion, demonstrations	1 A-D, 2 A-F, 3 A-C, 4 A,C,D, 5 A-C,
Wood as natural resource	.5 Week	Written work	video, multimedia presentations,	6 A-D, 7 A-D, 8 A-D, 10 A-C, 11 A-F,
Wood product Industries	.5 Week	Written work	text material	12 B-D,13 C,D, 17 A, 19 A-C,E,F,
Properties / Characteristics	.5 Week	Written work		20 B,C,D,E
Production of lumber	.5 Week	Written work		
Veneer and plywood	.5 Week	Written work		
Designing wood products	1 Week	Written work		
Wood Laboratory safety	1 Week	Written evaluation		
Machine tool safety	1 Week	Written evaluation		
Wood product production	2 Weeks	Rubric	Students will produce a "Widget"	
Finishing wood products	1 Week	Rubric		
Wood product production	4 Weeks	Rubric	Students will produce a non metallic	
Finishing wood products	1 Week	Rubric	product	

MISO3: 10336 Course Title: Electricity/Electronics
School: Richardton Taylor Public Instructor: Andrew Rohwedder
School Year: 2003-2004 Course Length: 18 Weeks

Unit Titles	Time	Assessment	Activity Description	ND STL Standards & Benchmarks
Introduction to electricity	.5 Week	Written work	Students will use the Devry Basic	1 A-D, 2 A-F, 3 A-C, 4 A-D,
Simple circuits	.5 Week	Written work	Electricity Trainer	6 A-D, 7 A-D, 10 B, 11 A-F, 12 B,C
Series circuits	1 Week	Written work		16 A,E, 17 A,B
Parallel circuits	1 Week	Written work		
Combination circuits	2 Weeks	Written work		
DC / AC	.5 Week	Written work		
Ohm's Law	1 Week	Written work		
Capacitance	1 Week	Written work		
Power	1 Week	Written work		
Introduction to Electronics	3 Weeks	Written work	Students will use Mister Circuit I	
Additional components, IC's		Written work	Training materials	
Introduction to Digital Electronics	3 Weeks	Written work	Students will use Mister Circuit II	
Additional components		Written work	Training materials	
No gates, Yes gates		Written work		
And gates, or gates		Written work		
Product development	2 Weeks	Rubric, Project	Student will build a tester	
Soldering	1 Week	Rubric		

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