

**Manufacturing Career Cluster
Applications in Granite Industry
Course Number: 47.45600**

Course Description:

Applications in Granite Industry is the third course in the pathway and is designed to provide students with the knowledge and safe operating skills needed to produce finished pieces of granite that meet the standards of the granite industry. In this course students will refine machine-operating skills learned in the previous granite technology classes and learn the new skills of operating the diamond saw and coring machine. Students will continue Monu-CAD training during the course and learn new drawing and detail layout concepts. Students will be introduced to stone cutting, involving the use of multiple hand-held tools. These various skills equip high school students with the skills needed to select a granite industry occupation, enter the work force, and continue to advance in a specialized granite industry occupation.

Along with honing in on skills and learning new skills, students will explore the many different job opportunities associated with the granite industry through visits to local operating facilities and classroom visits from skilled workers in the industry. Throughout the time spent in this class, students will layout, produce, and inspect products to be sold to the public through an entrepreneurship component of the program. The prerequisite for this course is Introduction to Granite.

Course Standard 1

TDL-AGI-1

The following standard is included in all CTAE courses adopted for the Career Cluster/Pathways. Teachers should incorporate the elements of this standard into lesson plans during the course. The topics listed for each element of the standard may be addressed in differentiated instruction matching the content of each course. These elements may also be addressed with specific lessons from a variety of resources. This content is not to be treated as a unit or separate body of knowledge but rather integrated into class activities as applications of the concept.

Standard: Demonstrate employability skills required by business and industry.

The following elements should be integrated throughout the content of this course.

1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.

Person-to-Person Etiquette	Telephone and Email Etiquette	Cell Phone and Internet Etiquette	Communicating At Work	Listening
Interacting with Your Boss	Telephone Conversations	Using Blogs	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Using Social Media	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls		Effective Written Communication	Ways We Filter What We Hear
Interacting with Suppliers	Making Cold Calls		Effective Nonverbal Skills	Developing a Listening Attitude
	Handling Conference Calls		Effective Word Use	Show You Are Listening
	Handling Unsolicited Calls		Giving and Receiving Feedback	Asking Questions
				Obtaining Feedback
				Getting Others to Listen

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Nonverbal Communication	Written Communication	Speaking	Applications and Effective Résumés
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application
Reading Body Language and mixed Messages	Constructive Criticism in Writing	One-on-One Conversations	Writing a Cover Letter
Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé
Improving Nonverbal Indicators		Large Group Communication	Selling Yourself in a Résumé
Nonverbal Feedback		Making Speeches	Terms to Use in a Résumé
Showing Confidence Nonverbally		Involving the Audience	Describing Your Job Strengths
Showing Assertiveness		Answering Questions	Organizing Your Résumé
		Visual and Media Aids	Writing an Electronic Résumé
		Errors in Presentation	Dressing Up Your Résumé

1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

Teamwork and Problem Solving	Meeting Etiquette
Thinking Creatively	Preparation and Participation in Meetings
Taking Risks	Conducting Two-Person or Large Group Meetings
Building Team Communication	Inviting and Introducing Speakers
	Facilitating Discussions and Closing
	Preparing Visual Aids
	Virtual Meetings

1.3 Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations.

Problem Solving	Customer Service	The Application Process	Interviewing Skills	Finding the Right Job
Transferable Job Skills	Gaining Trust and Interacting with Customers	Providing Information, Accuracy and Double Checking	Preparing for an Interview	Locating Jobs and Networking
Becoming a Problem Solver	Learning and Giving Customers What They Want	Online Application Process	Questions to Ask in an Interview	Job Shopping Online
Identifying a Problem	Keeping Customers Coming Back	Following Up After Submitting an Application	Things to Include in a Career Portfolio	Job Search Websites
Becoming a Critical Thinker	Seeing the Customer's Point	Effective Résumés:	Traits Employers are Seeking	Participation in Job Fairs
Managing	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	Searching the Classified Ads
	Handling Customer Complaints	When a Résumé Should be Used		Using Employment Agencies
	Strategies for Customer Service			Landing an Internship
				Staying Motivated to Search

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1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Workplace Ethics	Personal Characteristics	Employer Expectations	Business Etiquette	Communicating at Work
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers
Maintaining Honesty	Demonstrating Responsibility	Establishing Credibility	Avoiding Gossip	Dealing with a Difficult Boss
Playing Fair	Showing Dependability	Demonstrating Your Skills	Appropriate Work Email	Dealing with Difficult Customers
Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict
Showing Responsibility	Gaining Coworkers' Trust		Appropriate Work Texting	
Reducing Harassment	Persevering		Understanding Copyright	
Respecting Diversity	Handling Criticism		Social Networking	
Making Truthfulness a Habit	Showing Professionalism			
Leaving a Job Ethically				

1.5 Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.

Expected Work Traits	Teamwork	Time Management
Demonstrating Responsibility	Teamwork Skills	Managing Time
Dealing with Information Overload	Reasons Companies Use Teams	Putting First Things First
Transferable Job Skills	Decisions Teams Make	Juggling Many Priorities
Managing Change	Team Responsibilities	Overcoming Procrastination
Adopting a New Technology	Problems That Affect Teams	Organizing Workspace and Tasks
	Expressing Yourself on a Team	Staying Organized
	Giving and Receiving Constructive Criticism	Finding More Time
		Managing Projects
		Prioritizing Personal and Work Life

1.6 Present a professional image through appearance, behavior and language.

On-the-Job Etiquette	Person-to-Person Etiquette	Communication Etiquette	Presenting Yourself
Using Professional Manners	Meeting Business Acquaintances	Creating a Good Impression	Looking Professional
Introducing People	Meeting People for the First Time	Keeping Phone Calls Professional	Dressing for Success
Appropriate Dress	Showing Politeness	Proper Use of Work Email	Showing a Professional Attitude
Business Meal Functions		Proper Use of Cell Phone	Using Good Posture
Behavior at Work Parties		Proper Use in Texting	Presenting Yourself to Associates
Behavior at Conventions			Accepting Criticism

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International Etiquette			Demonstrating Leadership
Cross-Cultural Etiquette			
Working in a Cubicle			

Support of CTAE Foundation Course Standards and Georgia Standards of Excellence L9-10RST 1-10 and L9-10WHST 1-10:

Georgia Standards of Excellence ELA/Literacy standards have been written specifically for technical subjects and have been adopted as part of the official standards for all CTAE courses.

Course Standard 2

TDL-AGI-2

Demonstrate knowledge and practice of granite industry safety.

- 2.1 Identify and explain the common hazards in the granite industry.
- 2.2 Demonstrate basic knowledge of Occupation Safety and Health Administration (OSHA), and the regulations related to preventive measures for personal safety.
- 2.3 Demonstrate the proper use and care of Personal Protection Equipment (PPE) used in the granite industry.
- 2.4 Demonstrate the safe use of equipment in the granite laboratory.

Course Standard 3

TDL-AGI-3

Utilize stone cutting tools in a professional and safe manner.

- 3.1 Demonstrate knowledge of rules and regulations regarding the safe use of stone cutting tools.
- 3.2 Demonstrate knowledge of the care and maintenance of stone cutting tools.
- 3.3 Demonstrate knowledge of proper usage techniques of stone cutting tools.

Course Standard 4

TDL-AGI-4

Demonstrate and explain the ability to safely set up and operate diamond sawing equipment specific to the granite industry.

- 4.1 Identify and explain the use of diamond sawing equipment.
- 4.2 Properly set up diamond sawing equipment.
- 4.3 Safely perform straight, angled, and square cuts using diamond sawing equipment.

Course Standard 5

TDL-AGI-5

Demonstrate and explain the ability to safely set up and operate coring equipment specific to the granite industry.

- 5.1 Identify and explain the use of coring equipment.
- 5.2 Properly set up coring equipment.
- 5.3 Demonstrate knowledge of proper usage techniques of coring equipment.

Course Standard 6

TDL-AGI-6

Understand and apply Monu-CAD design.

- 6.1 Demonstrate knowledge and application of Monu-CAD design.
- 6.2 Apply basic Monu-CAD design to granite industry settings.

6.3 Apply and use Monu-CAD drawing codes to draw and layout designs.

Course Standard 7

TDL-AGI-7

Demonstrate proper safety, set up, and usage techniques associated with the granite industry equipment and produce finished products that meet industry standards.

- 7.1 Identify and explain granite industry safety.
- 7.2 Identify and explain granite industry equipment.
- 7.3 Demonstrate proper set up and usage of diamond sawing equipment.
- 7.4 Demonstrate proper set up and usage of top polishing equipment.
- 7.5 Demonstrate proper set up and usage of stone cutting tools.
- 7.6 Demonstrate proper usage of Monu-CAD design and layout.
- 7.7 Demonstrate proper set up and usage of sandblasting equipment.
- 7.8 Properly inspect finished product to make sure it meets industry standards.

Course Standard 8

TDL-AGI-8

Develop an understanding of granite industry careers and describe the principal fields of specializations (i.e. polishing, sandblasting, stone cutting, sawing, and designing) and identify associated career opportunities.

- 8.1 Identify education requirements for granite industry occupations and locations where programs of study are available.
- 8.2 Match granite industry job titles with qualifications and responsibilities.
- 8.3 Participate in activities related to career interests.

Course Standard 9

TDL-AGI-9

Examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects and competitive events.

- 9.1 Explain the purpose, mission, objectives, motto, colors, official dress and other distinguishing characteristics of SkillsUSA.
- 9.2 Explain how participation in SkillsUSA can promote lifelong responsibility for community service, professional growth and development.
- 9.3 Explore the impact and opportunities SkillsUSA can develop to bring business and industry together with education in a positive working relationship through innovative leadership and career development programs.
- 9.4 Explore the local, state, and national opportunities available to students through participation in SkillsUSA including but not limited to conferences, competitions, community service, philanthropy, and other SkillsUSA activities.