Course Description:
Powersports and Small-Engine Systems Performance Theory is the third course in the Powersports and Small-Engine Maintenance and Repair pathway. Students will master systems-level approaches to enhancing the performance of two- and four-stroke engines. Special emphasis will be on engine overhaul processes and individual modifications based on specified operational needs. Extensive classroom, lab, and field-based activities focus on students demonstrating skills in real-world scenarios under time constraints.

Course Standard 1

TDL-PSESPT-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.

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

<table>
<thead>
<tr>
<th>Nonverbal Communication</th>
<th>Written Communication</th>
<th>Speaking</th>
<th>Applications and Effective Résumés</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicating Nonverbally</td>
<td>Writing Documents</td>
<td>Using Language Carefully</td>
<td>Completing a Job Application</td>
</tr>
<tr>
<td>Reading Body Language and mixed Messages</td>
<td>Constructive Criticism in Writing</td>
<td>One-on-One Conversations</td>
<td>Writing a Cover Letter</td>
</tr>
</tbody>
</table>
### Matching Verbal and Nonverbal Communication

- Improving Nonverbal Indicators
- Nonverbal Feedback
- Showing Confidence Nonverbally
- Showing Assertiveness

### Small Group Communication

- Large Group Communication
- Making Speeches
- Involving the Audience

### Things to Include in a Résumé

- Selling Yourself in a Résumé
- Terms to Use in a Résumé
- Describing Your Job Strengths
- Organizing Your Résumé
- Writing an Electronic Résumé
- Dressing Up Your Résumé

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

#### Teamwork and Problem Solving

- Thinking Creatively
- Taking Risks
- Building Team Communication

#### Meeting Etiquette

- Preparation and Participation in Meetings
- Conducting Two-Person or Large Group Meetings
- Inviting and Introducing Speakers

#### Virtual Meetings

#### Preparing Visual Aids

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

#### Problem Solving

- Transferable Job Skills
- Becoming a Problem Solver
- Identifying a Problem
- Becoming a Critical Thinker
- Managing

#### Customer Service

- Gaining Trust and Interacting with Customers
- Learning and Giving Customers What They Want
- Keeping Customers Coming Back
- Seeing the Customer’s Point
- Selling Yourself and the Company

#### The Application Process

- Providing Information, Accuracy and Double Checking
- Online Application Process
- Following Up After Submitting an Application
- Effective Résumés: Traits Employers are Seeking
- Matching Your Talents to a Job

#### Interviewing Skills

- Preparing for an Interview
- Questions to Ask in an Interview
- Things to Include in a Career Portfolio
- Considerations Before Taking a Job

#### Finding the Right Job

- Locating Jobs and Networking
- Job Shopping Online
- Job Search Websites
- Searching the Classified Ads
- Using Employment Agencies
- Landing an Internship
- Staying Motivated to Search

### 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
<table>
<thead>
<tr>
<th>Demonstrating Good Work Ethic</th>
<th>Demonstrating a Good Attitude</th>
<th>Behaviors Employers Expect</th>
<th>Language and Behavior</th>
<th>Handling Anger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaving Appropriately</td>
<td>Gaining and Showing Respect</td>
<td>Objectionable Behaviors</td>
<td>Keeping Information Confidential</td>
<td>Dealing with Difficult Coworkers</td>
</tr>
<tr>
<td>Maintaining Honesty</td>
<td>Demonstrating Responsibility</td>
<td>Establishing Credibility</td>
<td>Avoiding Gossip</td>
<td>Dealing with a Difficult Boss</td>
</tr>
<tr>
<td>Playing Fair</td>
<td>Showing Dependability</td>
<td>Demonstrating Your Skills</td>
<td>Appropriate Work Email</td>
<td>Dealing with Difficult Customers</td>
</tr>
<tr>
<td>Using Ethical Language</td>
<td>Being Courteous</td>
<td>Building Work Relationships</td>
<td>Cell Phone Etiquette</td>
<td>Dealing with Conflict</td>
</tr>
<tr>
<td>Showing Responsibility</td>
<td>Gaining Coworkers’ Trust</td>
<td></td>
<td></td>
<td>Social Networking</td>
</tr>
<tr>
<td>Reducing Harassment</td>
<td>Persevering</td>
<td></td>
<td>Understanding Copyright</td>
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<tr>
<td>Respecting Diversity</td>
<td>Handling Criticism</td>
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<tr>
<td>Making Truthfulness a Habit</td>
<td>Showing Professionalism</td>
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<tr>
<td>Leaving a Job Ethically</td>
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</tbody>
</table>

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.

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

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

<table>
<thead>
<tr>
<th>On-the-Job Etiquette</th>
<th>Person-to-Person Etiquette</th>
<th>Communication Etiquette</th>
<th>Presenting Yourself</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Professional Manners</td>
<td>Meeting Business Acquaintances</td>
<td>Creating a Good Impression</td>
<td>Looking Professional</td>
</tr>
<tr>
<td>Introducing People</td>
<td>Meeting People for the First Time</td>
<td>Keeping Phone Calls Professional</td>
<td>Dressing for Success</td>
</tr>
<tr>
<td>Appropriate Dress</td>
<td>Showing Politeness</td>
<td>Proper Use of Work Email</td>
<td>Showing a Professional Attitude</td>
</tr>
<tr>
<td>Business Meal Functions</td>
<td></td>
<td>Proper Use of Cell Phone</td>
<td>Using Good Posture</td>
</tr>
<tr>
<td>Behavior at Work Parties</td>
<td></td>
<td>Proper Use in Texting</td>
<td>Presenting Yourself to Associates</td>
</tr>
<tr>
<td>Behavior at Conventions</td>
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<td></td>
<td>Accepting Criticism</td>
</tr>
<tr>
<td>International Etiquette</td>
<td></td>
<td></td>
<td>Demonstrating Leadership</td>
</tr>
<tr>
<td>Cross-Cultural Etiquette</td>
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</table>
Course Standard 2

TDL-PSESPT-2
**Identify the operational functions of two-stroke and four-stroke engine components.**

2.1 Identify the function of the intake stroke and related factors that impact engine performance.
2.2 Identify the function of the compression stroke and related factors that impact engine performance.
2.3 Identify the function of the power stroke and related factors that impact engine performance.
2.4 Identify the function of the exhaust stroke and related factors that impact engine performance.
2.5 Explain normal combustion and related factors that impact engine performance.
2.6 Explain abnormal combustion and related factors that impact engine performance.
2.7 Explain the engine fuel system and how the component parts impact engine performance.
2.8 Explain octane and how it impacts engine performance.
2.9 Explain the concept of volatility and how it impacts engine performance.
2.10 Explain the relationship between spark plugs and heat range in relation to vehicle speed and engine performance.
2.11 Explain the charging system components and how each interacts to impact engine performance.
2.12 Explain the starting system components and how each interacts to impact engine performance.

Course Standard 3

TDL-PSESPT-3
**Maintain electronic/electrical systems.**

3.1 Inspect the charging system.
3.2 Troubleshoot the charging system.
3.3 Repair the charging system.

Course Standard 4

TDL-PSESPT-4
**Perform overhaul engine functions.**

4.1 Disassemble and reassemble a two-stroke engine.
4.2 Disassemble and reassemble a four-stroke engine.
4.3 Read and interpret wear limit information from a service manual.
4.4 Examine internal engine parts for damage or wear.

Course Standard 5

TDL-PSESPT-5
**Examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events.**

5.1 Explain the purpose, mission, objectives, motto, colors, official dress and other distinguishing characteristics of SkillsUSA.
5.2 Explain how participation in SkillsUSA can promote lifelong responsibility for community service, professional growth and development.
5.3 Explore the impact and opportunities that SkillsUSA can develop to bring business and industry together with education in a positive working relationship through innovative leadership and career development programs.
5.4 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.