



9036

COLOUR THEORY AND CAREER
PREPARATION (12D)

40S/40E/40M

A Collision Repair and Refinishing Technology Course

9036: COLOUR THEORY AND CAREER PREPARATION (12D) 40S/40E/40M

Course Description

Students will learn colour theory and tinting principles as they spot repair and blend with refinishing materials; refinish plastic parts; perform final detailing; and correct common paint problems. They will also learn the skills required to transition from high school to the workplace and will create a portfolio and resumé.

Goal 1: Describe and apply appropriate **health and safety** practices.

GLO 1.1: Describe and apply appropriate **health and safety** practices.

- SLO 12D.1.1.1: Identify safety and health requirements. (A2.1)
- SLO 12D.1.1.2: Describe the importance of using personal protective equipment (PPE), and identify PPE and procedures. (A2.2) (TSA 16)
- SLO 12D.1.1.3: Identify electrical safety, and outline the safety principles for working on and around electrical equipment. (A2.3) (TSA 18)
- SLO 12D.1.1.4: Identify fire safety, and outline workplace fire safety principles. (A2.4) (TSA 19)
- SLO 12D.1.1.5: Recognize and control hazards. (A2.6)
- SLO 12D.1.1.6: Demonstrate awareness of the hazards of confined space entry, and identify the hazards in confined spaces and the preparation needed to work in a confined space. (A2.7) (TSA 20)
- SLO 12D.1.1.7: Describe basic first aid and cardiopulmonary resuscitation (CPR) requirements and techniques. (A2.8)
- SLO 12D.1.1.8: Explain the Workplace Hazardous Material Information System (WHMIS), and identify the WHMIS safety requirements. (A2.9) (TSA 13)
- SLO 12D.1.1.9: Identify and control hazards. (A2.10)
- SLO 12D.1.1.10: Identify safety precautions related to gas metal arc welding. (C2.2)
- SLO 12D.1.1.11: Identify and describe safety considerations and procedures related to fasteners and adhesives. (D2.1)
- SLO 12D.1.1.12: Practise safety precautions related to batteries. (B2.8)

SLO 12D.1.1.13: Identify safety considerations when working with body fillers and abrasives. (F2.4)

SLO 12D.1.1.14: Create and maintain a safe and organized working environment.

SLO 12D.1.1.15: Follow guidelines listed in the Safe Work Procedure for specific tasks.

GLO 1.2: Demonstrate knowledge of the *Trade Safety Awareness Manual*.

No applicable SLOs.

Goal 2: Select, use, and manage **tools and equipment**.

GLO 2.1: Select and manage **tools and equipment**.

SLO 12D.2.1.1: Select and manage tools and equipment used in colour theory.

SLO 12D.2.1.2: Identify types of refinishing and detailing tools and equipment, and describe their applications. (A4.9)

SLO 12D.2.1.3: Identify and describe procedures used to set up, adjust, care for, and maintain refinishing equipment. (H4.4)

GLO 2.2: Use **tools and equipment**.

SLO 12D.2.2.1: Use tools and equipment applicable to painting.

SLO 12D.2.2.2: Identify and describe procedures used to operate refinishing equipment. (H4.4)

Goal 3: Demonstrate vehicle **damage analysis** and **repair estimation**.

GLO 3.1: Demonstrate vehicle **damage analysis**.

No applicable SLOs.

GLO 3.2: Demonstrate vehicle **repair estimation**.

SLO 12D.3.2.1: Estimate time and materials required to complete repairs.

SLO 12D.3.2.2: Create repair estimates.

Goal 4: Demonstrate **welding** procedures.

GLO 4.1: Demonstrate **welding** procedures.

No applicable SLOs.

Goal 5: Demonstrate **structural repair**.

GLO 5.1: Demonstrate an understanding of **vehicle construction**.

No applicable SLOs.

GLO 5.2: Demonstrate **measuring and gauging**.

SLO 12D.5.2.1: Measure paint film thickness.

GLO 5.3: Perform **structural repairs**.

No applicable SLOs.

Goal 6: Demonstrate **sheet metal repair**.

GLO 6.1: Demonstrate an understanding of the **properties** of metal.

No applicable SLOs.

GLO 6.2: Repair sheet metal.

No applicable SLOs.

Goal 7: Select, use, and manage **seam sealers, fillers, and adhesives**.

GLO 7.1: Select, use, and manage **seam sealers** and **adhesives**.

No applicable SLOs.

Goal 8: Select, use, and manage **fasteners**.

GLO 8.1: Select, use, and manage **fasteners**.

No applicable SLOs.

Goal 9: Demonstrate **glass repair and replacement**.

GLO 9.1: Demonstrate **glass repair and replacement**.

No applicable SLOs.

Goal 10: Demonstrate repair and replacement of **upholstery, trim, and hardware.**

GLO 10.1: Repair and replace **upholstery.**

No applicable SLOs.

GLO 10.2: Repair and replace **trim and hardware.**

No applicable SLOs.

Goal 11: Demonstrate **surface preparation.**

GLO 11.1: Select, use, and manage **materials other than abrasives** used in surface preparation.

No applicable SLOs.

GLO 11.2: Select, use, and manage **abrasives** used in surface preparation.

SLO 12D.11.2.1: Select, use, and manage abrasives.

GLO 11.3: Prepare substrates.

SLO 12D.11.3.1: Identify and demonstrate surface preparation and related techniques when working with waterborne refinishing materials. (H4.2)

Goal 12: Demonstrate **refinishing.**

GLO 12.1: Demonstrate **refinishing** processes.

SLO 12D.12.1.1: Define and describe waterborne refinishing material, including its technical characteristics and applications for use. (H4.1)

SLO 12D.12.1.2: Describe and demonstrate types of topcoat. (H4.3)

SLO 12D.12.1.3: Perform the application of topcoats.

SLO 12D.12.1.4: Describe and demonstrate types of basecoat/clearcoat finishes. (H4.5)

SLO 12D.12.1.5: Perform the application of basecoat/ clearcoat finishes.

SLO 12D.12.1.6: Describe and demonstrate single-stage finishes. (H4.6)

SLO 12D.12.1.7: Perform the application of single-stage finishes.

Goal 13: Demonstrate cleaning and detailing.**GLO 13.1: Demonstrate cleaning and detailing.**

- SLO 12D.13.1.1: Demonstrate ability to detail vehicle exterior. (H2.1)
- SLO 12D.13.1.2: Demonstrate ability to detail vehicle interior. (H2.2)
- SLO 12D.13.1.3: Demonstrate ability to correct topcoat defects. (H2.4)
- SLO 12D.13.1.4: Demonstrate ability to remove overspray. (H2.5)
- SLO 12D.13.1.5: Demonstrate ability to polish vehicle exterior. (H2.6)
- SLO 12D.13.1.6: Demonstrate ability to clean vehicle interior. (H2.7)
- SLO 12D.13.1.7: Demonstrate ability to wash vehicle exterior. (H2.8)
- SLO 12D.13.1.8: Perform final cleanup for customer delivery. (H2.9)
- SLO 12D.13.1.9: Demonstrate ability to apply decals and pinstriping. (H2.10)

Goal 14: Describe vehicle systems.**GLO 14.1: Describe vehicle systems.**

No applicable SLOs.

Goal 15: Describe and demonstrate transferable cross-curricular knowledge and skills.**GLO 15.1: Read, interpret, and communicate information.**

- SLO 12D.15.1.1: Read, interpret, and communicate information from technical service bulletins.
- SLO 12D.15.1.2: Read, interpret, and communicate information from supplier labels.
- SLO 12D.15.1.3: Describe the importance of effective communication practices. (A3.1)

GLO 15.2: Apply knowledge and skills from mathematics.

- SLO 12D.15.2.1: Demonstrate the mathematical skills required to create vehicle repair estimates.
- SLO 12D.15.2.2: Demonstrate the correct use of ratios and proportions in the mixing of products.

GLO 15.3: Apply knowledge and skills from information and communication technology.

- SLO 12D.15.3.1: Identify the types of communication equipment and describe their operating procedures. (A3.2)
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GLO 15.4: Apply knowledge and skills from the **sciences**.

SLO 12D.15.4.1: Discuss the chemistry associated with refinishing products.

SLO 12D.15.4.2: Discuss the effects of overcatalyzing finishes.

Goal 16: Understand **career opportunities** and the **working environment**.

GLO 16.1: Describe **education, career opportunities, professional organizations, and working environments** related to collision repair and refinishing technology and associated fields.

SLO 12D.16.1.1: Write a resumé, and practise selling self. (A3.5)

SLO 12D.16.1.2: Create a portfolio, resumé, and cover letter that can be used to find employment in collision repair and refinishing technology and associated fields.

SLO 12D.16.1.3: Discuss wages and salaries for collision repair and refinishing technicians.

SLO 12D.16.1.4: Describe a variety of career opportunities related to collision repair and refinishing technology.

SLO 12D.16.1.5: Participate in a trade-related competition.

Goal 17: Demonstrate an awareness of **sustainability**.

GLO 17.1: Describe the effects of collision repair and refinishing technology on **human health and well-being**, including on tradespersons working in the field and those who use their services.

SLO 12D.17.1.1: Discuss long-term health concerns related to surface preparation and refinishing.

SLO 12D.17.1.2: Demonstrate the use of dust collection systems.

GLO 17.2: Describe collision repair and refinishing technology's **sustainability practices** and **impact on the environment**.

SLO 12D.17.2.1: Practise recycling materials.

SLO 12D.17.2.2: Discuss the effects of VOCs (volatile organic compounds) on the environment.

GLO 17.3: Describe **sustainable business practices** within collision repair and refinishing technology.

SLO 12D.17.3.1: Practise listening skills with customers. (A3.4).

Goal 18: Demonstrate an awareness of **ethical and legal standards** as they pertain to collision repair and refinishing technology.

GLO 18.1: Practise **ethical and legal standards** as they pertain to collision repair and refinishing technology.

No applicable SLOs.

Goal 19: Demonstrate **employability skills**.

GLO 19.1: Demonstrate fundamental **employability skills**.

SLO 12D.19.1.1: Demonstrate regular and punctual attendance.

SLO 12D.19.1.2: Demonstrate the ability to communicate respectfully and effectively with teachers, supervisors, co-workers, and students.

SLO 12D.19.1.3: Demonstrate accountability by taking responsibility for own actions.

SLO 12D.19.1.4: Demonstrate adaptability, initiative, and effort.

SLO 12D.19.1.5: Demonstrate teamwork skills.

SLO 12D.19.1.6: Demonstrate the ability to stay on task and use time effectively in class and work environments.

SLO 12D.19.1.7: Demonstrate the responsible use of wireless communication devices.

GLO 19.2: Demonstrate an awareness of **cultural proficiency** and its importance in the workplace.

SLO 12D.19.2.1: Role-play how to deal with challenging situations, and practise empathetic listening and response. (A3.3)

GLO 19.3: Demonstrate an understanding of the **business operation** of a collision repair and refinishing technology facility.

SLO 12D.19.3.1: Prepare a repair estimate.

GLO 19.4: Demonstrate **critical thinking skills** in planning, procedures, analysis, and diagnosis.

SLO 12D.19.4.1: Demonstrate critical thinking skills.

SLO 12D.19.4.2: Use a variety of strategies in order to diagnose and solve problems.

Goal 20: Demonstrate an understanding of the **evolution** of collision repair and refinishing technology, including its **technological progression and emerging trends**.

GLO 20.1: Describe the **evolution** of collision repair and refinishing technology, including its **technological progression and emerging trends**.

SLO 12D.20.1.1: Discuss the evolution of colour theory, including its technological progression and emerging trends.
