Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
Isulan Campus, Isulan Sultan Kudarat
College of Industrial Technology

AT 221– Body Repair and Painting

UNIVERSITY VISION

A leading University in advancing scholarly innovation, multi-cultural convergence, and responsive public service in a borderless Region.

UNIVERSITY MISSION

The University shall primarily provide advanced instruction and professional training in science and technology, agriculture, fisheries, education and other related fields of study. It shall also undertake research and extension services, and provide progressive leadership in its areas of specialization.

UNIVERSITY STRATEGIC GOALS

a. Deliver quality service to stakeholders to address current and future needs in instruction, research, extension, and production
b. Observe strict implementation of the laws as well as the policies and regulations of the University
c. Acquire with urgency state-of-the-art resources for its service areas
d. Bolster the relationship of the University with its local and international customers and partners
e. Leverage the qualifications and competences in personnel action and staffing
f. Evaluate the efficiency and responsiveness of the University systems and processes

INSTITUTIONAL OUTCOMES (IO)

a. Enhance competency development, commitment, professionalism, unity and true spirit of service for public accountability, transparency and delivery of quality services
b. Provide relevant programs and professional trainings that will respond to the development needs of the region
c. Strengthen local and international collaborations and partnerships for borderless programs
d. Develop a research culture among faculty and students
e. Develop and promote environmentally-sound and market-driven knowledge and technologies at par with international standards
f. Promote research-based information and technologies for sustainable development
g. Enhance resource generation and mobilization to sustain financial viability of the university

PROGRAM OUTCOMES (PO) COMMON TO ALL PROGRAMS AND ITS RELATIONSHIPS TO INSTITUTIONAL OUTCOMES

A graduate of the BIndTech program can:	INSTITUTIONAL OUTCOMES (IO)						
	a	b	c	d	e	f	g
a. Analyze broadly defined industrial technology processes by using analytical tools that enhance creativity, innovativeness, and intellectual curiosity to improve methods, processes, and systems that meet the industry standards;	✓	✓				✓	
b. Design and implement broadly defined industrial systems, components, products, or processes to meet specific industry needs with proficiency and flexibility in the area of specialization in accordance with global standards;	✓	✓		✓		✓	

c. Apply appropriate techniques, resources, and state-of-the-art industrial technology tools to meet current industry needs and use these modern tools and processes to improve and increase entrepreneurial activities upholding the safety and health standards of business and industry;	✓		✓	✓	✓		
d. Communicate with diverse groups of clienteles the appropriate cultural language with clarity and persuasion, in both oral and written forms, including understanding and giving of clear instructions, high comprehension level, effectiveness in delivering presentations and writing documents, and articulating technological innovation outputs;	✓	✓	✓	✓	✓		
e. Develop leadership and management skills in a team-based environment by making informed decisions, keeping the team motivated, acting and delegating responsibility, and inspiring positive changes in the organization by exercising responsibility with integrity and accountability in the practice of one's profession;	✓	✓	✓	✓	✓		
f. Practice the moral responsibilities of an industrial technologist to manage and balance wider public interest and uphold the norms and safety standards of the industrial technology profession;				✓	✓	✓	✓
g. Demonstrate enthusiasm and passion for continuous personal and professional development in broadly defined industrial technology and effecting positive changes in the entrepreneurial and industrial endeavor; and	✓	✓	✓	✓	✓	✓	✓
h. Recognize the need for, and an ability to engage in lifelong learning.	✓	✓	✓	✓	✓	✓	✓

1 **COURSE CODE** AT 221
2 **COURSE TITLE** Body Repair and Painting
3 **PREREQUISITE** AT 121
4 **CREDITS** 3 units

5 **COURSE DESCRIPTION**

This course deals basic tools, equipment, supplies and materials used in auto body repair and painting services. This will equip the students the basic techniques in auto body and chassis collision repair with hands on activity in performing jobs related to auto body repair and painting. This includes the observance and implementation of proper usage of PPE's, tools and equipment's.

6 **COURSE LEARNING OUTCOMES (CLO) AND ITS RELATIONSHIPS TO PROGRAM OUTCOMES**

Course Learning Outcomes (CLO)	Program Outcomes						
At the end of the course, a student can:	a	b	c	d	e	f	g
a. Understand SKSU-VGMO, Classroom Policies, Course Overview, Course Requirements and Grading System;	✓	✓	✓	✓	✓	✓	✓
b. Effectively use automotive fasteners and power tools while adhering to safety protocols and best practices.	✓	✓	✓	✓	✓	✓	✓
c. Accurately measure and assess structural damage in vehicles, applying appropriate repair techniques.	✓	✓	✓	✓	✓	✓	✓
d. Apply knowledge of collision repair methods to restore vehicle integrity and aesthetics.	✓	✓	✓	✓	✓	✓	✓
e. Demonstrate the ability to replace body parts, particularly plastic components, ensuring quality and fit.	✓	✓	✓	✓	✓	✓	✓
f. Operate spray guns proficiently for painting applications, ensuring even coverage and adherence to safety standards.	✓	✓	✓	✓	✓	✓	✓
g. Effectively mix and blend automotive paints to achieve desired colors and finishes, understanding color theory.	✓	✓	✓	✓	✓	✓	✓

h. Evaluate the quality of painted finishes, identifying defects and proposing solutions to achieve optimal results.						✓	✓	✓	✓	✓	✓	✓

7 COURSE CONTENTS

WEEK	CONTENT	INTENDED LEARNING OUTCOMES((ILOs)	TEACHING AND LEARNING ACTIVITIES (TLA)	OUTCOMES-BASED ASSESSMENT (OBA)	COURSE LEARNING OUTCOMES (CLOs)
1	**Course Orientation** *SKSU VMGO, Classroom Policies, Course Overview, Course Requirements, Grading System*	At the end of the week, the student can: a. Discuss the University's VMGO, classroom policies, course overview, requirements and grading system	Discuss the VMGO of the University, the classroom policies, scope of the course, course requirements and grading system	a. Participation in discussions	abcdefg
2	**Automotive Fasteners and Power Tools** a) Overview of automotive fasteners and their types b) Introduction to power tools used in automotive repair **c)** Safe operation and maintenance of power tools	At the end of the week, the student can: a) Identify different types of automotive fasteners. b) Demonstrate the safe use of power tools in automotive applications. c) Explain the maintenance requirements for automotive tools.	a. Hands-on demonstrations of fastener types and applications. b. Group activities practicing the use of power tools. c. Quizzes on fastener identification and tool safety.	a. Quiz b. participation	abcdefg
3	**Body Repair Tools Usage Demonstration** a) Overview of common body repair tools and their functions b) Demonstration of tool usage in real-world scenarios **c)** Safety measures when using body	At the end of the week, the student can: a) Identify and describe various body repair tools. b) Demonstrate proper usage techniques for body repair tools. c) Understand safety protocols related to tool usage.	a) Live demonstrations of body repair tool applications. b) Hands-on practice sessions with supervision. c) Group discussions on tool selection and safety.	a) Quiz results b) Hands-on application	abcdefg

	repair tools				
3	**Equipment and Process** a) Overview of equipment used in automotive repair b) Step-by-step processes for effective repairs **c)** Understanding workflow in a repair shop environment	At the end of the week, the student can: a) Identify key equipment used in automotive repair. b) Explain the repair processes from start to finish. c) Analyze workflow efficiency in repair operations.	a) Workshops on equipment setup and usage. b) Group discussions on improving workflow.	a) Quiz results	abcdefg
4	**Measuring Structural Damage and Collision Repair** a) Techniques for measuring structural damage b) Overview of collision repair methods **c)** Tools and equipment used in collision repair	At the end of the week, the student can: a) Assess structural damage accurately using measurement techniques. b) Explain the steps involved in collision repair. c) Identify tools used for collision repairs.	a) Hands-on measurements of structural damage. b) Simulated collision repair scenarios.	a) Quiz results b) Participation	abcdefg
5	**MIDTERM EXAM**				

6	**Body Parts and Plastic Replacement** a) Overview of body parts and their functions b) Techniques for plastic replacement in automotive repair c) Quality assessment of replaced parts	At the end of the week, the student can: a) Identify various body parts of an automobile. b) Demonstrate techniques for replacing plastic components. c) Assess the quality of replacements made.	a) Hands-on practice replacing body parts. b) Group activities assessing replacement quality. c) Discussions on sourcing and selecting parts.	a) Quiz results b) Group activity output	abcdefg
7	**Orientation in Spray Gun Use and Application of Painting Equipment** a) Introduction to spray guns and their components b) Techniques for using spray guns effectively c) Safety measures in painting applications	At the end of the week, the student can: a) Identify parts of a spray gun and their functions. b) Demonstrate proper spray gun operation techniques. c) Explain safety protocols when using painting equipment.	a. Live demonstrations of spray gun techniques. b. Hands-on practice using spray guns.	a) output and activity results b) quiz results	abcdefg
8	**Paint Mixing, Colour Blending/Coating** a) Principles of paint mixing and color blending b) Techniques for achieving uniform coatings c) Understanding paint types and	At the end of the week, the student can: a) Explain the process of paint mixing and color theory. b) Demonstrate techniques for effective color blending. c) Apply coatings uniformly on surfaces.	a) Workshops on paint mixing and color matching. b) Hands-on practice sessions with different paint types.	a. Hands-on application	abcdefg

	their applications				
9	**Solvent Material/Painting Application and Process/Painting Finish Evaluation** a) Overview of solvent materials used in painting b) Steps for effective painting application c) Techniques for ensuring proper adhesion and finish d) Techniques for identifying defects in finishes e) Best practices for achieving high-quality results	At the end of the week, the student can: a) Identify different solvent materials and their uses. b) Explain the painting application process. c) Discuss techniques for achieving a quality finish. d) Assess the quality of painted finishes using established criteria. e) Identify common defects and their causes.	a) Demonstrations of painting application techniques. b) Hands-on practice with various solvent materials. c) Hands-on evaluation of painted surfaces.	a. Hands-on application b. Participation	abcdefg
10	**FINAL EXAMINATION**				

Total No. of Hours : 54

8 COURSE REQUIREMENTS AND COURSE POLICIES

COURSE REQUIREMENTS

Each student is required to:

1. submit accomplished assignments, and activities;
2. participate actively in all discussion;
3. submit all the projects and activities; and
4. pass the major exams (midterm and final)

COURSE POLICIES

Attendance: A student will be marked late if he/she enters the class 5 minutes after start of class period. Any student who comes to class 15 minutes after the scheduled time shall be marked absent.

Missed work or exam: Any student who missed to submit a work assignment or to take a test should consult the concerned instructor for immediate compliance

Cheating and Plagiarism: Any student who committed any form of academic dishonesty (e.g., copy-paste plagiarism) shall be given disciplinary action provided in the SKSU Student's Handbook

Use of Technology: Cell phones should be turned off while the session is in progress. Using laptops, notebook PCs, smart phones, and tablets shall be allowed only when needed. A scientific calculator (e.g. Casio fx-991ES) shall be utilized in solving if applicable.

9 GRADING SYSTEM AND RUBRICS FOR GRADING

GRADING SYSTEM

Midterm Grade

Midterm Examination	45%
Attendance/ Class Participation	10%
Quizzes	10%
Project	20%
Report	15%
TOTAL	100%

Final Term Grade

Final Term Examination	45%
Attendance/Class Participation	10%
Quizzes	10%
Project	20%
Report	15%
TOTAL	100%

FINAL GRADE

Midterm Grade 50%

Final Term Grade 50%

TOTAL 100%

Materials used: Laptop, Powerpoint presentations and video clips
Books, Online slides, Teacher-made slides ,

References:

Miller, M. (2016). Automotive Body Repair and Painting.
Erjavec, J., & Thompson, R. (2019). Automotive Technology: A Systems Approach.
Collision Repair and Refinishing: A Fundamental Guide to Understanding the Repair of Collision-Damaged Vehicles
Anderson, W. J. (2018). Collision Repair and Refinishing.
D'Ambrosio, F. (2020). Automotive Paints and Coatings.
Halderman, J. D. (2020). Automotive Repair and Maintenance.
Brown, J. (2019). Spray Painting Techniques for Automotive Professionals.
Automotive Engineering: Lightweight, Functional, and Novel Materials
Kutz, M. (2018). Automotive Engineering: Lightweight, Functional, and Novel Materials.
DIY Auto Body and Paint Repair - How To Paint A Car. Youtube.com
D.I.Y. AUTO SCHOOL. Youtube.com

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5-14-25

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