



Faculty of Body Works



Curriculum with Course Syllabus

Department: OVEN BAKE SPRAY

Semester 1-4 | Core Courses + ATA 2040 Electives + SIWES + Capstone with Course Codes (OBS 101-OBS 405)

OBS 101 – Workshop Safety & Spray Booth Tools

Credit Hours	2 (1T/1P)
Course Description	Safety protocols, PPE, spray booth setup and airflow systems.
Syllabus / Topics	• Booth ventilation • PPE • Air filtration
Practical Activities / Lab Work	• Safety drills • Booth inspection • Airflow test
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Demonstrate safe spray booth practices.
Accreditation Mapping	NBTE NID Safety
AI/Future Module ↘	VR Spray Booth Safety Training

OBS 102 – Fundamentals of Automotive Paints

Credit Hours	3 (2T/1P)
Course Description	Types of automotive paints, primers, and coatings.
Syllabus / Topics	• Paint types • Primers • Coating systems
Practical Activities / Lab Work	• Paint mixing and testing
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Identify and apply automotive paints.
Accreditation Mapping	NBTE NID ASE



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AI/Future Module ↘

AI Paint Database

OBS 103 – Surface Preparation Techniques

Credit Hours	3 (1T/2P)
Course Description	Cleaning, sanding, masking, and priming.
Syllabus / Topics	• Cleaning • Sanding • Masking • Priming
Practical Activities / Lab Work	• Sanding panels • Masking exercises
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Prepare surfaces for painting.
Accreditation Mapping	NBTE NID IMI-UK
AI/Future Module ↘	AI Surface Prep Analyzer

OBS 104 – Color Theory & Paint Matching

Credit Hours	2 (1T/1P)
Course Description	Basic color principles, OEM codes, and paint matching.
Syllabus / Topics	• Color theory • Paint codes • OEM matching
Practical Activities / Lab Work	• Mix paint to OEM spec
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Match paint accurately to OEM standards.
Accreditation Mapping	NBTE NID ASE
AI/Future Module ↘	AI Color Matching System



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OBS E1 – VR Spray Painting Basics (ATA 2040 Elective)

Credit Hours	2 (0T/2P)
Course Description	Virtual training in spray painting techniques.
Syllabus / Topics	• VR training modules • Spray technique simulation
Practical Activities / Lab Work	• VR spray exercises
Assessment Methods	Project 100%
Learning Outcomes	Demonstrate basic spray techniques in VR.
Accreditation Mapping	NBTE Elective IMI-UK
AI/Future Module ↘	VR Spray Simulator

OBS 201 – Advanced Spray Painting Techniques

Credit Hours	3 (1T/2P)
Course Description	Base coat, clear coat, metallic, and pearl finishes.
Syllabus / Topics	• Base/clear system • Metallics • Pearls
Practical Activities / Lab Work	• Apply multi-layer coatings
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Apply advanced paint finishes.
Accreditation Mapping	NBTE NID ASE
AI/Future Module ↘	AI Spray Pattern Optimizer

OBS 202 – Oven Baking Technology

Credit Hours	2 (1T/1P)
Course Description	Heat curing, temperature control, curing ovens.
Syllabus / Topics	• Oven systems • Heat transfer • Cure cycles
Practical Activities / Lab Work	• Operate curing ovens • Bake painted panels
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Operate oven bake systems correctly.
Accreditation Mapping	NBTE NID IMI-UK
AI/Future Module ↘	IoT Temperature Control

OBS 203 – Spray Gun Technology & Maintenance

Credit Hours	2 (1T/1P)
Course Description	Spray gun design, calibration, and maintenance.
Syllabus / Topics	• Gun design • Calibration • Care
Practical Activities / Lab Work	• Disassemble and calibrate spray guns
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Maintain spray guns for quality finish.



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Accreditation Mapping	NBTE NID ASE
AI/Future Module ↘	Smart Spray Gun Sensors

OBS 204 – Defects & Paint Correction

Credit Hours	2 (1T/1P)
Course Description	Causes and solutions for defects like runs, sags, orange peel.
Syllabus / Topics	• Common defects • Correction methods
Practical Activities / Lab Work	• Repair paint defects
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Diagnose and correct paint defects.
Accreditation Mapping	NBTE NID ASE
AI/Future Module ↘	AI Defect Detection

OBS E2 – Digital Color Design (ATA 2040 Elective)

Credit Hours	2 (0T/2P)
Course Description	Use of CAD and AR tools for color styling.
Syllabus / Topics	• CAD for color • AR visualization
Practical Activities / Lab Work	• Create digital color styles
Assessment Methods	Project 100%
Learning Outcomes	Design car colors digitally.
Accreditation Mapping	NBTE Elective IMI-UK
AI/Future Module ↘	AR Color Studio

OBS 301 – SIWES Internship

Credit Hours	6 (0T/6P)
Course Description	Six-month supervised internship in auto spray workshops.
Syllabus / Topics	• Weekly logbook • Supervisor reviews
Practical Activities / Lab Work	• On-the-job tasks
Assessment Methods	Supervisor Report 50% Logbook 30% Oral 20%
Learning Outcomes	Apply spray and bake skills in industry.
Accreditation Mapping	NBTE SIWES ASE
AI/Future Module ↘	IoT Digital Logbook

OBS 401 – Capstone Project

Credit Hours	6 (0T/6P)
Course Description	Independent project in spray finishing, color innovation, or eco-paint.
Syllabus / Topics	• Proposal • Project execution • Defense
Practical Activities / Lab Work	• Build prototype finish • Report & defend



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Assessment Methods	Project 50% Report 30% Defense 20%
Learning Outcomes	Execute and defend innovation project.
Accreditation Mapping	NBTE NID ASE
AI/Future Module ↘	AI-Driven Color Prediction

OBS 402 – Special Effects & Custom Finishes

Credit Hours	3 (1T/2P)
Course Description	Candy, matte, chrome, hydro-dipping, wraps.
Syllabus / Topics	• Effect finishes • Hydro-dipping • Wrapping
Practical Activities / Lab Work	• Apply custom finishes
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Apply special effect finishes.
Accreditation Mapping	NBTE NID IMI-UK
AI/Future Module ↘	AI Custom Finish Visualizer

OBS 403 – Quality Control & Global Standards

Credit Hours	2 (1T/1P)
Course Description	Paint inspection, gloss meters, ISO/ASE standards.
Syllabus / Topics	• Inspection • Gloss meters • Standards
Practical Activities / Lab Work	• Perform QC checks
Assessment Methods	CA 20% Practical 40% Exam 40%
Learning Outcomes	Apply quality control checks.
Accreditation Mapping	NBTE NID ASE
AI/Future Module ↘	AI Quality Scanner

OBS 404 – Entrepreneurship in Automotive Paint

Credit Hours	2 (1T/1P)
Course Description	Business setup, marketing, customer service for paint shops.
Syllabus / Topics	• Business setup • Marketing • Finance
Practical Activities / Lab Work	• Draft business plan
Assessment Methods	CA 20% Business Plan 40% Exam 40%
Learning Outcomes	Develop a business plan for paint shop.
Accreditation Mapping	NBTE NID IMI-UK
AI/Future Module ↘	AI Market Analysis Tool

OBS 405 – Sustainable Paints & Eco Processes

Credit Hours	2 (1T/1P)
Course Description	Low-VOC paints, waterborne systems, eco-



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	curing.
Syllabus / Topics	• Eco paints • Waterborne systems • Green curing
Practical Activities / Lab Work	• Apply eco-paint
Assessment Methods	CA 20% Project 40% Exam 40%
Learning Outcomes	Apply sustainable paint practices.
Accreditation Mapping	NBTE NID IMI-UK
AI/Future Module ↘	AI Sustainability Checker

