

B.Voc Degree Programme in Automobile

The liberalization of the Indian industry has seen significant growth in the Indian Automotive Industry. As one of the fastest growing markets worldwide, India's automotive sector contributes majorly to the nation's manufacturing ecosystem. It also accounts for around 7% of the country's overall GDP while employing 32 million people, making it one of the largest creators of employment in the non-agricultural segment. However, technological and structural changes confronting the industry are a major challenge in ensuring its human resources are ready to keep pace with the market changes. Moreover, the advent of Industry 4.0 and the emergence of electric vehicles (EVs) remains one of the fastest rising global phenomena for the sector.

The sector has moderate direct employment and significant indirect employment; it is estimated that the sector provides direct and indirect employment to over 25 million people. Projected additional human resource requirement in Auto and Auto Components sector is estimated to be approximately 35 million till 2022.

The country is the largest manufacturers of motorcycles and the fourth largest producer of commercial vehicle. Grown at a spectacular rate on an average of 17% for last few years. Attained a turnover of USD \$35.8 billion. India overtook china by emerging as the fourth largest exporter of cars in the Asia

Structure and Components:

- Bachelor Degree in Automobile has been framed following the guidelines of National Skill Qualification Framework (NSQF) and the B. Sc. programme of Vidyasagar University (VU).
- The B. Voc. Programme comprises of both vocational and academic components.
- Vocational or skill component of the curriculum shall be examined at the end of each semester by the Automotive Skill Development Council (National Skill Development Corporation, Govt of India).
- Mahishadal Raj College is the only Govt sponsored college in West Bengal to become the NSDC Training Partner.
- The assessment for the General education component shall be done as per the schedule and guidelines of Vidyasagar University.



Year wise Curriculum of B.Voc in Automobile

First Year : NSQF Level - 5 (Diploma Standard)

	Module No	Vocational Content (Module name)	Hours /Credits Theoretical & Practical	General Content	Hours/Credits
SEMESTER - I	1	Introduction to Automobiles	10/0.7	Communication Skill	100/6.0
	2	Workshop & Safety Precaution	10/0.7		
	3	Equipments & Tools	15/1.00		
	4	System of Measurement	30/2.00		
	5	Basic ideas on engineering practices	40/2.9	Computer Skill	100/6.0
	6	Mechanical machines used in Automobile servicing and repair	40/2.9		
<p>Terminal Competency : 1.The students get knowledge and skill about the basics of automobiles-development, classification and anatomy. 2.Get knowledge on safety precaution at workshop and road safety while riding. 3.Will be familiar with the workshop equipments, tools and their uses. 4.Will become able to measure different parts required for servicing. 5.Will be familiar with workshop practices generally done in a garage. 6.Will get required knowledge and practice of the machining operation for repairing a vehicle.</p>					
SEMESTER - II	7	Introduction to Automobiles Engines	10/0.7	Geology (General / Pass Paper)	125/6.0
	8	Engine Construction	40/2.9		
	9	Engine Operating System	25/1.7		
	10	Ignition System	45/3.0		
	11	Lubricating system and its Function	25/1.7	Economics (General / Pass Paper)	125/6.0
	12	Cooling System	40/2.9		
	Basic Driving Skill		40/2.9		
	Internship at Industry Partners Workshop		180/10		
<p>Terminal Competency : 1.Get knowledge about the power units- automobile engines. 2. Become able to assemble & disassemble the engine. 3.Get the idea of finding and rectifying the problems of engine i.e. acquire diagnostic skills. 4. Get the knowledge of the necessity of car coolant and various type of coolant procedure and operation. 5. Will get the driving skill which is essential for a mechanic. 6.Through the internship the students will be able to act as Mechanic, Automobile repairs overhauls and services motor vehicle to keep them good running condition.</p>					
Total Vocational Content			550/36.0	Total General Content	450/24.0
Grand Total			1000 Hrs./60.0 Credits		

Job Role after successful completion of Sem-I & II (Level-5) - Assistant Mechanic



Second Year : NSQF Level - 6 (Advance Diploma Standard)

	Module No	Vocational Content (Module name)	Hours/Credits Theoretical & Practical	General Content	Hours/Credits
SEMESTER - III	13	Electrical, Electronic System and charging system	40/2.7	Communication Skill	75/5.0
	14	Vehicle Axle & Steering System	30/2.0		
	15	Clutches and Transmission System	40/2.7		
	16	Vehicle Suspension System	30/2.0	Computer Skill	75/5.0
	17	Brakes System	25/1.7		
	18	Vehicle Chassis System	35/2.3		
Terminal Competency: 1. Get knowledge on vehicle electrical & electronics system. 2. Get knowledge of the function of steering system & its components, axle & front wheel steering. 3. Will know about the transmission system, that is how gear shifting is done in to vehicles & its components function. 4. Can know the vehicle shock absorbing system & how it works, chassis spring suspension, fluid suspension and its parts & service. 5. Come to know the uses and functions of brake system. 6. Can know the base structure of vehicle & its repairing, denting & painting.					
SEMESTER - IV	19	Intake and Exhaust System	25/1.7	Geology (General / Pass Paper)	125/7.0
	20	Fuel Feed System	30/2.0		
	21	Fuel and Emission Control	25/1.7		
	22	Vehicle Wheels, Rims, Tyres	20/1.3	Economics (General / Pass Paper)	125/7.0
	23	Customer Handling Management	20/1.3		
	24	Marketing and Insurance	20/1.3		
	Internship at Industry Partners Workshop		300/13.3		
Terminal Competency: 1. Will be skilled in understanding importance of cleaned air required in engine and exhaust system, and how to overcome the pollution from the exhaust of an engine. 2. Will be skilled in fuel feeding system either by MPFI system or by CRDI system. 3. Will know the different types of fuel used in automobiles and their properties, how to control the emission and their norms. 4. Will be skilled in repairing different problems related to wheel and tyre. 5. Will be skilled in customer handling. 6. Will be able to work as an assistant in marketing of automobile.					
Total Vocational Content			640/36.0	Total General Content	400/24.0
Grand Total			1040 Hrs./60.0 Credits		
Job Role after successful completion of Sem-III & IV (Level-6) - Mechanic Automobile					



Third Year : NSQF Level - 7 (B.Voc Standard)

SEMESTER - V	Module No	Vocational Content (Module name)	Hours/Credits Theoretical & Practical	General Content	Hours/Credits
	25	Engine Testing	230/12.8	Economics (General / Pass Paper)	100/12.0
Terminal Competency: Will be skilled in Engine Testing and can perform Testing Jobs.					
SEMESTER - VI	26	Auto Electricals & Electronics	270/15.2	Geology (General / Pass Paper)	100/12.0
	Internship in Industry and Project		250/8.0	Communication /Personality Development	50/4.0
Terminal Competency: Will be skilled to handle any type of servicing and repairing of electrical and electronics problem. Trainees will be skilled about the controllers function in detail and skilled on diagnosis while connecting any software on CAR.					
Total Vocational Content			750/36.0	Total General Content	250/24.0
Grand Total			1000 Hrs./60.0 Credits		
Job Role after successful completion of Sem- V & VI - Automobile Technician					



General Rules

Continuous Assessment

The course is based on Choice Based Credit system as per UGC Guidelines. The 60% skill component (18 credits in each semesters) of the course will be assessed and certified by the respective Sector Skill Councils and 40% general education component will be assessed by the university on choice based credit system (12 credits in each semester). One credit will be awarded in terms of NSQF level certification which will have 60% weightage of total credits in the course in the following manner.

Name of the course	NSQF Level Certificate	Cumulative Credits
Diploma	Level - 5	36 Credits
Advance Diploma	Level - 6	72 Credits
B.Voc Degree	Level - 7	108 Credits

Eligibility Criteria :

The minimum Educational Qualification for admission to B.Voc Courses in any of the above five stream is Higher Secondary or Equivalent (10 + 2) pass from any recognized board. Those who have successfully cleared NSQF Level – 4 (Vocational) are eligible for Direct Admission to Level 5 of B.Voc Courses.

Maximum age limit for admission to any course is 35

Reservation Policy:

The reservation procedure is followed as per norms of Vidyasagar University.

Fees Structure:

Above B.Voc Courses are partially sponsored by the University Grants Commission. However, **Annual Course Fee is Rs. 10,000 (Rupees Ten Thousand)**, ie cumulative **Course Fee of Rs. 30,000 (Rupees Thirty Thousand)** for the entire Three Years (in Six Instalments) is payable to “ *Deen Dayal Upadhyay KAUSHAL Kendra, Mahishadal Raj College* ” through any online mode (PayTm/ Google Pay/ NEFT etc) to *SBI A/c No: 39519103556, IFSC Code: SBIN0001298*. The above Course Fee includes University Registration Fees, Assessment and Certification Fees, Consumable Cost for practical's, re-imbursement of cost to industry partner during internship etc.)

Application Procedure:

1. Application Forms for Admission to B.Voc Courses can be downloaded from College website on & from 08.05.2024 (Students of Vocational Stream and candidates have secured more than 60% in HS or Equivalent can directly fill up respective Admission Registration Form)
2. Fill up the forms with blue / black pen in capital letters. Keep no points blank
3. As per Notification from Higher Education Dept, Govt of West Bengal, “**No Application Processing Fee**” is required to pay along with the Application Form
4. Please scan duly filled up Application Form (Registration Form in case of Vocational Students and candidates have secured more than 60% in HS or Equivalent) in either pdf or jpg format and send to our Email: mrcbvocadmission2024@gmail.com or whatsapp the same to : 9733038150
5. After submission of Application form applicant will receive a ‘Submission and verification’ SMS to his/her registered Mobile Number.
6. Selected Candidates will be intimated about their selection and procedure of admission by SMS to their registered mobile number and Email.

Please contact Shri Susim Payra (Mob: 7908558567 / 9733038150) or Prof. Arnab Patra (9733216242) for any further query.

7. Merit List of the Selected Candidates will also be published in the College Website.