

# Ajay Kumar Garg Engineering College, Ghaziabad



## Bachelor of Vocation (B. Voc) Professional Degree Program



APPROVED BY



AFFILIATED TO



SKILLS PARTNER

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# Ajay Kumar Garg Engineering College

- Established in 1998, Approved by AICTE
- Affiliated to Uttar Pradesh State Technical University "AKTU".
- Accredited by NAAC & NBA (CS, ME, EC, EN, IT)
- Excellent Infrastructure and State of Art Laboratories.
- Excellent Academic Performance by Students.
- The only Institution in U.P. to have received approval from DST, Govt. of India, for establishment of Centre of Relevance and Excellence (CORE) in the field of Industrial Automation & Robotics.
- Skill Development Centre established in partnership with National Skill Development Corporation (NSDC)

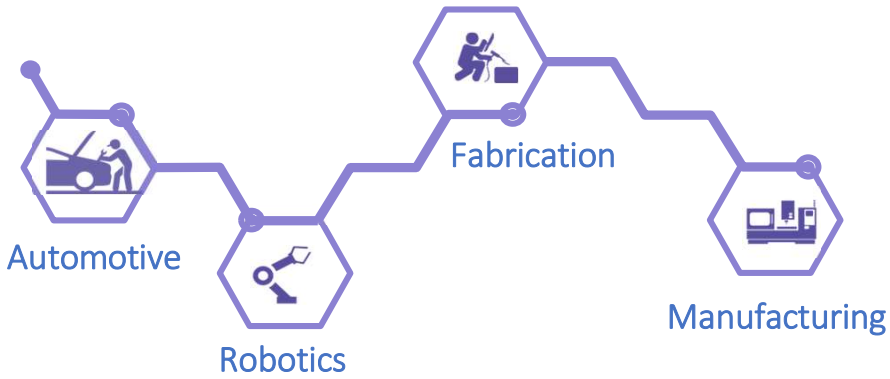


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# AKGEC SKILLS FOUNDATION – SKILLING PARTNER FOR B. VOC

Approved by NSDC, Ministry of Skill Development & Entrepreneurship, Govt. of India



**1** Operating Since 2009, Registered as Section 8 Company in 2015

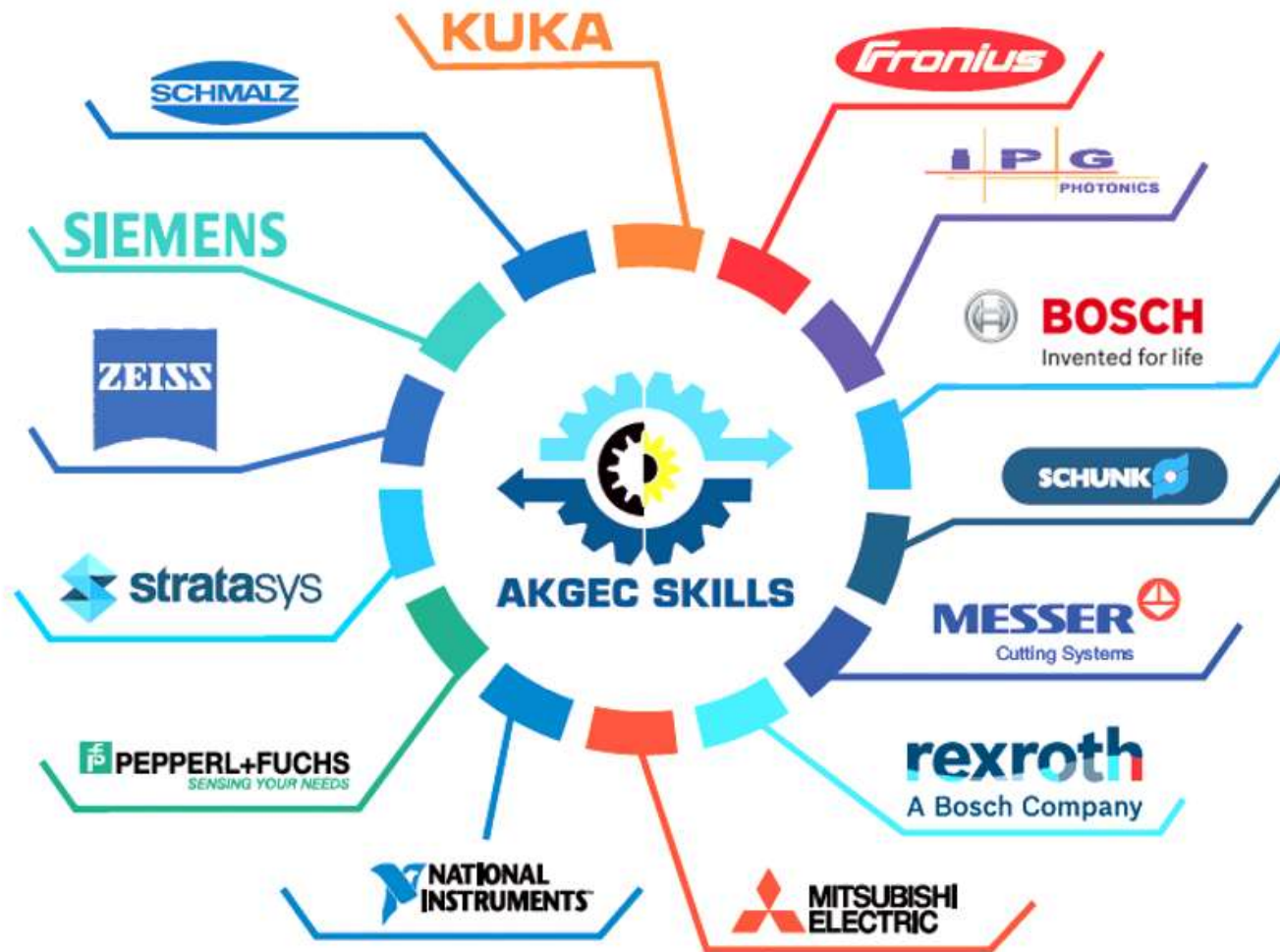
**2** Funded Partner of National Skill Development Corporation

**3** Active engagement with Global Industry Players

**4** Nine State of Art Centers of Competence

**5** 50,000 Sq.Ft. dedicated covered area

# Industry Partners



## The Program

# Bachelor of Vocation (B.Voc.)

## A Professional Program in Engineering

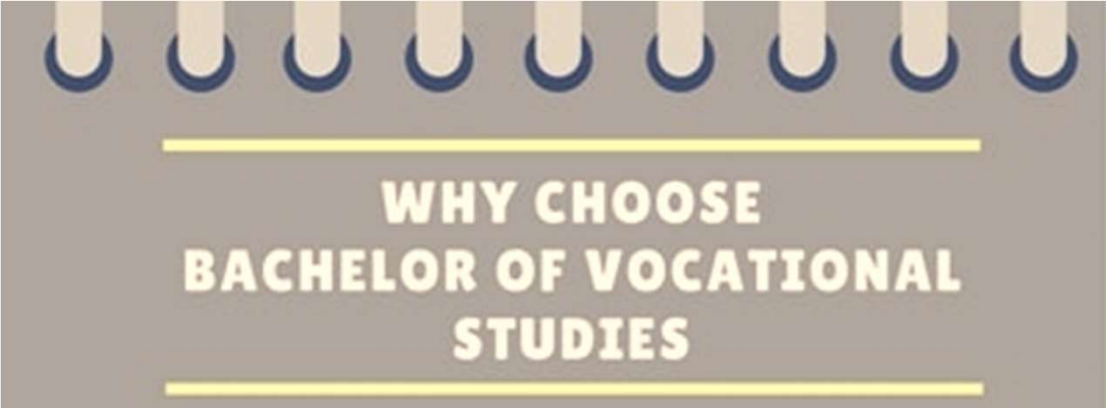
3-Years Course for Students who have completed their 12<sup>th</sup> Standard or Equivalent.

The main objective of this program is to provide a judicious mix of skills relating to a profession so that students become work ready after completion of course. The program structure includes :



- General Education Components (10%)
- Skill Education Components (70%)
- On Job Training Component ( 20%)

## The Program



### WHY CHOOSE BACHELOR OF VOCATIONAL STUDIES

Practical Learning on Industrial Machines

Skill Development through On the Job Training (OJT)

Focus on Technical Competency and Employability

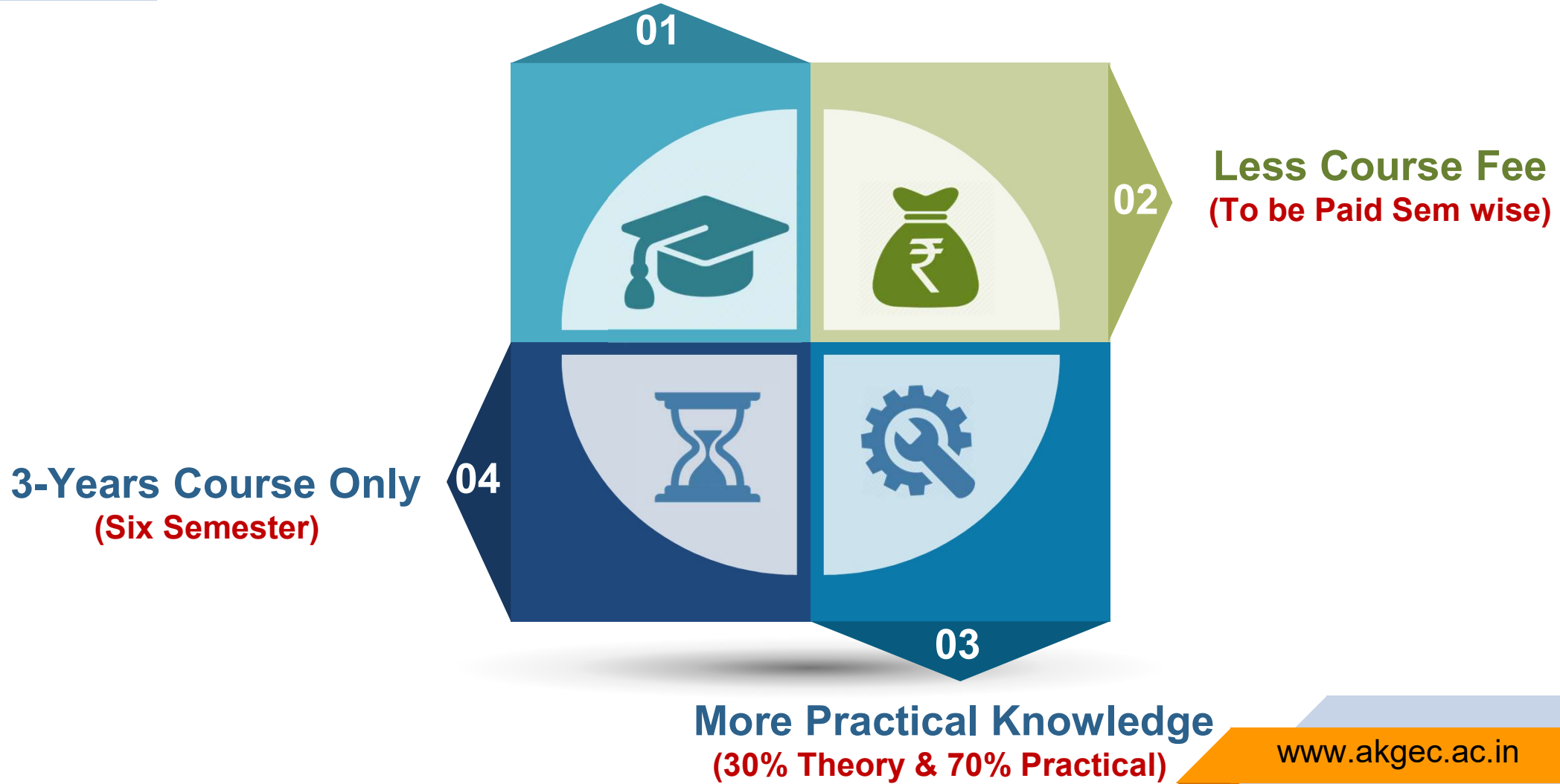
Exposure to Best Industrial Practices

Additional Certification as per NSQF (through NSDC, SSc )

Skill Development based Higher Education

## Key Features

### Skill Oriented Engineering Program (Bachelor Degree)



## Available Streams

**B. Voc**

**Production Engineering**  
**50 Seats**

**Automobile Servicing**  
**50 Seats**

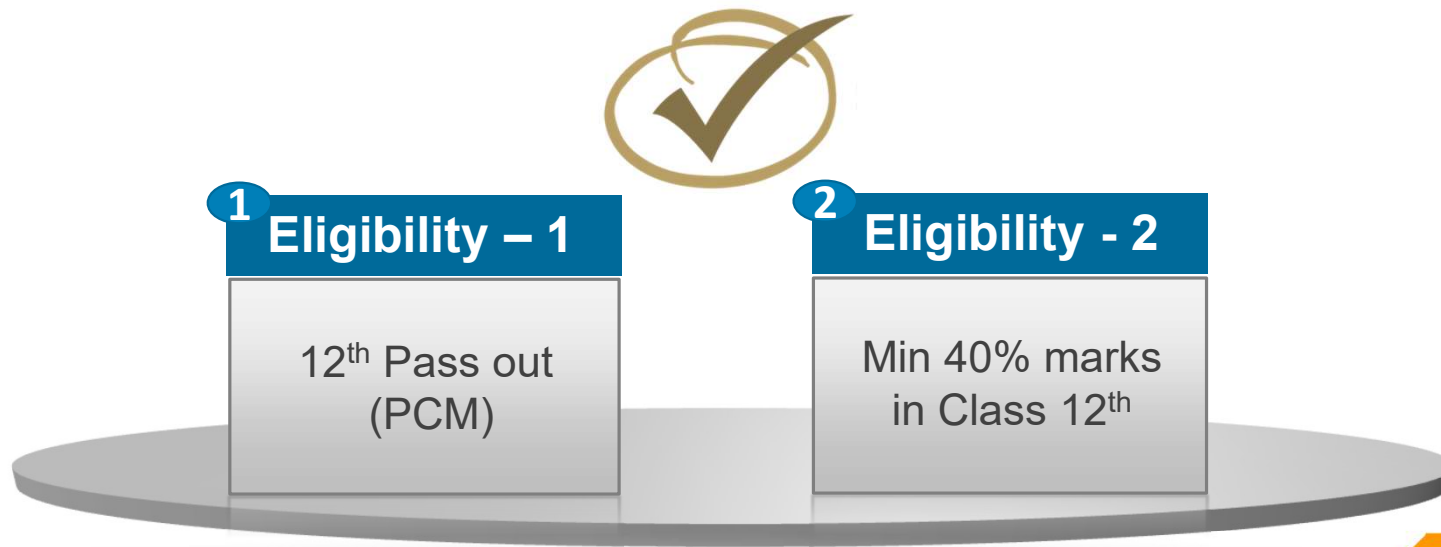




# Admission



- ✓ B.Voc Course Admission is done through UPSEE Counselling.
- ✓ Direct Admission at College Level.



## Fees & Scholarship



**Course Fee** - Rs. 50,000 per Year (Rs 25,000/- per Semester)



### Scholarship - 1

Rs 30,000/-

**Marks Above  
70%**



### Scholarship - 2

Rs 20,000/-

**Marks Above  
65%**



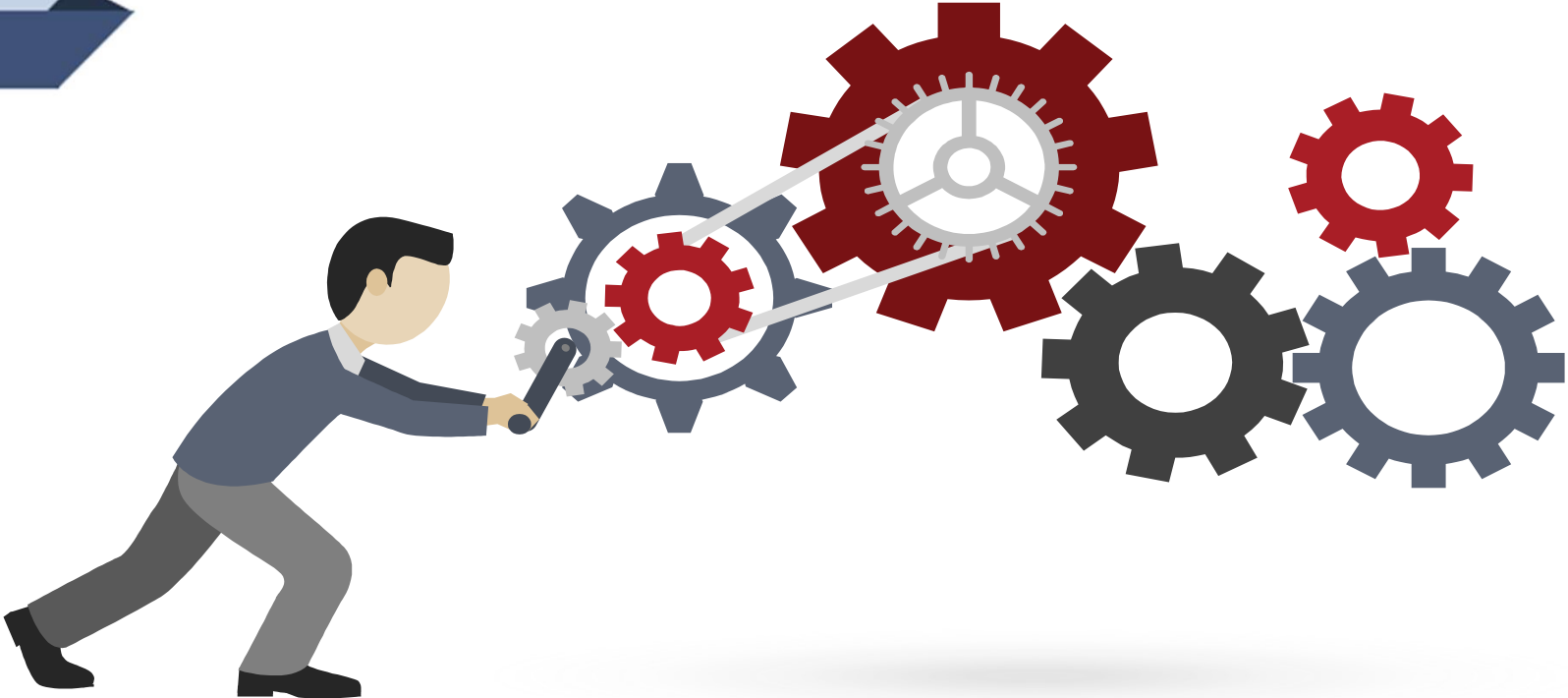
### Scholarship - 3

Rs 15,000/-

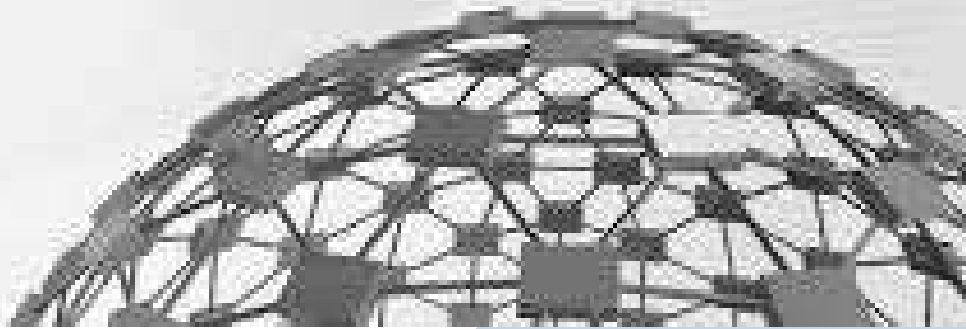
**Marks Above  
60%**

**Note :** > This scholarship is available only for first year based on PCM percentage.  
> Subsequent scholarship based on performance and merit in each semester.

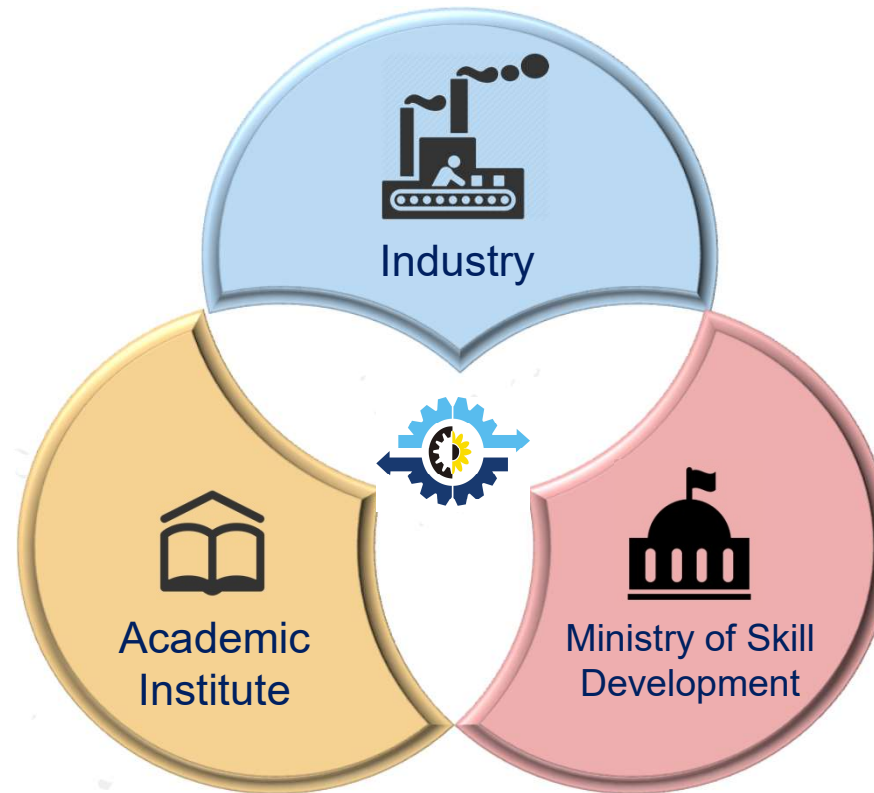
Infrastructure & Facilities



Infrastructure



## Concept of CoE



“Nucleated by Govt., nested by the Institution and nurtured by Stake Holding Industry Partners”



Advance  
Manufacturing



CNC Turning LT 16



CNC Milling MCV400



Drill Tap Spark E



CNC Turning TUTOR



Cylindrical Grinding



Controller Simulator



Universal Cylindrical Grinding Machine



CONTURA G2 - CMM



7- Axis Robo Milling Application



Advance  
Manufacturing



**LASER Engraving Machine**



**CNC Wood Router Machine**

Centre of Excellence



SHIFTING THE LIMITS



Advance Welding  
Technology



Virtual Welding Station



Master Trainer Demonstration Table



24 Welding Bays



Welding Stations





Advance Welding  
Technology



Trans Pocket Welding Station



Trans Steel Welding Station



Magic Wave Welding Station



Trans-TIG Welding Station



TPS Welding Station



Virtual Welding Station

Centre of Excellence



Advance Welding  
Technology



CNC Plasma Cutting Machine



SHIFTING THE LIMITS



NDT Lab

**Digital  
Manufacturing**





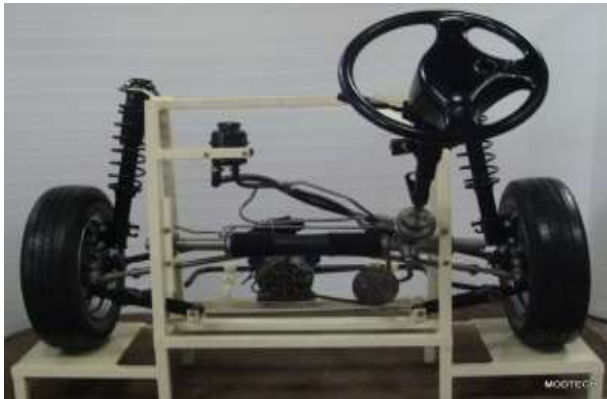
Additive  
Manufacturing



Centre of Excellence



Automotive  
Technologies



Centre of Excellence



Automotive  
Technologies



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# Student Placements



# Facilities

**FACILITIES @**   
**Campus**



**GYM**



**SPORTS**



**CANTEEN**



**RESOURCE CENTRE**



**Wi-Fi**



**FAITH CENTRE**



**ATM**



# Facilities

**FACILITIES @**   
**Campus**



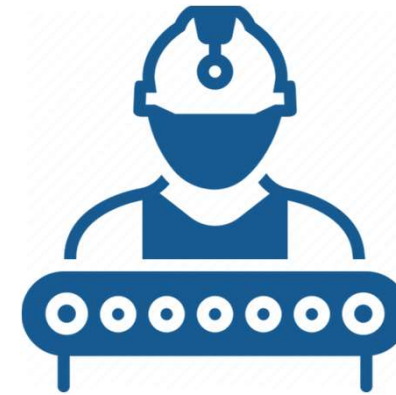
**Girls Hostel**



**Boys Hostel**

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## COURSE CONTENT



## COURSE CONTENT



# COURSE CONTENT



## Production Engineering -1<sup>st</sup> Year



S. NO	SUBJECTS – 1 <sup>st</sup> Semester	SUBJECTS – 2 <sup>nd</sup> Semester	OJT COURSE
1	Machine Tool Technology	Industrial Management	Metal Arc Welding (CSC/Q0204)
2	General Mechanical Engineering-I	Manufacturing Technology	MIG MAG or GMAW Welder (CSC/Q0209)
3	Production Technology	Material Science and Materials	Assistant TIG Welder (CSC/Q0212)
4	Metrology and Measuring Instruments	General Mechanical Engineering-II	CNC Setter Cum Operator (CSC/Q0120)
5	Metrology and Measuring Instruments Lab	Project	CNC Operator – VMC (CSC/Q0116)
6	Machine Tool Technology Lab	Basic Electricity and Electronics Lab	Any one training per semester 400 hrs / 8 weeks
7	Language Lab	Mechanical Workshop Practice Lab	

# COURSE CONTENT



## Production Engineering - 2<sup>nd</sup> Year



S. NO	SUBJECTS – 3 <sup>rd</sup> Semester	SUBJECTS – 4 <sup>th</sup> Semester	OJT COURSE
1	Metal Casting Technology	Mass Production Devices	Service Engineer – Installation (CSC/Q0501)
2	Production Automation & Computer Integrated Mfg.	Agile and Lean Manufacturing	Quality Inspector – Forged, Casted or Machined Component (CSC/Q0601)
3	Fundamental of Mechatronics	Metal Forming Processes	CNC Programmer (CSC/Q0401)
4	Machining and Machine Tools	Non-Conventional Machining	Maintenance Fitter – Mechanical (CSC/Q901)
5	Uni. Human Values & Ethics/ Env. & Eco.	Env. & Eco./Uni. Human Values & ethics	CNC Setter Cum Operator – VMC (CSC/Q0123)
6	Metal Casting Technology Workshop	Tool and Die Making Lab	Any one training per semester 400 hrs / 8 weeks
7	Mechatronics Lab	IT Tool Lab	

# COURSE CONTENT



## Production Engineering – 3<sup>rd</sup> Year



S. NO	SUBJECTS – 5 <sup>th</sup> Semester	SUBJECTS – 6 <sup>th</sup> Semester	OJT COURSE
1	Reliability, Maintenance & Safety Engineering	Rapid Prototyping and Reverse Engineering	Tool & Die Maker (CSC/Q0306)
2	Plant Layout and Product Handling	Production Planning and Control	Designer – Mechanical (CSC/Q0405)
3	Product Design and Manufacturing	Essence of Indian Traditional Knowledge / Indian Constitution	Service Engineer – Breakdown Service (CSC/Q0503)
4	CAD & CAM	Major Project	Any one training per semester 400 hrs / 8 weeks
5	Indian Constitution / Essence of Indian Traditional Knowledge		
6	CAD Lab		
7	CAM Lab		

# COURSE CONTENT



## Automobile Servicing - 1<sup>st</sup> Year



S. NO	SUBJECTS – 1 <sup>st</sup> Semester	SUBJECTS – 2 <sup>nd</sup> Semester	OJT COURSE
1	Motor Vehicle Technology -I	Modern Electric & Hybrid Vehicles	Automotive Service Tech. Level 5 (ASC/Q 1403)
2	Manufacturing Technology	Motor Vehicle Technology -II	Spare Parts Operations Exe Level 5 (ASC/Q 1502)
3	Automobile Electrical Equipment	Material Science and Materials	Industrial Engineer (Layout Design) (ASC/Q6401)
4	Two and Three Wheeler	Garage Org & Transport Mngt	Equipment Designer L5 (ASC/Q 6405)
5	Mechanical Workshop Practice lab	Project	Tool Designer (ASC/Q4001)
6	Basic Electricity and Electronics lab	Electric & Hybrid Vehicles Lab	Any one training per semester 400 hrs / 8 weeks
7	Language Lab	IT Tool Lab	

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# COURSE CONTENT



## Automobile Servicing - 2<sup>nd</sup> Year



S. NO	SUBJECTS – 3 <sup>rd</sup> Semester	SUBJECTS – 4 <sup>th</sup> Semester	OJT COURSE
1	Automobile Electrical System	Automobile Engine Systems	Automotive Service Technician Level 6 (ASC/Q1404)
2	Automobile Drawing & Design	Automotive Refrigeration and Air Conditioning	Automation Specialist (ASC/Q6807)
3	Automobile Engine Systems	Vehicle Performance and Testing	Assembly Line Machine Setter (ASC/Q3603)
4	Auto Body Repair, Denting & Painting	Electric and Hybrid Vehicles-II	Process Design Engineer (ASC/Q6404)
5	Uni. Human Values & ethics/Env. & Eco.	Env. & Eco./Uni. Human Values & ethics	Quality Controller (ASC/Q1605)
6	Automobile Workshop - I	Automotive RAC Lab	Any one training per semester 400 hrs / 8 weeks
7	Auto Body Repair, Denting & Painting Workshop	Vehicle Performance and Testing Lab	

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# COURSE CONTENT

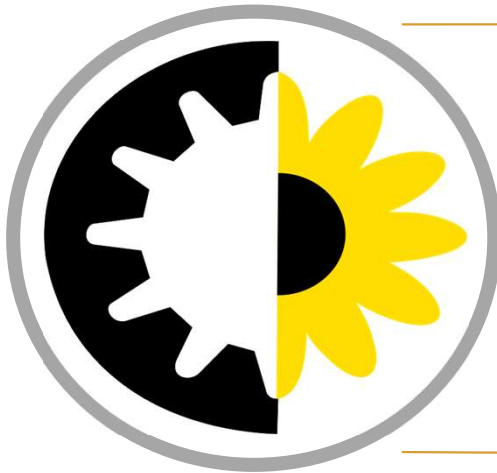


## Automobile Servicing – 3<sup>rd</sup> Year



S. NO	SUBJECTS – 5 <sup>th</sup> Semester	SUBJECTS – 6 <sup>th</sup> Semester	OJT COURSE
1	Automotive System Design	Automobile Maintenance Service & Repairs - II	Spare Parts Operations In charge (ASC/Q1503)
2	Alternative Fuel & Emission Control	Off-road Vehicles	Body Shop In-Charge (ASC/Q1413)
3	Automobile Maintenance Service & Repairs - I	Essence of Indian Traditional Knowledge / Indian Constitution	Service Supervisor (ASC/Q1412)
4	Auto NVH	Automobile Workshop - I	Testing Manager (ASC/Q8405)
5	Indian Constitution / Essence of Indian Traditional Knowledge		Product Design Manager L7 (ASC/Q8103)
6	Automobile Workshop - II		Any one training per semester 400 hrs / 8 weeks
7	Design of Automotive Systems Lab		





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## **AJAY KUMAR GARG ENGINEERING COLLEGE**

(Affiliated to Dr. APJ Abdul Kalam Technical University, Lucknow, UP)

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