

Hindusthan College of Engineering and Technology

(Approved by AICTE, New Delhi, Accredited with 'A' Grade by NAAC,
An Autonomous Institution, Accredited by NBA, Affiliated to Anna University, Chennai)
Othakkalmandapam, Coimbatore-641032, www.hindusthan.net

Academic Audit (Academic year: 2017-2018)

Name of the Department : Automobile Engineering

Year of Establishment : 2014

Programmes offered by the Department

UG & Year of Establishment	PG & Year of Establishment
B.E. Automobile Engineering & 2014	NIL

VISION

To impart quality education and offer cutting edge technology in automobile engineering to develop competent and socially responsible automobile engineers.

MISSION

To inculcate complete and fashionable principles of Automobile Engineering and developing skills that will enable graduates to become leaders who can make noteworthy contributions to their profession and to the social environment, Instilling the highest ethical standards and sense of professionalism.

Program Educational Objective (PEO)

PEO1: The programme will prepare graduates for successful carrier in Plan, design, create, construct, develop and maintain to improve automobile engineering systems and research that are technically sound, economically feasible and socially acceptable to enhance quality of life.

PEO2: The programme will prepare graduates for applying analytical and computational modern techniques to address the challenges occupied in the core and allied engineering streams.

PEO3: The programme will prepare graduates with leadership skills, entrepreneurial and self-learning capabilities to excel in their profession.

PEO4: The programme will prepare graduates with exhibit professionalism, ethical attitude, team spirit and pursue lifelong learning to achieve career and organizational goals.

Program Outcomes (PO)

PO1: An ability to apply knowledge of mathematics, basic science and engineering to analyze, design and evaluate automotive components and systems.

PO2: An ability to identify, formulate and analyze the problems related to vehicle design, manufacturing, engine performance, flow resistance and maintenance engineering.

PO3: An ability to design an automobile system and process to meet standard specifications with due consideration for safety and environment.

PO4: An ability to design and conduct of experiments and apply knowledge to analyze and interpret the data for inferring valid conclusions.

PO5: An ability to implement the techniques, programming skills and latest computer aided engineering tools for modeling, simulation and analysis of complex automobile engineering problems.

PO6: An ability to analyze the local and global impact of modern technologies on individual organizations, society and culture.

PO7: Apply knowledge of contemporary issues to investigate and solve problems with a concern for sustainability and eco-friendly environment.

PO8: Exhibit responsibility in professional, ethical, legal, security and social issues.

PO9: An ability to comprehend and write effective reports, design documentation, develop effective presentations and give as well as receive clear instructions.

PO10: An ability to involve multidisciplinary activities effectively as an individual and as a member or a leader in diverse teams.

PO11: An ability to engage in independent and life-long learning for personal and societal development.

PO12: An ability to apply management principles and techniques individually/ collaboratively in project planning, implementation and control.

Program Specific Outcomes (PSO)

PSO1 Graduate using the knowledge of basic science, professional theory, advanced software and tools for diagnosis the systems for technical and social perspectives through a broad area in automotive sector.

PSO2 Acquire the working knowledge and analyse new technical challenge and advancements in the automotive industry.

4. Number of the Faculty Members

Male	Female	Total
12	0	12

Designation	Required as per norms	Available	Vacant if any
Professor	1	1	Nil
Associate Professor	-	-	Nil
Assistant Professor	11	11	Nil
Total	12	12	Nil

5. Faculty profile with name, qualification, designation and experience

S.No	Name of the Faculty	Qualification	Designation	Years of Experience
1.	Dr.C.Sabarinathan	PhD	Professor & Head	15
2.	Mr.J.Yogaraja	M.TECH	Assistant Professor	10
3.	Mr.Naresh Mallireddy	M.E	Assistant Professor	10
4.	Mr.J.Krishnaraj	M.E	Assistant Professor	7
5.	Mr. M. Samuel gemsprim	M.E	Assistant Professor	8
6.	Mr.C. Udayakumar	M.E	Assistant Professor	3
7.	Mr.E.Anandprabhakaran	M.E	Assistant Professor	2
8.	Mr.Anandsai	M.E	Assistant Professor	2
9.	Mr.K.Maniraj	M.E	Assistant Professor	4
10.	Mr.P.Meenakshi Sundaram	M.E	Assistant Professor	3
11.	Mr.M.Palanisamy	M.E	Assistant Professor	6
12.	Mr.P.Manikandan	M.E	Assistant Professor	1

6. Number of the Faculty Members awarded in the current Academic Year

	Full Time	Part Time	Total
PDF	Nil		
PhD			
Recognized Guides			
Others			

7. Number of Faculty Members Pursuing in the current Academic Year

	Full Time	Part Time	Total
PDF	Nil	Nil	Nil
PhD	Nil	4	4
Recognized Guides	Nil	1	1
Others	Nil	Nil	Nil

8. List of visiting Fellows/ Adjunct Faculty

S.No	Name of visiting /Teachers, Adjunct and Emeritus Professors	Designation/Address
NIL		

9. Professional Body Membership details of Faculty Members

S.No	Name of Faculty	Membership in professional bodies	Membership Number
1.	Dr. C. Sabarinathan	IEI	AM098143-8
2.	Mr. J. Yogaraja	IEI	M-1676061
3.	Mr. Naresh Mallireddy	IWS	L01319

10. Information about research grants, projects completed / ongoing during the current year from National funding Agencies only (like AICTE, UGC, CSIR, DST, DBT, & others etc.,)

S.No	Name of the principal Investigator & CO-Investigator	Title of the project	Funding Agency, Duration & Date of Sanction	Amount (in Lakh)	Completed/ On-going
NIL					

11. Awards / Prizes /recognitions received by teachers at national and international level / professional societies

S. No	Name of Students	Date of Award	Name of the Award	Name of the Professional Society
Nil				

12. Details of faculty members who acted as resource persons for Orientation courses, Seminars, Guest Lectures ,Workshops, Conferences at national and international levels (Outside the parent institutions)

S.No	Name of Staff	Date	Title of the FDP/Seminar/ Workshop/STTP/ Training program	Name of Organizing Institute	Place
NIL					

13. Participation of faculty members in various academic activities as members of committees at other Institutions like BoS, Academic Council, etc.,

S. No	Name of the Faculty Members	Name of the body / committee the teacher participated
NIL		

14. Details of faculty members appointed/nominated on Editorial Boards of peer reviewed journals/ International conferences

S. No	Name of the Faculty Members	Name of Editorial Boards of peer reviewed journals &National/International conference
NIL		

15. Details of Number of Research Scholars Produced & On-going Details:

S.No.	Name of the Faculty	Awards			PhD		Projects		
		State	National	International	Produced	On going	Major	Minor	Amount (inRs.)
1.	Dr Sabarinathan C	-	-	-	-	7	-	-	-

16. Details of Seminars / Conferences/ Workshops /Guest Lectures organized by the faculty members with funding from Government / NGOs / Management

S. No	Name of Conference / Seminars / Workshops / Guest Lectures	Date	No. of beneficiaries	Funding agency
1	Emerging Trends in Design	21.07.2017	150	Management
2	National Level Dirt Bike Event "Throttle Out 2017"	07.10.2017	120	Management
3	Application of CFD in Automotive Industry	10.02.2018	145	Management
4	Industry 4.0 and Augmented Reality	23.02.2018	160	Management
5	Mercedes Benz Feature Enhancements and Enrichments	16.03.2018	155	Management

17. Details of the Faculty Members attended Training on both Industry and Academia

S. No	Date	Name of the Faculty	Name of the Industry	Outcomes of the visits
NIL				

18. Details of the Faculty Members participated in FDP/Seminar/Workshop/STTP/ Training program

S.No	Name of Staff	Date	Title of the FDP/Seminar/Workshop/STTP/ Training program	Name of Organizing Institute	Place
Workshops					
1.	Mr.M.Samuel Gemsprim	17.08.2017	an International workshop on 'Writing and Publishing Research papers in High Impact factor Journals'	Hindusthan college of Engineering and Technology,.	Coimbatore
Seminars					
1.	Naresh Mallireddy	14.09.2017	The future of applied biomechanics in human body	P A College of Engg & Tech	Pollachi
2.	Mr.Samuel Gemsprim M	14.09.2017	ICMR sponsored national seminar on 'The future of Applied Biomechanics in Human Body'	P.A. college of Engineering and Technology, Pollachi.	Pollachi

FDPs/SDPs					
1.	Mr.Naresh Mallireddy	13.06.2017 To 18.06.2017	Instructional Model for Outcome Based Education	Hindusthan College of Engineering and Technology	Coimbatore
2.	Samuel Gemsprim M	13.06.2017 To 18.06.2017	Instructional Model for Outcome Based Education	Hindusthan College of Engineering and Technology	Coimbatore

19. Details of Papers/ Journal Publications /conferences

S.No.	Name of the Faculty	Journals			Conference			Publications with Impact/ISSN/ISBN	
		International	National	State	International	National	State	Books	Articles
1.	Dr Sabarinathan C	2	-	-	-	-	-	-	-
2.	Mr.Samuel Gemsprim M	-	-	-	2	-	-	-	-

* Proof of First page of Journal details are to be attached separately

20. Number of Academic support staff (technical) and administrative staff

S.No	Name	Designation	Qualification	Experience
1.	S Muthuvigneshwaran	Lab Technician	DME	1
2.	M.ThamaraiSelvan	Lab Technician	DAE	1
3.	M.Krishnasamy	Lab Technician	HSC	23

21. MoU's Details

S.No	Name of the Company	Year of MoU signed
1	M/s Ambal Autos – Maruthi Authorized Dealer	2017

22. Academic Toppers Details

S.No	Name of the Student	Class & Section	Percentage
1.	Mr. Sethumadhavan J	II	8.03
2.	Mr. Mohankumar	III	7.6
3.	Mr. Wilson Jebakumar	IV	8.05

23. Student Placement Details

Total number of students	Total number of eligible students	Total number of placed students	Percentage of Placed
70	40	28	40%

* List are to be attached separately

24. Student Higher Studies Details

Name of students doing higher studies (UG to PG)	Name of students doing higher studies (PG to PhD)	Name of students inside India	Name of students outside India
NIL			

(B) CURRICULAR ASPECTS

1. Year in which the present syllabi has been revised: 2016
2. Course /Topics included in the revised syllabus: Yes
3. Curriculum & Syllabus standard on par with National/International standard benchmark following CBCS, OBE, and Blooms Taxonomy concepts: Yes
4. Is overall curriculum and Syllabus focus towards Institutional Graduate Attributes: Yes

S.NO	Descriptions	Y/N
1	Standard of the syllabi	Y
2	Relevance of the syllabus for Industrial Need	Y
3	Standard of Electives	Y
4	Standard of Learning resources used	Y
5	Course Objectives and Outcomes	Y
6	Mapping done on par with Course Outcome	Y
7	Focus of curriculum and Syllabus towards Institutional Graduate Attributes	Y
8	Standard of Counselling records	Y
9	Industrial visits up to the mark of need based technology	Y
10	Digital tool usage in syllabi	Y
11	Consulting Industrial experts to frame curriculum and Syllabus	Y
12	Consulting Academic experts to frame curriculum and Syllabus	Y
13	Consulting Alumni to frame curriculum and Syllabus	Y

Comments : 1. Standard of syllabus was good
 2. According to Programme Specific outcome, Subjects were coined.
 3. BOS Constituted with industry, Academic expert and Present Final Year students.

(C)TEACHING, LEARNING AND EVALUATION

S.NO	Descriptions	Y/N
1	Academic Calendar	Y
2	Allotment of teaching Hours for each subject is sufficient	Y
3	Maintenance of log book	Y
4	Standard of delivering the lectures by the staff members	Y
5	Sufficient number of assignment/seminars delivered by the students in each subject	Y
6	List of Learning resources available	Y
7	Coverage of the syllabus in time	Y
8	Content beyond the syllabus	Y
9	Usage of ICT tools	N
10	Mapping done on par with Program outcomes and Course Outcomes	Y
11	Mapping done on par with Program Specific outcomes and Course Outcomes	Y
12	Standard of Question paper	Y
13	Result analysis	Y
14	Is proper corrective action initiated	Y
15	Level of Remedial records	Y
16	Periodical department discussion of academic progress [Minutes of meeting]	Y
17	Industrial visits organized	Y
18	Special attention taken on slow learners/remedial record	Y
19	Feedback analysis 1. Parents Feedback 2. Students Feedback 3. Employee Feedback 4. Academic Experts Feedback	Y

Comments : 1. In the Advisory file student data is missing and same is rectified.
 2. Few regular absent students were marked as present and they were rectified.
 3. many missing Attendance in e-campus are found and those entries were entered in e-campus and the same is verified.

(D) INFRASTRUCTURAL FACILITIES

S.NO	Infrastructural facilities	Y/N
1	Adequate No. of Class Rooms/ Staff Room	Y
2	Adequate No. of books	Y
3	Adequate No. of Periodicals/Journals	Y
4	Adequate No. of Teaching Aids	Y
5	Adequate No. of Computers in the Lab	Y
6	Adequate Laboratory Equipment and facilities	Y
7	Adequate Budget/ Fund allotted to the Department	Y
Comments : 1. As per the syllabus of university norms lab space and equipments are available. 2. Consumables registers need to be updated.		

1. Details of the laboratories in the department

S.No	Name of the Laboratory	Area (m ²)
1.	Automotive Components Laboratory	60 m ²
2.	Automotive Fuels and Lubricants Laboratory	60 m ²
3.	Two And Three Wheeler Laboratory	60 m ²
4.	Automotive Electrical and Electronics Laboratory	60 m ²
5.	Vehicle Maintenance Laboratory	60 m ²
6.	Engine Performance and Emission Testing Laboratory	60 m ²
Others (Research Labs / Centre of Excellence, etc.)		
NIL		

2. List of major equipment (value more than Rs.50,000)

S. No	Name of the lab	Name of the Item/Equipment/instrument	Make / Size	Quantity	Cost / Nos.	Total Cost
1.	Automotive Components Laboratory	Multicylinder diesel engine with cut section working model	TATA	01	65000/ 01	65000.00
2.		Light duty vehicle chassis working model	TATA 407	01	2,96,000/ 01	2,96,000.00
3.	Automotive Fuels and Lubricants Laboratory	Junkers gas calorimeter	Unique lab	01	90,450/01	90,450.00
4.		Ried vapour pressure test apparatus	Unique lab	01	52,870/01	52,870.00
5.		Copper strip corrosion test	Unique lab	01	58,500/01	58,500.00
6.	Two And	Computerised two wheeler chassis	Micromech instruments	01	2,32,762/01	2,32,762.00

	Three Wheeler Laboratory	dynamometer				
7.		Coil spring/ shock absorber test rig	Micromech instruments	01	60,666/01	60,666.00
8.		Chain tension test rig	Micromech instruments	01	58,649/01	58,649.00
9.	Automotive Electrical and Electronics Laboratory	Auto electrical test bench with power supply	Micromech instruments	01	68521/01	68521.00
10.	Vehicle Maintenance Laboratory	Engine Analyzer	Micromech instruments	01	141600/01	141600.00
11.	Vehicle Maintenance Laboratory	Cylinder Reboring Machine	Micromech instruments	01	61905/01	61905.00
12.	Vehicle Maintenance Laboratory	Valve Grinding Machine	Micromech instruments	01	51330/01	51330.00
13.		Valve Lapping Machine	Micromech instruments	01	60180/01	60180.00
14.		Fuel Injection Calibration Tester Bench With Nozzle Tester	Micromech instruments	01	141000/01	141000.00
15.		Wheel Alignment Apparatus	Micromech instruments	01	142857/01	142857.00
16.	Engine Performance and Emission Testing Laboratory	Emission measuring instruments for petrol engines (gas analyser)	Micromech instruments	01	1,97060/01	1,97060.00
17.		Emission measuring instruments for diesel engine	Micro mech instruments	01	1,41,600/01	1,41,600.00
18.		Two wheeler engine test rig with electrical loading	Micro mech instruments	01	97,200/01	97,200.00
19.		Automotive multi cylinder SI engine test rig with heat balance arrangement –eddy current loading	Micro mech instruments	01	3,50,000/01	3,50,000.00
20.		Automotive multi cylinder CI engine test rig with heat balance arrangement – Hydraulic loading	Micro mech instruments	01	3,70,000/01	3,70,000.00
21.		Four stroke engine cylinder test rig with piezo electric	Micro mech instruments	01	4,25,000/01	4,25,000.00

		pickup, charge amplifier, angle encoder and PC				
--	--	--	--	--	--	--

3. Details of new labs established in the current academic year

S.No	Name of the lab	Name of the Item/Equipment/instrument	Make / Size	Quantity	Cost / Nos.	Total Cost
NIL						

4. Details of Departmental Library (Vol., books, journals etc.)

Books	Journals	
	International	National
NIL	NIL	

(E) STUDENT SUPPORT, PARTICIPATION AND PROGRESSION

S.No	Description	Y/N
1	The student's grievances record	Y
2	Counselling by outside source	Y
3	Committee for prevention of ragging (Dept./college) ?	Y
4	Efforts taken for placement of students – Placement	Y
5	Students awareness of competitive avenues like GATE, CSIR, various entrance examinations for Ph.D. admission and students fellowships	Y
6	Register for alumni of the department with their addresses-Alumni register	Y
7	Class Committee Meeting	Y
8	Peer Group Meeting	Y
9	Coaching for students for skills training by outside experts/by teachers	Y
Comments : 1. Students records are well maintained.		

1. Current AY results of students at UG

Year		Sem	Appeared	Passed	Pass %	Sem	Appeared	Passed	Pass %
IV	2017-2018	ODD	70	42	60	EVEN	70	67	95.7
III			71	16	23		69	17	25
II			61	27	44.26		61	33	54.1
I			62	36	58.06		62	36	58.06

2. Awards and Prizes received by students at various events conducted at University, state, national and international level

S. No	Register Number	Name of Student	Date of Award	Name of the Award / Prize	Level (University, State, National and International level)	Organizer
1.	72071410 2313	Mr. Naveenraju A C	3-5 Oct 2017	Gold	South Asian Silambam championship	South Asian Silambam Federation
2.			24 and 26 Feb 2018	Gold (Silambum)	National Silambam Championship	World Silambam Federation
3.			24 and 26 Feb 2018	Bronze (Vall Veechu)	National Silambam Championship	All India Silambam Federation
4.			24 and 26 Feb 2018	Gold (Nedukambu veechu)	National Silambam Championship	All India Silambam Federation

3. Details of students projects /Funds

S. No	Name of the Student	Class	Name of Project	Fund received Y/N	Amount in (Rs.)
Nil					

4. Details of industrial visits organized for the students

S. No	Date	Name of the Company	Class	No. of participants	Outcomes of the visits
1.	23.09.2017	Auto Expo 2017	III	71	Students Learn the various new model and latest technology adopted in the Vehicles
2.	19.08.2017	G D Naidu Museum	II	60	Students can able to see the Vitage vehicles model and its functions
3.	19.08.2017	M/s Redlands Ashlyn Motors	III	60	Students can able to learn the various farming equipment and its applications
4.	29.07.2017	G D Naidu Museum	IV	60	Students can able to see the Vitage vehicles model and its functions

5. List the distinguished alumni of the department

S.No.	Batch	Name of Alumni	Designation	Name of organization/Company
NIL				

6. Drop out Student Details:

S.No	Name of the Student	Year of Drop out	Reason for the Drop out
1.	Arun S	II Year	Lack of attendance
2.	Kishore P	II Year	Lack of attendance

(F) ACADEMIC SUPPORT ACTIVITIES

S. No	Description	Y/N
1	Graduate Exit Survey	N
2	Course Exit Survey	N
3	CO/PO attainment level	Y
4	Course Information Sheet	Y
5	Course File	Y
6	Time Table File	Y
7	Department Newsletter	Y
8	External Experts visits to the Department	Y
9	Discipline Committee	Y
10	Department Budget File	Y
11	Elective/Open Elective File	Y
12	Department Minutes of Meeting File	Y
13	Best Practices	Y
14	Department Extension Activities	Y
15	First aid supplies in department	Y

Comments : 1. Course file documents and contents are well organized.
2. Bill copies need to be added in the budget file for utilization source documents.

Declaration by the Head of the Department

I am aware that the above information provided by the department will be validated by the Academic Audit committee during the visit.

Date: 30.05.2018

External Academic Audit Committee

Signature of the team *C. Senthil Kumar* 30/5/2018

Mr. C. Senthil Kumar
Associate Professor,
Department of Mechanical Engineering.
SNS College of Technology,
Mob: 9487558267

C. Senthil Kumar
Head of Department with seal
Dr. C. SABARINATHAN,
Professor & Head,
Department of Automobile Engg.,
Hindusthan College of Engg. & Technology,
Coimbatore - 641 032.