

A Report
on
Seven Day FDTP on AT6604 Vehicle Dynamics
(23rd – 30th November, 2016)

Approved by
Anna University, Chennai



Organized by



Department of Automobile Engineering
Sri Venkateswara College of Engineering
Pennalur, Sriperumbudur Taluk
Tamil Nadu-602 117

REGISTRATION FORM

Faculty Development Training Programme

on

AT6604 VEHICLE DYNAMICS

23rd to 30th November 2016

1. Name:
2. Age and DoB:
3. Designation:
4. Name of the Institution:
5. Institution Affiliated to Anna University:
Yes/No
6. Address for Communication:

7. Official Address:
E-mail:
Phone:
8. Subjects Handled in last Two years:

9. Professional Experience(in years)
Industry: Teaching:

Signature of the Applicant

DECLARATION

The information furnished by me is true to the best of my knowledge. I agree to abide by the rules and regulation governing the FDTP. If selected, I shall attend the program for the entire duration.

Date :

Place :

Signature of the Applicant

SPONSORSHIP

Dr./Mr./Ms.....,
an employee of our institution is hereby allowed to attend the FDTP on "AT6604- Vehicle Dynamics", approved by Anna University, Chennai. He/She will be permitted to attend the program for the entire duration, if selected.

Signature of the HOD/Principal

Date :

Place :

Registration form can be sent by post/email.

Email/Mobile:

vinaganesh@svce.ac.in / 9841214374
jvenkat@svce.ac.in / 9444339292

SEVEN DAY FDTP

ON

AT6604 VEHICLE DYNAMICS

23rd to 30th November 2016

REGISTRATION FORM

Co-ordinators

Dr. V. Ganesh & Dr. J. Venkatesan



Approved by

Anna University
Chennai

Organized by



Department of Automobile Engineering
Sri Venkateswara College of
Engineering

(Autonomous - Affiliated to Anna University)
Pennalur, Sriperumbudur (Tk) - 602 117
Tamil Nadu, India

Phone: 044 27152000, Extn: 450

ABOUT THE COLLEGE

Sri Venkateswara College of Engineering (SVCE), a premier self-financing engineering college was started in the year 1985 and is managed by Sri Venkateswara Educational and Health Trust. The college conducts 10 UG Programmes, 10 PG Programmes in Engineering/Technology. The courses are approved by AICTE and affiliated to Anna University, Chennai. The college is accredited by National Assessment and Accreditation Council (NAAC). The college is situated in a quiet environment about 37 km from Chennai and situated on Chennai–Bangalore National Highway (NH4) at Pennalur, in Sriperumbudur taluk, Kancheepuram district.

ABOUT THE DEPARTMENT

The department of Automobile Engineering was established in the year 1999 with a mission to educate and impart technical knowledge to the students to become globally competent in the field of Automobile Engineering. It has well-qualified and self motivated faculty members with relevant experience in their area of specialization.

The department is equipped with most modern and state of art laboratories like Engine testing, Automotive components, Automotive Electrical and Electronics, Vehicle Maintenance and Re-conditioning, 2 & 3 Wheeler, Automotive Fuels and Lubricants, CAD/CAM, etc. The department is also equipped with 2/3/4 Wheeler Chassis Dynamometer to simulate the vehicle in on-road condition. The department provides consultancy services to research scholars and automotive industries in the field of engine performance and emission testing using alternate fuels with the help of advanced instruments like AVL Pressure pickup, Angle encoder and Data acquisition system. The department is accredited by NBA.

ABOUT THE FDTP

The FDTP is approved by Anna University, Chennai. All topics of the syllabus of the forthcoming semester subject **AT6604-Vehicle Dynamics** will be covered.

TOPICS TO BE COVERED

- Vibrations concepts and its response analysis
- Vibration absorber, Torsional vibration, Critical speed
- Tire force and moments, their properties and vibrations
- Calculation of maximum acceleration and reaction forces for different drives
- Study and analysis of Vertical Dynamics. Lateral dynamics, longitudinal dynamics and control
- ABS, Stability control, Traction control
- Hands-on training on Latest softwares for solving Vibration problems

REGISTRATION FEE

The course is offered by the Anna University, Chennai with **free of cost** to the faculty members of Anna University, Chennai and its affiliated colleges.

The registration form can be downloaded from college web site, www.svce.ac.in. The registration is **restricted to 25**, with first come first basis. No TA/DA will be provided. The participants can use the college bus for to and fro journey.

ORGANIZING COMMITTEE

CHIEF PATRON: Vice-Chancellor,
Anna University,
Chennai.

PATRON: Dr. S. Ganesan,
Registrar,
Anna University,
Chennai.

CHAIR: Dr. K. Shanthi,
Director, CFD

Dr. D. Sridharan,
Addl. Director, CFD

CO CHAIR: Dr. S. Ganesh
Vaidyanathan,
Principal, SVCE
Dr. J. Venkatesan
HoD-Automobile Engg.

CO-ORDINATORS:
Dr. V. Ganesh,
Associate Professor,
Department of Automobile
Engineering

Dr. J. Venkatesan,
Professor,
Department of Automobile
Engineering

VENUE: Department of Automobile
Engineering,
Sri Venkateswara College
of Engineering

IMPORTANT DATES:

Submission of Application : 18.11.16

Intimation of selection : 21.11.16

Confirmation by Participants : 22.11.16

SRI VENKATESWARA COLLEGE OF ENGINEERING
Pennalur, Sriperumbudur Taluk

Department of Automobile Engineering

Report on

Anna University approved Seven Day FDTP on AT6604 Vehicle Dynamics
(23rd – 30th November 2016)

The Department of Automobile Engineering organized a Seven Day Faculty Development Training Programme on **AT6604 Vehicle Dynamics** from 23rd to 30th November 2016 approved by Centre for Faculty Development, Anna University, Chennai. The Programme was inaugurated by Dr. K.S. Badrinathan, Dean-Educational Development, Sri Venkateswara College of Engineering. He delivered inaugural address about how vehicle dynamics plays a key role in day-to-day life when driving the vehicle on road.

Twenty five Lecture sessions including Tutorials with the help of MATLAB and one Laboratory session covering all the major topics prescribed in the syllabus, were conducted (List enclosed). These technical lectures and laboratory classes were handled by the Senior Faculty members from Sri Venkateswara College of Engineering and Outside Colleges.

This programme was organized in view of upgrading the knowledge of teachers working in affiliated Institutions of Anna University, Chennai in the field of Vehicle Dynamics. Twenty Five Faculty members (External and Internal) participated in FDTP (List enclosed).

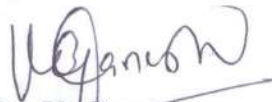
The participants expressed their full satisfaction through Feedback. The lecture sessions and the practical sessions were very much appreciated by the participants. The program was very well received by the participants.

The programme ended with valedictory function presided by Dr. S. Ramesh Babu, Head of the Department, Mechanical Engineering, Sri Venkateswara College of Engineering. He delivered valedictory address on the importance of FDTP.

As a concluding note, we express our heartfelt thanks to the Director-CFD, Anna University for giving an opportunity and the management of SVCE for their supports for the conduct of the programme.



Dr. J. Venkatesan,
FDTP Coordinator
Professor & Head
Department of Automobile
Engineering



Dr. V. Ganesh
FDTP Coordinator
Associate Professor
Department of Automobile
Engineering

Dr.J.VENKATESAN, M.E.,Ph.D.
Professor & Head
Department of Automobile Engineering
Sri Venkateswara College of Engineering
Pennalur, Sriperumbudur Taluk-602 117
Tamil Nadu, India

SRI VENKATESWARA COLLEGE OF ENGINEERING
Pennalur, Sriperumbudur Taluk

Department of Automobile Engineering

Anna University approved Seven Day FDTP on AT6604 Vehicle Dynamics

Duration: November 23rd – November 30th 2016

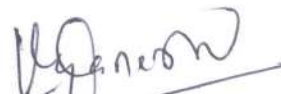
List of Participants

S. No	Participant Name	Designation	College Name
1	Mr. Hariharan C	Assistant Professor	Easwari Engineering College
2	Mr. Fakkir Mohamed	Assistant Professor	Mookambigai College of Engineering
3	Mr. Senthilmurugan A	Assistant Professor	RVS Technical Campus, Coimbatore
4	Mr. Jagadesh D	Assistant Professor	Sriram Engineering College
5	Mr. Subramanian P.M	Assistant Professor	Rajalakshmi Engineering College
6	Mr. Nanthakumar A.J.D	Assistant Professor	Rajalakshmi Engineering College
7	Dr. Bhaskar K	Assistant Professor	Rajalakshmi Engineering College
8	Mr. Gowtham R	Assistant Professor	Rajalakshmi Engineering College
9	Mr. Manivarmaa S.N	Assistant Professor	Velammal Engineering College
10	Mr. Thennarasu P	Assistant Professor	Velammal Engineering College
11	Mr. Kalidass K	Assistant Professor	Rajiv Gandhi College of Engineering
12	Mr. Pavendhiran S	Assistant Professor	Rajiv Gandhi College of Engineering
13	Mr. Jagan S	Assistant Professor	Rajiv Gandhi College of Engineering
14	Mr. Sivasankar K	Associate Professor	Jeppiaar Maamallan Engineering College
15	Mr. Anthony G	Assistant Professor	Jeppiaar Maamallan Engineering College

16	Mr. Muthukumar T	Assistant Professor	Jeppiaar Maamallan Engineering College
17	Mr. Boobalan V	Assistant Professor	Jeppiaar Maamallan Engineering College
18	Mr. Paul Durai K	Assistant Professor	Sri Venkateswara College of Engineering
19	Mr. Kumaraguru K.E.K	Assistant Professor	Sri Venkateswara College of Engineering
20	Mr. Ravi G	Assistant Professor	Sri Venkateswara College of Engineering
21	Mr. Ravindar Rao E	Assistant Professor	Sri Venkateswara College of Engineering
22	Mr. Boobalasantilraj A.K	Assistant Professor	Sri Venkateswara College of Engineering
23	Mr. Dhanabal J	Assistant Professor	Sri Venkateswara College of Engineering
24	Mr. Ramanjeyalu Kolla	Assistant Professor	Sri Venkateswara College of Engineering
25	Mr. Sakthivel R	Assistant Professor	Sri Venkateswara College of Engineering



Dr. J. Venkatesan
FDTP Coordinator



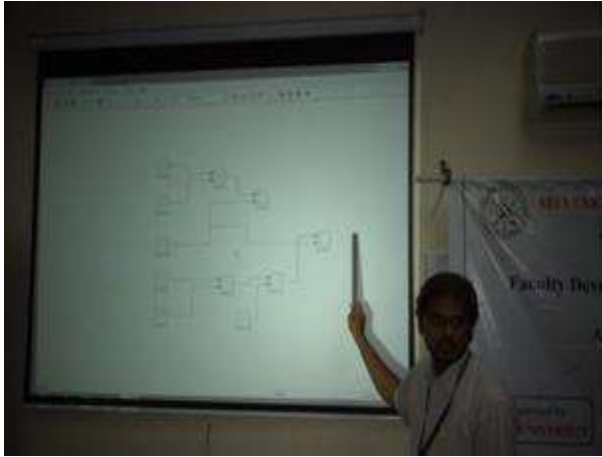
Dr. V. Ganesh
FDTP Coordinator

Dr.J.VENKATESAN, M.E.,Ph.D.

Professor & Head

Department of Automobile Engineering
Sri Venkateswara College of Engineering
Pennalur, Sriperumbudur Taluk-602 117
Tamil Nadu, India

**Photographs of “A Seven day Faculty Development training Programme on Vehicle Dynamics”
between 23/11/2016 and 30/11/2016**



Dr. Ganesh V delivering a lecture on MATLAB



Dr. Ganesh V delivering a lecture



Dr. Venkatesan delivering a lecture



Participants of FDTP on Vehicle Dynamics



Dr. J. Janci Rani delivering a lecture



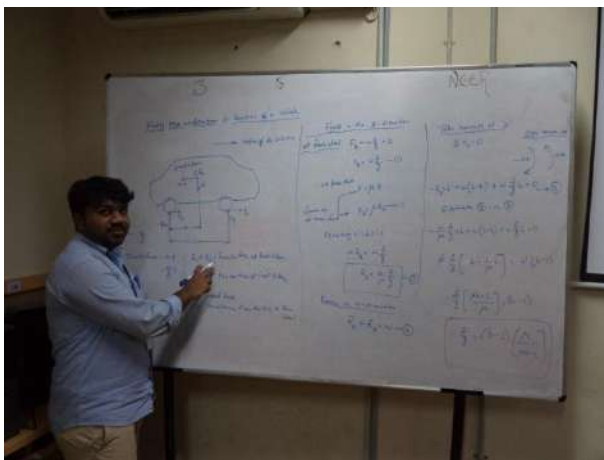
Mr. J. Dhanabal delivering a lecture



Mr. T. Vijaya Kumar delivering a lecture



Dr. K. Arunachalam delivering a lecture



Mr. Ramananjanyulu Kolla delivering a lecture



Mr. Sakthivel delivering a lecture



Dr. K.S. Badrinathan delivering Inaugural address



Dr. S. Ramesh babu delivering valedictory address



Mr. A.J.D Nantha Kumar delivering a lecture



Dr. S. Ramesh demonstrating about Vibration Analysis in a Laboratory.

List of Faculty Members and Topics Covered

S. No	Resource Person	Topics Covered
1	Dr. J. Venkatesan Professor and Head Department of Automobile Engineering Sri Venkateswara College of Engineering Sriperumbudur	Torsional vibration, Critical speed Tutorial 4
2	Dr. V. Ganesh Associate Professor Department of Automobile Engineering Sri Venkateswara College of Engineering Sriperumbudur	Introduction to Vehicle Dynamics Aerodynamic forces and moments. Equation of motion , Tire forces, Rolling resistance, Definitions, Modeling and Simulation, Global and Vehicle Coordinate System, Free Undamped and Damped Vibration , Tutorial 2, Tutorial 5- Vehicle Vibration analysis using MATLAB, Tutorial 5- Vehicle Vibration analysis using MATLAB, Stability of vehicle on banked road, Tutorial 7 - Dynamic analysis using MATLAB, Tutorial 8 - Dynamic analysis using MATLAB, Tutorial 10- Dynamic analysis using MATLAB, Tutorial 12- Dynamic analysis using MATLAB, Tutorial 13- Dynamic analysis using MATLAB
3	Mr. Ramanjaneyulu Kolla Assistant Professor Department of Automobile Engineering Sri Venkateswara College of Engineering Sriperumbudur	Load distribution for three wheeler and four wheeler, Calculation of Maximum acceleration, Reaction forces for Different drives, Forced Undamped and Damped Vibration Response Analysis of Single DOF, Two DOF, Tutorial 3

4	Mr. R. Sakthivel Assistant Professor Department of Automobile Engineering Sri Venkateswara College of Engineering Sriperumbudur	Prediction of Vehicle performance. ABS, stability control, Traction control, Tutorial 1 using MATLAB, Transmissibility, Vibration absorber, Vibration measuring instruments
5	Mr. T. Vijaya Kumar Assistant Professor School of Mechanical Engineering VIT University Vellore-632 014	Tire forces and moments, Tire structure, Longitudinal and Lateral force at various slip angles, rolling resistance, Tractive and cornering property of tire. Performance of tire on wet surface. Ride property of tires, Estimation of tire road friction. Test on Various road surfaces. Tire vibration
6	Mr. J. Dhanabal Assistant Professor Department of Automobile Engineering Sri Venkateswara College of Engineering Sriperumbudur	Steady state handling characteristics, Tutorial 9, Steady state response to steering input. Testing of handling characteristics, Transient response characteristics
7	Dr. J. Janci Rani Professor Department of Production Technology MIT Campus, Anna University, Chennai	Human response to vibration Design and analysis of Passive suspension
8	Mr. A.J.D. Nanthakumar Associate Professor Rajalakshmi Engineering College Thandalam, Chennai	Design and analysis of Semi-active, Active suspension using Quarter car, half car and full car model - Tutorial 11
9	Dr. K. Arunachalam Associate Professor Department of Automobile Engineering MIT Campus, Anna University, Chennai	Influence of suspension stiffness, suspension damping, tire stiffness, Air suspension system and their properties, State space problem.

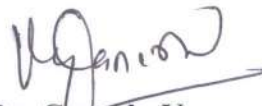


Dr. J. Venkatesan
FDTP Coordinator & HoD

Dr.J.VENKATESAN, M.E.,Ph.D.

Professor & Head

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Dr. Ganesh. V
FDTP Coordinator