



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

Name of the Event	Lean and six sigma in the digital age
Date	22-07-2019 & 23-07-2019
Resource Person	Dr. Vettrivel Gnaneswaran, Professor, Department of Mechanical and Industrial Engineering, University of Wisconsin-Platteville, Platteville, USA
Venue	Wright Brothers Engineering Hive

A Report on Two day FDP on “Lean and Six Sigma in the Digital Age”

The Department of Mechanical Engineering is organized a two-day faculty development programme (FDP) on **Lean and Six Sigma in the Digital Age** during 22nd and 23rd of July, 2019, for the benefit of Mechanical Engineering faculty members and outside participants (Industry & Institution). Dr. Vettrivel Gnaneswaran, Department of Mechanical Engineering and Industrial Engineering, University of Wisconsin-Platteville, Platteville, USA, is the resource person and provided insight knowledge on a variety of lean and six sigma concepts. Twenty-three faculty members from various institutions are participated in the programme, which improved their knowledge on Lean and six sigma. All participants have given a positive feedback about the FDP.



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**School of Mechanical & Construction
Department of Mechanical Engineering**

08 July 2019

Ref: Vel Tech/SoMCE/DoME/FDP/2019-20/01

Submitted to the Vice Chancellor

The Department of Mechanical Engineering would like to organize a Two Day Faculty Development Programme (FDP) on **Lean and Six Sigma in the Digital Age** for the Faculty members of Mechanical Engineering and outside participants (Industry & Institution) on 22nd & 23rd July, 2019. Dr. Vettrivel Gnaneswaran, Department of Mechanical and Industrial Engineering, University Plaza, USA has given consent to be as an expert speaker for this FDP. Permission may please be granted to organize the FDP on the above said dates. The detailed budget proposal is enclosed herewith for your kind reference and approval.

Conveners

1. Dr. M. Siva Kumar, Professor/Mech
2. Dr. N. Lenin, Asso. Professor/Mech

[Handwritten signatures and dates]
8/7/19

[Handwritten signature]
HOD - Mech 8/7

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Two Day Faculty Development Programme on Lean and Six Sigma in the Digital Age

REGISTRATION FORM

Name :
Qualification :
Designation :
Sex :
Experience : Teaching Yrs, Industry Yrs
Organization :
Communication :
Address :

Pincode :
Phone numbers(With STD Code) :
(Off)
(Res)
Mobile :
E-mail :

The above details are to be filled during
online registration through the link:

www.veltech.edu.in/LSS19



DECLARATION OF THE CANDIDATE

The given information is true to the best of my knowledge. I agree to abide by the rules and regulations governing the programme. If selected, I shall attend the programme.

Place:
Date:

Signature of the candidate

SPONSORSHIP

Dr./Prof./Mr./Ms..... is an employee of our institution and hereby sponsored. He/She will be permitted to attend the programme, if selected.

Date:

Signature of the sponsoring authority with office Seal

Address for Communication

Convenor

Prof. Dr. A. T. Ravichandran
Dean - SOMC & HOD Mechanical

Coordinators

Dr. M. Siva Kumar & Dr. N. Lenin
Department of Mechanical Engineering
Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology,
Avadi, Chennai, Thiruvallur District, Tamil Nadu.
Pin code – 600 062.
Phone: Off: 044-26840332
Mobile: 9976909647, 9659599970
Website: www.veltech.edu.in/LSS19
E-mail : drleeninn@veltech.edu.in

Passionate • Doers



Vel Tech
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R&D Institute of Science and Technology
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Two Day Faculty Development Programme on LEAN AND SIX SIGMA IN THE DIGITAL AGE

22.07.2019 & 23.07.2019



Organized by
Department of Mechanical Engineering



Vel Tech
Rangarajan Dr. Sagunthala
R. D. T. Group of Science and Technology
(Known for the Excellence in Education)

Cordially invites you for the inauguration of

LSS' I9

Faculty Development Programme on

LEAN AND SIX SIGMA IN THE DIGITAL AGE

22nd & 23rd July 2019

10:00 AM | Wright Brothers Engineering Hive



Resource Person
Dr. Vettrivel Gnaneswaran

Professor,
Department of Mechanical and
Industrial Engineering,
University of Wisconsin-Platteville,
Platteville, USA

In the presence of

Col. Prof. Vel. Dr. R. Rangarajan
Founder Chancellor & President

Dr. Sagunthala Rangarajan
Foundress President

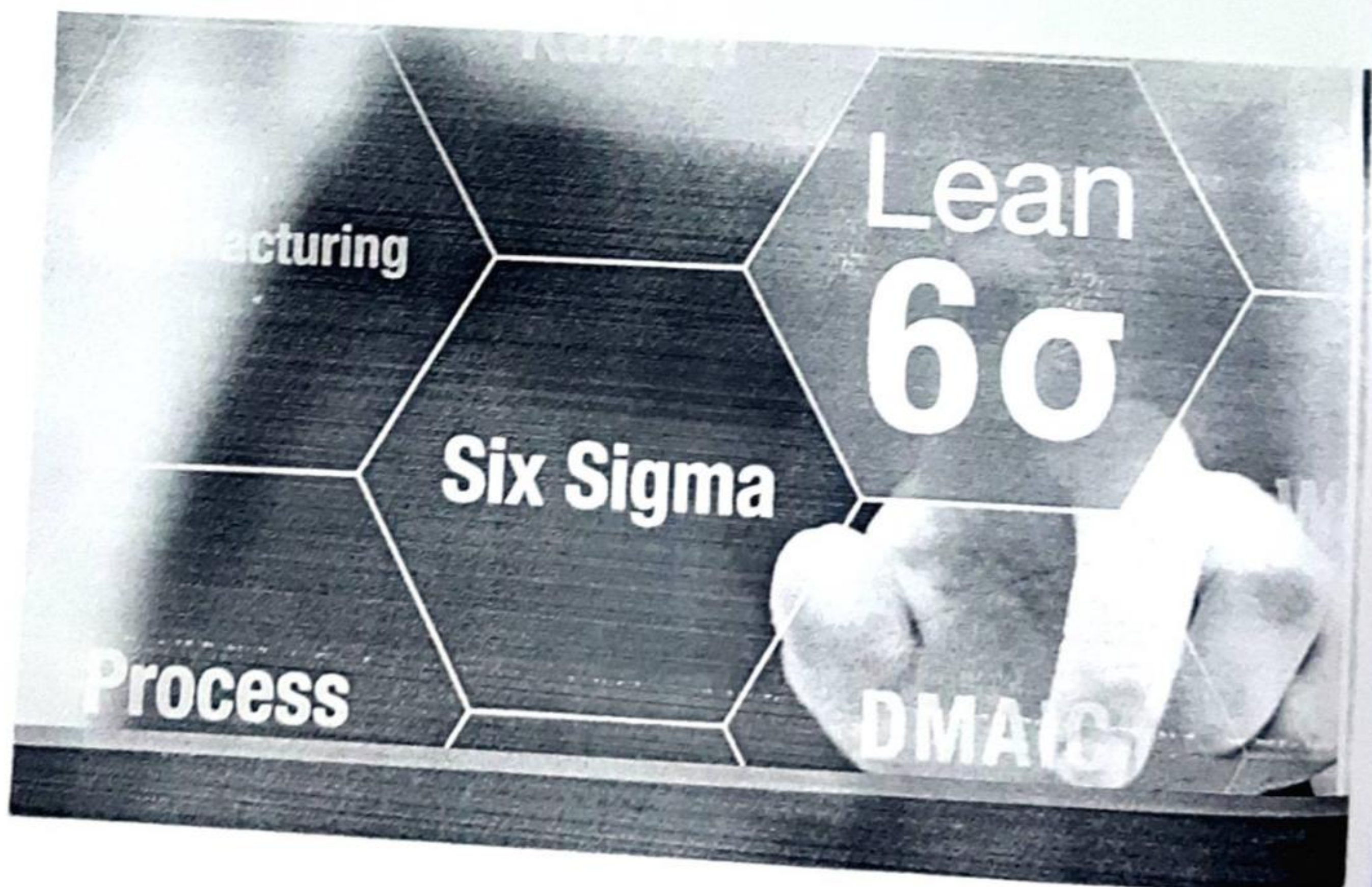
Prof. V. S. S. Kumar
Vice-Chancellor

Organized by
Department of Mechanical Engineering

Prof. Dr. A. T. Ravichandran

AGENDA

10.00 a.m.	Welcome Address	Dr. M. Siva Kumar Professor – Mech.
10.05 a.m.	Inaugural Address	Prof. V. S. S. Kumar Vice Chancellor
10.15 a.m.	Introduction of Resource Person	Dr. P. Anand Associate Professor – Mech.
10.20 a.m.	Special Address	Dr. Vettrivel Gnaneswaran, Department of Mechanical and Industrial Engineering, University of Wisconsin-Platteville, Platteville, USA
10.30 a.m.	Vote of Thanks	Dr. N. Lenin Associate Professor – Mech





Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
Chennai - 600 076

SCHOOL OF MECHANICAL AND CONSTRUCTION

Department of Mechanical Engineering

**Two Day Faculty Development Programme on
LEAN AND SIX SIGMA IN THE DIGITAL AGE**

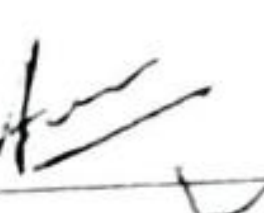
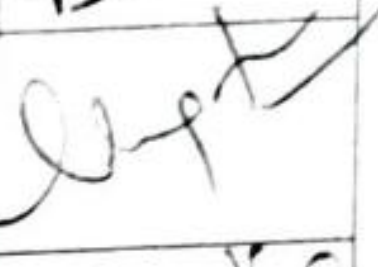
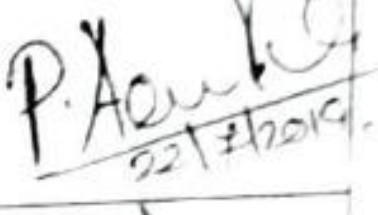
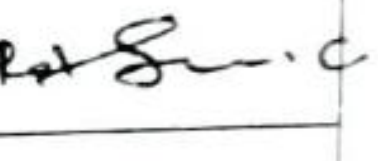
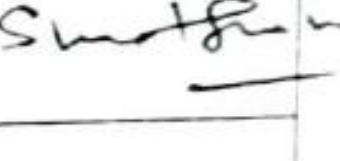
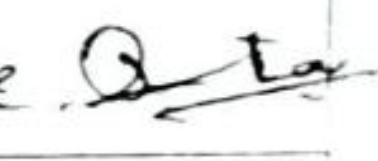
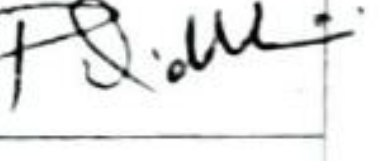
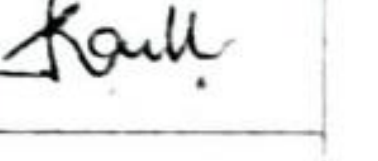
22-23, July 2019

Venue: Wright Brothers Engineering Hive

REGISTRATION

22.07.2019

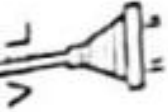
SL. NO.	NAME OF THE PARTICIPANT	DESIGNATION	NAME OF THE INSTITUTION	SIGNATURE
1.	Dr. MANIMARAN. A	PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
2.	Dr. SIVA KUMAR. M	PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
3.	Dr. UDAYA PRAKASH. J	ASSOCIATE PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
4.	Dr. LENIN. N	ASSOCIATE PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
5.	Dr. PAVITHRA. E	ASSOCIATE PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
6.	Dr. ELANGO VAN. M	ASSOCIATE PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
7.	Dr. LAKSHMANAN. P	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
8.	Dr. BALAJI. K	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
9.	DHARMALINGAM G	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
10.	SATHYASEELAN. P	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]
11.	GANESH. R	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE OF SCIENCE AND TECHNOLOGY	Dr. [Signature]

12.	RAJA. T	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE SCIENCE AND TECHNOLOGY	Dr. OF	
13.	ARUN PRASAD. M	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE SCIENCE AND TECHNOLOGY	Dr. OF	
14.	NIRUBAN PRAJOTH. T	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE SCIENCE AND TECHNOLOGY	Dr. OF	
15.	ARUN KUMAR. P	ASSISTANT PROFESSOR	VEL TECH RANGARAJAN SAGUNTHALA R&D INSTITUTE SCIENCE AND TECHNOLOGY	Dr. OF	
16.	KANNAN. S	Asst-Prof	VTRS (vel-Tech owned by R.S. Trust)		
17.	Dr. RATHINASURIYAN. C	Asst. Prof	VTRS		
18.	Dr. SUMATHY MUNIAMUTHU	Professor	VTRS		
19.	D. VIJANESHA KUMAR	Asst. Prof (S.G)	NATIONAL ENGINEERING COLLEGE, KOVILPATTI		
20.	C. DEVANATHAN	Asst. Prof.	Rajalakshmi Engg. College		
21.	C.S. shamli	Asst Prof	Veltech University		
22.	P. VIDHUSHINI	Asst Prof	Rajalakshmi Engg College		
23.	R. KARTHIK	Asst Prof	Veltech university		
24.					
25.					
26.					
27.					
28.					
29.					
30.					


(N. LENIN)
Coordinator



ADVANCE CASH/CHEQUE SETTLEMENT REGISTER



AMOUNT OF RS. ...
WITHIN THREE WORKING DAYS
OF LAST DATE OF ACTIVITY.
FAILING WHICH 20% OF MY SALARY
WILL BE DEDUCTED EVERY MONTH
TILL SETTLEMENT

Sl.No. 60762

Settlement Date:

Name: L E N I N . N

Advance Cash Approval No.: 006291

Cash Received Date:

Sl.No.	Bill No.	Bill Date	Control No.	Particulars	Supplier Name	Bill Value
1.	06.07.19	81587		Brochure printing	Cash voucher (Melayar Student's xerox)	Rs. 400
2.	19.07.19	81501		AA size battery.	Cash voucher with memo	Rs. 102
3.	17.07.19	0651		Certificate, Invitation, ID Card printing	Sunraj xerox, Arachi	Rs. 783
4.	17.7.19	81588		A5 cover for invitation	Cash voucher	Rs. 200
5.	17.07.19	JNS-079		Flex print	JN Signage	Rs. 295
6.	21.07.19	81589		JD card rope and A4 paper	Cash voucher with memo	Rs. 760
7.	22.07.19	81590		Water bottle & cool drink	Cash voucher	Rs. 200
8.	31.07.19	81591		Lunch for participants	Cash voucher	Rs. 960
9.	20.09.19	81592		Report printing & binding	Cash voucher	Rs. 150
Total						Rs. 3850

N. Lenin

Signature

Amount Received

Advance Amount Spent: Rs. 3850/-

Balance Amount

: Rs. 11,650/-

paid to 15th

Account no. 380206021000008
on 20/09/19

Authorised Signatory

DATE OF PAYMENT:

EXP. DATE OF CLOSING:



VIT Tech
Vellore Institute of Technology

SCHOOL OF MECHANICAL AND CONSTRUCTION
Department of Mechanical Engineering

Two Day Faculty Development Programme on
LEAN AND SIX SIGMA IN THE DIGITAL AGE

22-23 July 2019

FEEDBACK FORM

Please spare your valuable time to complete this feedback form to correct and shape our forthcoming programmes in the near future

Remarks	5	4	3	2	1
1. Call for participation – Clarity and value				✓	
2. Topics relevancy to the title of FDP		✓			
3. Subject knowledge of the resource person	✓				
4. Level of interaction by the resource person	✓				
5. Coverage of modern/advanced topics		✓			
6. Usefulness of this FDP		✓			
7. Overall Experience about this FDP		✓			

5 - Excellent; 4 - Good; 3 - Satisfactory; 2 - To improve; 1 - Unsatisfactory

Please provide any comments or general suggestions regarding the FDP:

I expect more sub topic in the presentation. Having recent problems & insti tech related problem is preferred.

Name: Dr. M. Elangovan Institution: VITech
Email: drmelangovan@veltech.co.in Signature: M. Elangovan
23/7/19



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SCHOOL OF MECHANICAL AND CONSTRUCTION
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5. Coverage of modern/advanced topics		✓			
6. Usefulness of this FDP		✓			
7. Overall Experience about this FDP		✓			

5 - Excellent; 4 - Good; 3 - Satisfactory; 2 - To improve; 1 - Unsatisfactory

Please provide any comments or general suggestions regarding the FDP:

Good. Topics are relevant to the Faculty programme.
So in future statistical analysis class should
be provide along with the session as a unique session.

Name: Dr. K. BALAJI

Institution:

Veltech University

Email: drkbalaji@veltech.edu.in

Signature:

K. Balaji



Vel Tech

Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

CERTIFICATE OF PARTICIPATION

This is to certify that Dr. /Mr. /Ms. _____ of _____

has participated in the two day Faculty Development Programme on **LEAN AND SIX SIGMA IN THE DIGITAL AGE** organized by the Department of Mechanical Engineering on 22nd & 23rd July, 2019 at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi, Chennai.

Dr. M. Siva Kumar
Co-ordinator

Dr. N. Lenin
Co-ordinator

Prof. Dr. A.T. Ravichandran
Convenor

Prof. Dr. techn.Koteswara Rao Anne
Director Academics



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Faculty Development Programme on
LEAN AND SIX SIGMA IN THE DIGITAL AGE

LSS'19

22nd & 23rd July 2019 | 10:00 AM | Wright Brothers Engineering Hive

Resource Person

Dr. Vettrivel Gnaneswaran

Professor,
Department of Mechanical and
Industrial Engineering,
University of Wisconsin-Platteville,
Platteville, USA



Organized by Department of Mechanical Engineering

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A. Arts, 1999

Programme on
THE DIGITAL AGE

Brothers Engineering Hive

SIX SI

mechanical Engin



22.07.2019



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LSS'19

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Resource

SIX SIGMA

22.07.2019

Mechanical Engineering

Example – Two-Way ANOVA – Interaction- Table

Source	Sum of Squares (SS)	DF	Mean Square (MS)	F	F _{critical}	P-value
Factor A	2005.56	1	2005.56	100.28	F _(1,12,0.05) = 4.6	0.0000
Factor B	872.44	2	436.22	21.31	F _(2,12,0.05) = 3.74	0.0002
Interaction	55.78	2	27.89	1.34	F _(2,12,0.05) = 3.74	0.2826
Error	240	12	20.00			
Total	3171.78	17				

Freedom

$$= (DF_{\text{factor A}})(DF_{\text{factor B}}) = (1)(2) = 2$$

$$DF_{\text{factor A}} - DF_{\text{factor A}} - DF_{\text{interaction}} = 17 - 1 - 2 - 2 = 12$$

interaction effect between the two factors

hypothesis of no interaction is not rejected

exists, analyze the interaction as more effects which are significant provides better of variation. A smaller MS_{error} increases the sensitivity of testing effects.



22.07.2019