

### **Value Added Courses attended by Students**

<b>Year</b>	<b>Name of Course</b>
2018-19	Analysis and Design of RC Building: Concepts and Practice
	Machine Learning Applications in Engineering
	Energy Conservation and Alternative Sources of Energy
	AI, Big Data and HPC Aligned Applications – A Modern Approach of Computing
	Tribological Analysis of 4-Dimensional Printed Engineering Materials
2017-18	Insights of Image Processing and their recent trends
	Research Opportunities in Medical Imaging, Biomedical Engineering and Health Informatics
	Waste Management by Additive Manufacturing
	Optimization Life Enhancement of Bio-Medical Implants by Additive Manufacturing and Protective Coatings
	Waste Management by 3 Dimensional/4Dimensional Printing
2016-17	Solid Waste Management in Indian Cities: Issues and Concerns
2015-16	Waste Management and Optimization Techniques
2014-15	Latest Trends in Information and Communication Technologies

### **Sequence of Proofs**

Course Report

Schedule of course

Attendance sheet

Sample Certificates

## PRESS REPORT

A five day QIP sponsored short term training program on 'Analysis and Design of RC buildings: Concepts and Practice' concluded at Guru Nanak Dev Engineering College, Ludhiana. It was organized by Civil Engineering Department of the college under the mentorship of Principal Dr Sehajpal Singh. Around 35 participants attended the course and learned about the finer details and new developments of the structural designing of concrete buildings. On the final day of the course, the design project works completed by the participants during the hands-on-training sessions were evaluated by the experts and discussions were held to improve the projects further. At the end, Head of the department, Professor K S Gill congratulated the participants on their successfully completing the course and advised them to put the concepts learnt during the course into their professional life to serve the community better in constructing their houses economically with mandated safety margins. Faculty coordinator of the program, Dr Harvinder Singh informed the participants about various design aspects and other legal aspects associated with the design process. It is now-a-days mandatory for building professionals, architects, engineers to release drawings that are designed and constructed exactly as per the requirements of various Indian standards. As most of the Punjab is located in the seismic zone IV, the people there must insist on a certified copy of the drawings from the building professionals that the building they are constructing is designed exactly as per the relevant Indian Standards and they should avoid the prevailing practice of constructing their houses/buildings without getting a certified copy of the drawings. He also highlighted the fact that the buildings designed following the prescribed guidelines are safe to occupy and also leads to a considerable saving in the construction and repair & maintenance costs at a later stage. The availability of high strength steel rebars, cements and other building products helps to achieve these mandated targets easily and the participants were appraised about the benefits the public would get if the buildings were designed using these high end material, e.g. the use of Fe600 grade steel in the design of RC buildings would directly pass on a benefit of approximately Rupees one to two for every square feet of the constructible area depending upon the type of the building. The course ended on an advice to the participants to explore the use of high end material in the design and help the nation to save natural resources going waste without inadequate structural advice.



Group photo of experts, coordinator and participants of the course

# Guru Nanak Dev Engineering College Ludhiana

## Civil Engineering Department

### *Program Schedule*

#### Analysis and Design of RC Buildings: Concepts and Practice

(5 days QIP sponsored STTP)

Time hours	19 February, 2019	20 February, 2019	21 February, 2019	22 February, 2019	23 February, 2019
<b>0815-0945</b>	Registration and networking	Fundamentals concepts: analysis & design of RC structural system (HVS)	Structural modelling and analysis using ETAB (MJS)	Structural Design of masonry components (HVS)	Project Review (Team-1 to 5) (JPS & HSR)
<b>Tea</b>					
<b>1000-1200</b>	Interpreting soil investigation data for foundation design (KSG)	Selection of appropriate foundation system (GSK)	Design and Detailing of structural systems (HVS)	Structural design of RC buildings-3 <i>(Guided group exercise)</i> (HVS)	Project Review (Team-6 to 10) (JPS & HPS)
<b>Lunch</b>					
<b>1300-1430</b>	Concrete: Important tips to improve performance (HVS)	Material models: development and use in structural design (HVS)	Structural design of RC buildings-1 <i>(Guided group exercise)</i> (HVS)	Structural design of RC buildings-4 <i>(Guided group exercise)</i> (HVS)	Project Review (Team-11 to 15) (JPS & KSG)
<b>Tea</b>					
<b>1445-1615</b>	Structural modelling and analysis using STAADpro (PTG)	Structural Planning and load assessment (HVS)	Structural design of RC buildings-2 <i>(Guided group exercise)</i> (HVS)	Structural design of RC buildings-5 <i>(Guided group exercise)</i> (HVS)	Concluding remarks by expert and distribution of certificates

# Analysis and Design of RC Buildings: Concepts and Practice

5 days Q/P sponsored STTP, February 19-23, 2019

Attendance sheet

S. No.	Date 19/2/2019				
	Name	Session-1	Session-2 ✓	Session-3	Session-4
1	Amandeep Singh Gill		Amandeep	Amandeep	Amandeep
2	Amandeep Singh		A	A	A
3	Bhupinder Singh		Bm	Bm	Bm
4	Inderpreet Kaur		gk	gk	gk
5	Mandeep Kaur		Mkaur	Mkaur	Mkaur
6	Manvinder Kingra		X	X	X
7	Sahibdeep Singh		Sahibdeep Singh	Sahibdeep Singh	Sahibdeep Singh
8	Prabhjot Singh Pannu		Prabhjot	Prabhjot	Prabhjot
9	Prashant Garg		Prashant	Prashant	Prashant
10	Pritpal Kaur		Pritpal	Pritpal	Pritpal
11	Sukhwinder Singh		S	S	S
12	Sukhwinder Singh		S	S	S
13	Tanpreet Singh		T	T	
14	Yuvraj Singh		Y	Y	Y
15	Sarvesh Kumar		Sarvesh Kumar 19/02/2019	Sarvesh Kumar 19/02/2019	Sarvesh Kumar 19/02/2019
16	Satinder Kaur Khatra		X	X	X
17	Ranjodh Singh		Ranjodh Singh		
18	Satnam Singh		Satnam Singh 19/02/19	Satnam Singh 19/02/19	Satnam Singh 19/02/19

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

## Attendance sheet

19	Jasveer Singh		Jasveer Singh	Jasveer Singh	Jasveer Singh
20	Amit Duggal		Amit Duggal	Amit Duggal	Amit Duggal
21	Sandeep Singh		Sandeep Singh	Sandeep Singh	Sandeep Singh
22	Sadam Hussain		Sadam Hussain	Sadam Hussain	Sadam Hussain
23	Sushant Garg		Sushant Garg	Sushant Garg	Sushant Garg
24	Shoaib Nisar		Shoaib Nisar	Shoaib Nisar	Shoaib Nisar
25	Javeed Ahmed Khan		Javeed Ahmed Khan	Javeed Ahmed Khan	Javeed Ahmed Khan
26	Harvinder Singh		Harvinder Singh	Harvinder Singh	Harvinder Singh
27	Tandeep Singh		Tandeep Singh	Tandeep Singh	Tandeep Singh
28	Jobandeep Singh		Jobandeep Singh	Jobandeep Singh	Jobandeep Singh
29	Sushil Bhatia		Sushil Bhatia	Sushil Bhatia	Sushil Bhatia
30	Jaspreet Kaur		Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur
31	Y. Joth Kumar		Y. Joth Kumar	Y. Joth Kumar	Y. Joth Kumar
32	Gundeepale Sry		Gundeepale Sry	Gundeepale Sry	Gundeepale Sry
33	Charnjeet Singh		Charnjeet Singh	Charnjeet Singh	Charnjeet Singh
34	Kavish Ar Bhat		Kavish Ar Bhat	Kavish Ar Bhat	Kavish Ar Bhat
35	Sandeep Kaur		Sandeep Kaur	Sandeep Kaur	Sandeep Kaur
36	Fahmeed Shafi		Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

## Attendance sheet

S. No.	Name	Date	Session-1	Session-2	Session-3	Session-4
1	Amandeep Singh Gill	20/02/2019				
2	Amandeep Singh					
3	Bhupinder Singh					
4	Inderpreet Kaur					
5	Mandeep Kaur					
6	Manvinder Kingra					
7	Sahibdeep Singh					
8	Prabhjot Singh Pannu					
9	Prashant Garg					
10	Pritpal Kaur					
11	Sukhwinder Singh					
12	Sukhwinder Singh					
13	Tanpreet Singh					
14	Yuvraj Singh					
15	Sarvesh Kumar					
16	Satinder Kaur Khatra					
17	Ranjodh Singh					
18	Satnam Singh					

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

## Attendance sheet

19	Jasveer Singh	<i>Jas</i>	<i>Jas</i>	<i>Jas</i>	<i>Jas</i>
20	Amit Duggal	<i>Amit Duggal</i>	<i>Amit Duggal</i>	<i>Amit Duggal</i>	<i>Amit Duggal</i>
21	Sandeep Singh	<i>Sandeep Singh</i>	<i>Sandeep Singh</i>	<i>Sandeep Singh</i>	<i>Sandeep Singh</i>
22	Sadam Hussain	<i>Sadam</i>	<i>Sadam</i>	<i>Sadam</i>	<i>Sadam</i>
23	Sushant Gupta	<i>Sushant Gupta</i>	<i>Sushant Gupta</i>	<i>Sushant Gupta</i>	<i>Sushant Gupta</i>
24	Shoaib Nisar	<i>Shoaib</i>	<i>Shoaib</i>	<i>Shoaib</i>	<i>Shoaib</i>
25	Javeed Ahmad Khan	<i>Javeed Ah</i>	<i>Javeed Ah</i>	<i>Javeed Ah</i>	<i>Javeed Ah</i>
26	Harvinder Singh	<i>Harvinder</i>	<i>Harvinder</i>	<i>Harvinder</i>	<i>Harvinder</i>
27	Tandeep Singh	<i>Tandeep</i>	<i>Tandeep</i>	<i>Tandeep</i>	<i>Tandeep</i>
28	Jobandeep Singh	<i>Jobandeep Singh</i>	<i>Jobandeep Singh</i>	<i>Jobandeep Singh</i>	<i>Jobandeep Singh</i>
29	Sushil Bhatia	<i>X</i>	<i>Sushil Bhatia</i>	<i>Sushil Bhatia</i>	<i>Sushil Bhatia</i>
30	Jaspreet Kaur	<i>Jaspreet Kaur</i>	<i>Jaspreet Kaur</i>	<i>Jaspreet Kaur</i>	<i>Jaspreet Kaur</i>
31	Yogesh Kumar	<i>YK</i>	<i>YK</i>	<i>YK</i>	<i>YK</i>
32	Charnjeet Singh	<i>CS</i>	<i>CS</i>	<i>CS</i>	<i>CS</i>
33	Gurdeepak Singh	<i>GS</i>	<i>GS</i>	<i>GS</i>	<i>GS</i>
34	Kaisir Ah Bhat	<i>Kaisir</i>	<i>Kaisir</i>	<i>Kaisir</i>	<i>Kaisir</i>
35	Fahmeed Shafi	<i>Fahmeed</i>	<i>Fahmeed</i>	<i>Fahmeed</i>	<i>Fahmeed</i>
36	Sandeep Kaur	<i>Sandeep Kaur</i>	<i>Sandeep Kaur</i>	<i>Sandeep Kaur</i>	<i>Sandeep Kaur</i>

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

Attendance sheet

S. No.	Name	Session-1	Session-2	Session-3	Session-4
1	Amandeep Singh Gill				
2	Amandeep Singh	A	A	A	A
3	Bhupinder Singh	bm	bm	bm	bm
4	Inderpreet Kaur	IK	IK	IK	IK
5	Mandeep Kaur	MK	MK	MK	MK
6	Manvinder Kingra	Manvinder Kingra	Manvinder Kingra	Manvinder Kingra	Manvinder Kingra
7	Sahibdeep Singh	Sahibdeep Singh	Sahibdeep Singh	Sahibdeep Singh	Sahibdeep Singh
8	Prabhjot Singh Pannu	Prabhjot Singh Pannu	Prabhjot Singh Pannu	Prabhjot Singh Pannu	Prabhjot Singh Pannu
9	Prashant Garg	Prashant Garg	Prashant Garg	Prashant Garg	Prashant Garg
10	Pritpal Kaur	PK	PK	PK	PK
11	Sukhwinder Singh	SS	SS	SS	SS
12	Sukhwinder Singh	SS	SS	SS	SS
13	Tanpreet Singh	TS	TS	TS	TS
14	Yuvraj Singh	YS	YS	YS	YS
15	Sarvesh Kumar	SK 21/02/2019	SK 21/02/2019	SK 21/02/2019	SK 21/02/2019
16	Satinder Kaur Khatra	SKh	SKh	SKh	SKh
17	Ranjodh Singh	Ranjodh Singh	Ranjodh Singh	Ranjodh Singh	Ranjodh Singh
18	Satnam Singh	SS 21/2/19	SS 21/2/19	SS 21/2/19	SS 21/2/19

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

## Attendance sheet

19	Jasveer Singh	Jasveer Singh	Jasveer Singh	Jasveer Singh	Jasveer Singh
20	Amit Duggal	Amit Duggal	Amit Duggal	Amit Duggal	Amit Duggal
21	Sandeep Singh	Sandeep Singh	Sandeep Singh	Sandeep Singh	Sandeep Singh
22	Sadam Hussain	Sadam Hussain	Sadam Hussain	Sadam Hussain	Sadam Hussain
23	Sushant Gupta	Sushant Gupta	Sushant Gupta	Sushant Gupta	Sushant Gupta
24	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar
25	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan
26	Harvinder Singh	Harvinder Singh	Harvinder Singh	Harvinder Singh	Harvinder Singh
27	Tandeep Singh	Tandeep Singh	Tandeep Singh	Tandeep Singh	Tandeep Singh
28	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh
29	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia
30	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur
31	Yogesh Kumar	Yogesh Kumar	Yogesh Kumar	Yogesh Kumar	Yogesh Kumar
32	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh
33	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh
34	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat
35	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi
36	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

Attendance sheet

S. No.	Name	Session-1	Session-2	Session-3	Session-4
1	Amandeep Singh Gill				
2	Amandeep Singh				
3	Bhupinder Singh				
4	Inderpreet Kaur				
5	Mandeep Kaur				
6	Manvinder Kingra				
7	Sahibdeep Singh				
8	Prabhjot Singh Pannu				
9	Prashant Garg				
10	Pritpal Kaur				
11	Sukhwinder Singh				
12	Sukhwinder Singh				
13	Tanpreet Singh				
14	Yuvraj Singh				
15	Sarvesh Kumar	 22/02/2019	 22/02/2019	 22/02/2019	 22/02/2019
16	Satinder Kaur Khatra				
17	Ranjodh Singh				
18	Satnam Singh	 22/02/19	 22/02/19	 22/02/19	 22/02/19

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

## Attendance sheet

19	Jasveer Singh				
20	Amit Duggal	Amit Duggal	Amit Duggal	Amit Duggal	Amit Duggal
21	Sandeep Singh	Sandeep Singh	Sandeep Singh	Sandeep Singh	Sandeep Singh
22	Sadam Hussain	Sadam Hussain	Sadam Hussain	Sadam Hussain	Sadam Hussain
23	Sushant Gupta	Sushant Gupta	Sushant Gupta	Sushant Gupta	Sushant Gupta
24	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar
25	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan
26	Harvinder Singh	Harvinder Singh	Harvinder Singh	Harvinder Singh	Harvinder Singh
27	Tandeep Singh	Tandeep Singh	Tandeep Singh	Tandeep Singh	Tandeep Singh
28	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh
29	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia
30	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur
31	Yogesh kumar	Yogesh kumar	Yogesh kumar	Yogesh kumar	Yogesh kumar
32	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh
33	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh
34	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat
35	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi
36	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

Attendance sheet

S. No.	Name	Date <u>23/02/2019</u>			
		Session-1	Session-2	Session-3	Session-4
1	Amandeep Singh Gill				
2	Amandeep Singh	A	A	A	A
3	Bhupinder Singh	bm	bm	bm	bm
4	Inderpreet Kaur	IK	IK	IK	IK
5	Mandeep Kaur	MK	MK	MK	MK
6	Manvinder Kingra				
7	Sahibdeep Singh	Sahibdeep Singh	Sahibdeep Singh	Sahibdeep Singh	Sahibdeep Singh
8	Prabhjot Singh Pannu	PS	PS	PS	PS
9	Prashant Garg	PG	PG	PG	PG
10	Pritpal Kaur	PK	PK	PK	PK
11	Sukhwinder Singh				
12	Sukhwinder Singh	S	S	S	S
13	Tanpreet Singh				
14	Yuvraj Singh	YS	YS	YS	YS
15	Sarvesh Kumar	SK 23/02/2019	SK 23/02/2019	SK 23/02/2019	SK 23/02/2019
16	Satinder Kaur Khatri	SK	SK	SK	SK
17	Ranjodh Singh	RS	RS	RS	RS
18	Satnam Singh	SS 23/02/19	SS	SS	SS

# Analysis and Design of RC Buildings: Concepts and Practice

5 days QIP sponsored STTP, February 19-23, 2019

## Attendance sheet

19	Jasveer Singh				
20	Amit Duggal	Amit Duggal	Amit Duggal	Amit Duggal	Amit Duggal
21	Sandeep Singh	Sandeep Singh	Sandeep Singh	Sandeep Singh	Sandeep Singh
22	Sadam Hussain	Sadam Hussain	Sadam Hussain	Sadam Hussain	Sadam Hussain
23	Sushant Gupta	Sushant Gupta	Sushant Gupta	Sushant Gupta	Sushant Gupta
24	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar	Shoaib Nisar
25	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan	Javeed Ahmad Khan
26	Harvinder Singh	Harvinder Singh	Harvinder Singh	Harvinder Singh	Harvinder Singh
27	Tandeep Singh	Tandeep Singh	Tandeep Singh	Tandeep Singh	Tandeep Singh
28	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh	Jobandeep Singh
29	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia	Sushil Bhatia
30	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur	Jaspreet Kaur
31	Yogesh Kumar	Yogesh Kumar	Yogesh Kumar	Yogesh Kumar	Yogesh Kumar
32	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh	Charnjeet Singh
33	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh	Gurdeepak Singh
34	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat	Kaisir Ah Bhat
35	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi	Fahmeed Shafi
36	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur	Sandeep Kaur

**Guru Nanak Dev Engineering College, Ludhiana**  
(An Autonomous College under UGC Act)

**Certificate of Participation**

This certificate is awarded to

JASPREET KAUR (GNDEC, LDH).

who participated in 5-day QIP sponsored Short Term Training Programme on

**Analysis and Design of RC Building :  
Concepts and Practice**

organised by the Department of Civil Engineering  
from 19 - 23 February, 2019.

  
Faculty Coordinator

  
Head of Department

  
Principal

**Guru Nanak Dev Engineering College, Ludhiana**  
(An Autonomous College under UGC Act)

**Certificate of Participation**

This certificate is awarded to

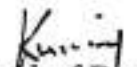
.....**JOBANDEEP SINGH (GNDEC, LOH)**.....

who participated in 5-day QIP sponsored Short Term Training Programme on

**Analysis and Design of RC Building :  
Concepts and Practice**

organised by the Department of Civil Engineering  
from 19 - 23 February, 2019.

  
*Faculty Coordinator*

  
*Head of Department*

  
*Principal*

## PROCEEDINGS

**TITLE: MACHINE LEARNING APPLICATIONS IN ENGINEERING**

**DATE: February 04-08, 2019**

An one week QIP Short Term Course on "Machine Learning Applications in Engineering" was conducted by Department of Electronics and Communication Engineering, Guru Nanak Dev Engineering College, Ludhiana from February 04-08, 2019. The course was aimed to introduce the participants to Machine Learning and its various applications. The course planning for the course included the introduction, followed by the algorithms and applications of machine learning. State of the art technologies with hands on exercises were also planned for the course. Course being interdisciplinary in nature, faculty and research scholars of all engineering branches were eligible to apply. Dr. Sandeep Singh Gill and Er. Tarandeep Singh coordinated the course. An organising committee including the coordinators and faculty of the department of Electronics and Communication Engineering, Guru Nanak Dev Engineering College, Ludhiana was setup for the smooth running of the course. A total no. of 58 participants from various reputed colleges/ universities such as NIT Jalandhar, GCET jammu, DKTGI Rahon, Thapar University Patiala, MRSPTU Bathinda and many more attended the course. Various experts from IIT Ropar, NIT Jalandhar, Bennett University Greater Noida and many more presented their expertise. Hands on exercises on MATLAB, WEKA and PYTHON were also provided to the participants. Experts from Guru Nanak Dev Engineering College, Ludhiana also took part in this platform to present their expertise.

The list of experts present for the course is presented in Table 1.

S. No.	Name of Expert	College/University/Company
1	Dr Kanav Kahol	Pink Rickshaw Design, New Delhi
2	Dr. Kuldeep Singh Nagla	NIT Jalandhar
3	Dr. Kuldeep Kumar	NIT Jalandhar
4	Dr. Amit Kamra	GNDEC, Ludhiana
5	Dr. Sudarshan Iyengar	IIT Ropar
6	Er. Tarandeep Singh	GNDEC, Ludhiana
7	Er. Navjot Singh	AlertEnterprise, Chandigarh
8	Dr. Suneet Kumar Gupta	Bennett University, Greater Noida, U.P.
9	Dr. Neeraj Goel	IIT Ropar
10	Dr. Mukesh Saini	IIT Ropar
11	Dr. Sandeep Singh Gill	GNDEC, Ludhiana

Table 1: List of Experts

The 5 day session workshop commenced on 04<sup>th</sup> Feb, 2019 with the inaugural ceremony and keynote address by Dr. Kanav Kahol, Chief Technical Officer, Pink Rickshaw Design, New Delhi. Everyday 3 sessions were planned for the experts. The sessions were a mixture of theory and practical.



gements for Tea and Lunch was present for the participants as well as experts. The details for the session has been listed below:

#### Session 1: Scope of Machine Learning

The session was the introductory session for the course. This session introduced the participants to machine learning and how machine learning is transforming lives nowadays. It also focused on the applications of machine learning in various disciplines. This session was aimed to create a sense of curiosity and motivation for the participants and it proved to do so.

#### Session 2 : AI in Mobile Robotics: Focused on multi sensor data fusion

This was the 2<sup>nd</sup> session in row. It was focused on the application of AI and Machine Learning in Robotics. The concept of multi sensors being fused in robotics was discussed. This session concluded with the focus of ISRO and DRDO in this area.

#### Session 3: A Practical Approach to Research Methodologies in Machine learning

This session focused on the research areas in machine learning and the practical approaches to research in this area. The present scenario in research was discussed and new Possible research areas were also listed.

#### Session 4: Transforming Machine Learning data through WEKA

This was a hands on session focused on WEKA. The participants were introduced to WEKA and were taught how to handle data in machine learning through WEKA. This session proved out to be very informative for the participants.

#### Session 5: Introduction to Machine Learning through motivational stories

This session targeted the motivation of the participants through some motivational stories in which machine learning had created a difference. A large no. of examples and proven stories were discussed with the participants where machine learning proved out to be very beneficial and large empires were setup on this concept

#### Session 6: Unsupervised learning algorithm that created a 500 billion dollar industry

This was a hands on session on Python. This session started with the basics of Python and moved towards a certain algorithm that had helped to create a 500 billion dollar industry.

#### Session 7: Essentials of Machine Learning Algorithms

This session focused on various machine learning algorithms such as Random Forest, Support Vector Machine, Linear Regression, Logistic Regression, Decision Tree, Naive Bayes, kNN, K-Means and many more. The focus of this session was to introduce the participants to the basics of the actual algorithms working behind Artificial Intelligence and Machine Learning.

#### Session 8: Disruptive applications of AI in various industries with use cases and scientific solutions

This was a hands on session on Python where various problems from industries were taken and their solutions through machine learning were taught to the participants.

#### Session 9: Alignment of Academic and Research in modern day AI based disruption and opportunity for application oriented research activities

This session was focused to understand the gap between academic and research in AI and machine learning and how both can be aligned in accordance to the modern day scenario.



#### Session 10: Basics of ML and AI

This was a hands on session in MATLAB. This session focused upon the basics of Machine Learning and Artificial Intelligence in Matlab. This session also helped a lot to the participants as majority of the participants were familiar with the environment in MATLAB. The participants also worked on some examples on machine learning that helped to enhance their knowledge on the use of this tool for AI.

#### Session 11: Hyperparameter Tuning

This session was focused on a very important topic i.e. to choose parameters on which the learning depends in machine learning algorithms. The algorithms discussed earlier were again reviewed but with an angle of learning parameters. The vision to these algorithms broadened after this session and participants were able to understand the nature of learning in various problems related to machine learning.

#### Session 12: Convolutional Neural Network, Recurrent Neural Network

This session focused upon the uses of Neural Networks in Machine Learning. Along with the theory, hands on sessions on examples based on Convolutional Neural Network and Recurrent Neural Network were discussed in this session.

#### Session 13: Hardware architecture for Deep Learning Applications

This session was focused on the Hardware Architecture in Deep Learning. Along with the software or GUI Platform that's required for Machine Learning, the participants were able to understand the hardware requirements for AI through this session.

#### Session 14: Advanced Surveillance Systems

This session focused on the applications of machine learning with focus on advanced surveillance systems. In this session, the traditional surveillance systems were discussed and light was thrown on the changes in these systems that machine learning could perform.

#### Session 15: Future of Artificial Intelligence and Machine Learning

This was the concluding session of the course. This session focused on the future aspects of Artificial Intelligence and Machine Learning. This gave the participants an idea that what could be expected from Machine Learning in the future.

The Five day course ended on 08<sup>th</sup> Feb, 2019 with the valedictory ceremony. The participants were given certificates for their participation and feedback was taken from them. Based on the positive feedback received, this course surely helped them to broaden their vision about machine learning and will pave new paths in research areas in the future.



**One week QIP Short Term Course on**  
**“ Machine Learning Applications in Engineering ”**  
**(February 04-08, 2019)**

**Schedule**

	<b>4<sup>th</sup> February, 2019 (Monday)</b>	<b>5<sup>th</sup> February, 2019 (Tuesday)</b>	<b>6<sup>th</sup> February, 2019 (Wednesday)</b>	<b>7<sup>th</sup> February, 2019 (Thursday)</b>	<b>8<sup>th</sup> February, 2019 (Friday)</b>
<b>9:00am - 10:00am</b>	<b>Registration</b>	<b><u>Session-1</u></b> Dr. Amit Kamra, Asst. Prof., Dept. of IT, GNDEC,ldh	<b><u>Session-1</u></b> Er.Tarandeep Singh, Asst. Prof., Dept. of ECE, GNDEC,ldh	<b><u>Session-1</u></b> Dr. Suneet Kumar Gupta, Asst.Prof., Dept. of CSE, Bennett University, Greater Noida, Uttar Pradesh	<b><u>Session-1</u></b> Dr. Neeraj Goel, Asst. Prof. Dept. of CSE, IIT Ropar
<b>10:00am - 11:00am</b>	<b><u>Keynote Address</u></b> Dr. Kanav Kahol, Chief Technical Officer Pink Rickshaw Design New Delhi	<b><i>Topic: Transforming machine learning data using WEKA.</i></b>	<b><i>Topic: Essentials of Machine Learning Algorithms.</i></b>	<b><i>Topic:Basics of AI and ML</i></b>	<b><i>Topic: Hardware architecture for Deep Learning Applications.</i></b>
<b>11:00am-11:30am</b> <b>TEA</b>					
<b>11:30am - 1:30pm</b>	<b><u>Session-1</u></b> Dr. Kuldeep Singh Nagla, Assoc. Prof., Dept. of Instrumentation & Control Engg.,NIT, Jalandhar <b><i>Topic- AI in Mobile Robotics: Focused on multi sensor data fusion.</i></b>	<b><u>Session-2</u></b> Dr. Sudarshan Iyengar, Asst. Prof., Dept. of CSE, IIT Ropar <b><i>Topic: Introduction to Machine learning through motivational stories.</i></b>	<b><u>Session-2</u></b> Mr. Navjot Singh, Associate Manager, AI & ML Alert Enterprise, Chandigarh <b><i>Topic: Disruptive applications of AI in various industries with use cases and scientific solutions.</i></b>	<b><u>Session-2</u></b> Dr. Suneet Kumar Gupta, Asst.Prof., Dept. of CSE, Bennett University, Greater Noida, Uttar Pradesh <b><i>Topic:Hyperparameter Tuning</i></b>	<b><u>Session-2</u></b> Dr. Mukesh Saini, Asst. Prof., Dept. of CSE, IIT Ropar <b><i>Topic: Advanced Surveillance Systems.</i></b>
<b>1:30pm-2:30pm</b> <b>LUNCH</b>					
<b>2:30pm- 4:30pm</b>	<b><u>Session-2</u></b> Dr. Kuldeep Kumar, Asst. Prof., Dept. of CSE, NIT Jalandhar <b><i>Topic: A Practical approach to Research Methodologies in machine learning.</i></b>	<b><u>Session-3</u></b> Dr. Sudarshan Iyengar, Asst. Prof., Dept. of CSE, IIT Ropar <b><i>Topic: Unsupervised learning algorithm that created a 500 billion dollar industry.</i></b>	<b><u>Session-3</u></b> Mr. Navjot Singh, Associate Manager, AI & ML AlertEnterprise, Chandigarh <b><i>Topic: Alignment of Academic and Research in modern day AI based disruption and opportunity for application oriented research activities.</i></b>	<b><u>Session-3</u></b> Dr. Suneet Kumar Gupta, Asst.Prof., Dept. of CSE, Bennett University, Greater Noida, Uttar Pradesh <b><i>Topic:Covolutional Neural network, Recurrent Neural network</i></b>	<b><u>Session-3</u></b> Dr. Sandeep Singh Gill, Prof., Dept. of ECE, GNDEC,ldh <b><i>Topic: Future of AI and ML</i></b>
<b>4: 30pm -5:00pm</b>	<b>TEA</b>				<b>Valedictory</b>



GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

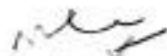
(Department of Electronics & Communication Engineering)

ECE No. 315/1

Date 25-02-2019

The following M.Tech (ECT) students have participated in 5 days OIP Short term course on "Machine Learning Applications in Engineering" organized from 04-08 February, 2019.

1. Tufail Farooq
2. Diksha Puri
3. Kamalpreet Kaur
4. Kshitij V Chaudhary
5. Jasdeep Singh
6. Atamjeet Kaur
7. Amritpal Kaur
8. Manpreet Kaur
9. Bhumika Narang
10. Shubhneet Kaur
11. Gurpreet Kaur
12. Supriya Sharma
13. Gurvir Kaur



Course Coordinator

No. 6-7-89



**Guru Nanak Dev Engineering College, Ludhiana**

AN AUTONOMOUS COLLEGE u/s [2(f) &amp; 12(B)] OF UGC ACT-1956



Department of Electronics and Communication Engineering

## QIP short term course

## Certificate of Participation

*This is to certify that Prof./Dr./Er./Mr./Ms. Tufail Farooq from GNDEC, Ludhiana, participated in the five (5) days short term course on "Machine Learning Applications in Engineering" from February 04-08, 2019.*

**Course Coordinator**

Head of Deptt.

**QIP Coordinator**

No. 15-FPM/11/15



**Guru Nanak Dev Engineering College, Ludhiana**

AN AUTONOMOUS COLLEGE u/s [2(f) & 12(B)] OF UGC ACT-1956




Department of Electronics and Communication Engineering

**QIP short term course**

**Certificate of Participation**

*This is to certify that Prof./Dr./Er./Mr./Ms. Diksha Puri from GNDEC, Ludhiana, participated in the five (5) days short term course on "Machine Learning Applications in Engineering" from February 04-08, 2019.*

  
Course Coordinator

  
Head of Deptt.

  
QIP Coordinator

## **Experts dwell on Energy Conservation and Alternate Sources of Energy**

In the weeklong program organized under Quality Improvement Program of AICTE by the Electrical Engineering Department of Guru Nanak Dev Engineering College, Ludhiana, the experts from industry and academia dwelled on energy conservation and alternate sources of energy. The program concluded today. Giving a brief about the program, Pf. Jaswinder Singh, HOD (EED) said that energy is required for all jobs we perform and the conventional sources of energy are fast depleting, hence this relevant theme was chosen for faculty development program. Dr. Sehijpal Singh, Principal, GNDEC said that such programs were regularly being in held for college faculty to enable them to get the latest know how and keep themselves updated with the development in various fields. Giving details of the proceedings of the program, Dr. Arvind Dhingra, Coordinator, informed that experts from industry including Ms. Sangita Kapoor, Blue Planet, Kolkata, Ar. Aalok Deshmukh, Energy Head, Schnieder Electric, Mumbai, Er. Rumi Engineer, GM, Godrej Boyce Ltd., Mumbai, Natioanl Award winning architect Siddharatha Wig, Sh. Anupam Nanda, Sr. DM, PEDDA, Dr. Tejinder Singh Saggu , Punjab Engineering College, Chandigarh, Dr. Ritula Thakur, NITTTR, Chandigarh & Dr. Ashwani Kumar Sharma , NIT, Kurukshetra shared their views in the area. Internal speakers included Dr. Harmit Singh & Pf. Sukhwinder Singh. The experts were of the view that energy needs of the world and the methods to harness energy need to seen from a holistic point of view and not in isolation. Even water being pumped from the earth is energy and so is the food we eat having some embodied energy. Dr. Ashwani Kumar Sharma, Professor, NIT, Kurukshetra was the chief guest for valedictory ceremony. Over 40 participants from various universities, engineering colleges of the region participated in the program. Dr. Navneet Singh Bhangu and Er. Harmeet Singh Gill were the Co-coordinators of the program.

**GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA**  
**ELECTRICAL ENGINEERING DEPARTMENT**

QIP Sponsored Faculty Development Program

on

Energy Conservation & Alternative Sources of Energy

January 29- February 2, 2019

Schedule

Date	Time	Activity	Venue
29.1.2019	8.30AM-9.00AM	Inaguration	Workshop Seminar Hall
	9.00AM-11.00AM	Expert Talk by Ms. Sangita Kapoor	Workshop Seminar Hall
	11.00AM-11.15AM	Tea Break	Workshop Seminar Hall
	11.15AM-1.15PM	Expert Talk by Ms. Sangita Kapoor	Workshop Seminar Hall
	1.15PM-1.45PM	Lunch	Alumni Home
	1.45PM-3.45PM	Expert Talk by Er. Sidharath Wig	Workshop Seminar Hall
	3.45PM-4.00PM	Tea Break	Workshop Seminar Hall
	4.00PM-6.00PM	Expert Talk by Er. Sidharath Wig	Workshop Seminar Hall
30.1.2019	8.45AM-10.45AM	Expert Talk by Er.Rumi Engineer	Workshop Seminar Hall
	10.45AM-11.00AM	Tea Break	Workshop Seminar Hall
	11.00AM-1.00PM	Expert Talk by Aalok Deshmukh	Workshop Seminar Hall
	1.15PM-1.45PM	Lunch	Alumni Home
	1.45PM-3.45PM	Expert Talk by Aalok Deshmukh	Workshop Seminar Hall
	3.45PM-4.00PM	Tea Break	Workshop Seminar Hall
	4.00PM-6.00PM	Expert Talk by Er.Rumi Engineer	Workshop Seminar Hall
31.2.2019	8.00AM-5.00PM	Field Visit to PEDDA building, Chandigarh & Renewable Energy Plant, Khattrra	
1.2.2019	8.45AM-10.45AM	Expert Talk by Dr.Harmeet Singh	Workshop Seminar Hall
	10.45AM-11.00AM	Tea Break	Workshop Seminar Hall
	11.00AM-1.00PM	Expert Talk by Dr. Tejinder Singh Saggu	Workshop Seminar Hall
	1.15PM-1.45PM	Lunch	Alumni Home
	1.45PM-3.45PM	Expert Talk by Dr. Prashant Garg	Workshop Seminar Hall
	3.45PM-4.00PM	Tea Break	Workshop Seminar Hall
	4.00PM-6.00PM	Expert Talk by Sh. Anupam Nanda	Workshop Seminar Hall
2.2.2019	8.45AM-10.45AM	Expert Talk by Dr. Yadwinder Singh Brar	Workshop Seminar Hall
	10.45AM-11.00AM	Tea Break	Workshop Seminar Hall
	11.00AM-1.00PM	Expert Talk By Dr. Ritula Thakur	Workshop Seminar Hall
	1.00PM-1.45PM	Lunch	Alumni Home
	1.45PM-3.45PM	Expert Talk by Dr. Ashwani Sharma	Workshop Seminar Hall
	3.45PM-4.00PM	Feedback & Validectory	Workshop Seminar Hall
	4.00PM	Tea	Workshop Seminar Hall



## Guru Nanak Dev Engineering College, Ludhiana

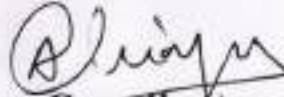
AN AUTONOMOUS COLLEGE u/s [2(f) & 12(B)] OF UGC ACT-1956

Department of Electrical Engineering

QIP Sponsored Faculty Development Programme

### Certificate of Participation

This is to certify that Vishal Kumar  
From GNDEC, Ludhiana participated in the one week QIP sponsored  
Faculty Development Programme on "Energy Conservation and Alternate Sources of Energy" from  
January 29<sup>th</sup> to February 2<sup>nd</sup>, 2019

  
Course Coordinator

  
Head of Department

  
QIP Coordinator



## Guru Nanak Dev Engineering College, Ludhiana

AN AUTONOMOUS COLLEGE u/s [2(f) & 12(B)] OF UGC ACT-1956

Department of Electrical Engineering

QIP Sponsored Faculty Development Programme

### Certificate of Participation

This is to certify that Shivam Saxena  
From GNDEC, Ludhiana participated in the one week QIP sponsored  
Faculty Development Programme on "Energy Conservation and Alternate Sources of Energy" from  
January 29<sup>th</sup> to February 2<sup>nd</sup>, 2019

  
Course Coordinator

  
Head of Department

  
QIP Coordinator

**GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA**  
**DEPARTMENT OF ELECTRICAL ENGINEERING**  
**QIP sponsored FDP**  
**Energy Conservation & Alternative Sources of Energy**  
**January 29- February 2, 2019**

**Attendance Chart**

S.N.	Name of Participant	29.1.19				30.1.2019				31.1.2019	1.2.2019				2.2.2019			
		Session 1	Session 2	Session 3	Session 4	Session 1	Session 2	Session 3	Session 4	Field Visit	Session 1	Session 2	Session 3	Session 4	Session 1	Session 2	Session 3	Session 4
24	Dr. Navneet Singh Bhangu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	Pf. Swapandeep Kaur	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	Pf. Raman Kumar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27	Pf. Deepinder Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	Pf. Ranjit Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	Pf. Amrit Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
30	Vishal Kumar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	Shivam Saxena	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
32	Balkar Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
33	Baldeep Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
34	Amritpal Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
35	Rajbeer Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
36	Binny Sharma	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
37	Rajeev Sharma	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
38	Ranvijay Kumar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
39	Mukesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
40	Parminder Singh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

  
 Coordinator

**Event Report of Quality Improvement Programme (QIP) Short Term Course (STC) on  
"AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing"  
during Dec. 31<sup>st</sup>, 2018 to Jan. 04<sup>th</sup>, 2019**

Information Technology Department of Guru Nanak Dev Engineering College, Ludhiana concluded the weeklong series of lectures and hands-on practice sessions on Quality Improvement Programme (QIP) Short Term Course (STC) on title "AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing". This STC was sponsored by QIP Centre of the Institute. The valediction programme of this course was organized in the consultancy seminar hall of the campus on Friday. This programme was organized with the objective of sharing recent developments in the areas of Artificial Intelligence, Big Data and High Performance Computing with practical demonstration. 17 resource persons of renowned institutions of the region had shared their views and further research areas among the participants.

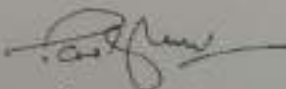
Dr. Sarabjot Singh Anand from Sabudh Foundation, New Delhi was invited as chief guest for the valediction of this programme. In his speech, chief guest emphasised that awareness of technology trends in AI and HPC is the need of the hour, but at same time security of information transferred is important area of concern. He further elaborated that role of hidden variables in machine learning.


In the whole five day programme the academicians, software professional and researchers were invited to deliver the expert talks during the course. During this programme, Dr. Shashi Shekhar Jha from IIT Ropar elaborated the case study of Demands and Supplies Prediction for Taxis in Singapore. Dr. Sukhwinder Singh, Director, Computer Centre at Panjab University, Chandigarh pointed out various innovative ideas implemented at the industry and government level for the concern of Artificial Intelligence and High Performance Computing. Dr. Kuldeep Kumar from Dr. B.R. Ambedkar National Institute of Technology, Jalandhar discussed the topics of Practical Approach to Research Methodologies and Industry-Academic Research Trends in Computing. He demonstrated the contents by sharing live examples.

Er. Navjot Singh from AlertEnterprise Chandigarh shared his views on Disruptive Applications of AI in Various Industries with Use Cases and Scientific Solutions. He elaborated the Alignment of Academic and Research in Modern Day AI based Disruption and Opportunity for Application Oriented Research Activities. Dr. Pankaj Bhambri from GNDEC Ludhiana presented the role and need of High Performance Computing with evolving research trends in bioinformatics. Mr. Vipin Gupta from U-Net Solution organized the hands on session on Implementation of Docker Cluster and Software Defined Networking. Dr. Nirmal Kaur from UIET Panjab University Chandigarh and Er. Amit Deogir from NITTTR Chandigarh delivered their expert talks on Need cum Techniques for Energy Aware Scheduling and Implementation of Load Balancer for Big Data Applications, respectively. Er. Sandeep Kumar Singla shared his practical exposure to Big Data Analytics using the R Lab.

Dr. Pankaj Bhambri, the course coordinator of this programme conveyed that this course was organized with the objectives to expose the faculty/ research scholars/ industry based persons in emerging technologies. This programme provided the practical foundation level training to enable the audience for insight into digital disruption and accelerating machine learning on AI through performance libraries and platforms. Dr. Bhambri informed that the course contents for this STC included AI, Bigdata & HPC aligned applications; Exposure to Analysis; Interpretation of Data; AI, Big Data & HPC Research Methods; Exploration of Contemporary Research in Teaching Learning; Real Life Implementation Scenarios; Case Studies and Lab Sessions.

Dr. Kiran Jyoti, HOD of IT Dept. and faculty coordinator of this course presented the summary & feedback report of this short term course at valediction programme. She shared the roles of social media, mobility, analytics and cloud computing. Dr. Shijpal Singh, Principal of GNDEC mentioned the benefits as well as wastage of resources due to updation in technology every day. He discussed the significance of these types of courses for faculties as well as researchers and congratulated the course coordinators for organizing this STC. Participation Certificates were issued to 41 participants, which came from different regions of the country to attend this STC.

  
PANKAJ BHAMBRI  
Course Coordinator

  
Dr. Kiran Jyoti  
HOD(IT)

QIP SHORT TERM COURSE ON AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing (31st December 2018 - 04th January 2019)						
SCHEDULE						
Day 1: 31st December, 2018 (Monday)						
09:00am-10:30am Registration	10:30am-11:00am	11:00am-12:30pm	12:30pm-01:15pm	01:15pm-02:45pm	02:45pm-03:00pm	03:00pm-04:30pm
10:30am Inauguration	Tea	Session - 1.1	Lunch	Session - 1.2	Tea	Session - 1.3
Chief Guest/ Key Note Speaker	Dr. Sukhwinder Singh Panjab University, Chandigarh					
Session - 1.1	Dr. Kuldeep Kumar Dr. B.R.Ambedkar NIT, Jalandhar		Practical Approach to Research Methodologies			
Session - 1.2	Dr. Kuldeep Kumar Dr. B.R.Ambedkar NIT, Jalandhar		Industry-Academic Research Trends in Computing			
Session - 1.3	Dr. Kiran Jyoti GNDEC, Ludhiana		Overview of Big Data			
Session - 1.4 (04.30-05.00pm)	Discussion cum Feedback Session so as to incorporate corrective measures/ suggestion for this Short Term Course					
Day 2: 01st January, 2019 (Tuesday)						
09:00am-10:30am	10:30am-10:45am	10:45am-12:15pm	12:15pm-	01:00pm-02:30pm	02:30pm-02:45pm	02:45pm-04:15pm
Session - 2.1	Tea	Session - 2.2	Lunch	Session - 2.3	Tea	Session - 2.4
Session - 2.1	Er. Sandeep Kumar Singla GNDEC, Ludhiana		Big Data Analytics using R			
Session - 2.2	Dr. Nirmal Kaur UIET, Panjab University		Energy Aware Scheduling -Need and Technique			
Session - 2.3	Er. Navjot Singh AlertEnterprise, Chandigarh		Disruptive Applications of AI in Various Industries with Use Cases and Scientific Solutions			
Session - 2.4	Er. Navjot Singh AlertEnterprise, Chandigarh		Alignment of Academic and Research in Modern Day AI based Disruption and Opportunity for Application Oriented Research Activities			
Day 3: 02nd January, 2019 (Wednesday)						
09:00am-10:30am	10:30am-10:45am	10:45am-12:15pm	12:15pm-	01:00pm-02:30pm	02:30pm-02:45pm	02:45pm-04:15pm
Session - 3.1	Tea	Session - 3.2	Lunch	Session - 3.3	Tea	Session - 3.4
Session - 3.1	Dr. Pankaj Bhambri GNDEC, Ludhiana		Role in HPC in Bioinformatics			
Session - 3.2	Er. Vipin Gupta U.Net Solutions, Moga		Implementation of Docker Cluster			
Session - 3.3	Er. Vipin Gupta U.Net Solutions, Moga		Implementation of Software Defined Networking			
Session - 3.4	Dr. Amit Kamra GNDEC, Ludhiana		Impact of Big Data on Industrial Environment - A Case Study			
Day 4: 03rd January, 2019 (Thursday)						
09:00am-10:30am	10:30am-10:45am	10:45am-12:15pm	12:15pm-	01:00pm-02:30pm	02:30pm-02:45pm	02:45pm-04:15pm
Session - 4.1	Tea	Session - 4.2	Lunch	Session - 4.3	Tea	Session - 4.4
Session - 4.1	Er. Jagdeep Singh		Practical Session on Python and Other Tools			
Session - 4.2	Er. Amit Deoger NITTTR, Chandigarh		Implementation of Load Balancer for Big Data Applications			
Session - 4.3	Dr. H.S. Rai GNDEC, Ludhiana		Tools for AI and Big Data			
Session - 4.4	Dr. Shashi Shekhar Jha, IIT, Ropar		Demands and Supplies Prediction for Taxis in Singapore			
Day 5: 04th January, 2019 (Friday)						
09:00am-10:30am	10:30am-10:45am	10:45am-12:15pm	12:15pm-	01:00pm-02:30pm	02:30pm-02:45pm	02:45pm-04:15pm
Session - 5.1	Tea	Session - 5.2	Lunch	Session - 5.3	Tea	Session - 5.4
Session - 5.1	Dr. Pradeep Jaswal GNDEC, Ludhiana		Problem Solving and Reasoning through Artificial Intelligence			
Session - 5.2	Dr. Pankaj Bhambri GNDEC, Ludhiana		Various Applications of High Performance Computing and Artificial Intelligence			
Session - 5.3	Dr. Sarabjot Singh Anand Sabudh Foundation, New		The Role of Hidden Variables in Machine Learning			
Session - 5.4	Dr. Sarabjot Singh Anand Sabudh Foundation, New		Concerns of Neural Networks and Artificial Intelligence			
04:15pm-05:00pm	Summary Report, Feedback and Valediction Ceremony					
Venues						
Sessions	Consultancy Seminar Hall, Testing and Consultancy Cell, Guru Nanak Dev Engineering College, Ludhiana					
Lunch and Tea	Consultancy Hall, Testing and Consultancy Cell, Guru Nanak Dev Engineering College, Ludhiana					

--- ORGANISED BY ---

Department of Information Technology  
GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA



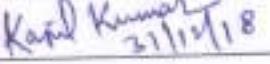

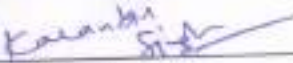

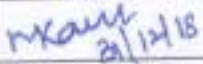
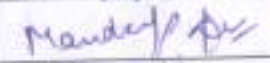
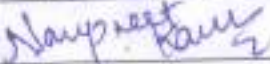




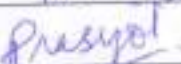
**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**

**Registration for the Course on Dated 31.12.2018**

S. No.	Dr./ Er/ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Signature with Date
1	Dr.	Amit Kamra	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>As</i> 31/12/18
2	Er.	Birpal Kaur	Assistant Professor	GNA University, Phagwara	<i>B</i>
3	Er.	Dinesh Anand	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>Dinesh</i>
4	Er.	Divya Sharma	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	<i>Divya Sharma</i>
5	Er.	Gitanjali	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	<i>Gitanjali</i>
6	Er.	Gurjit Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>Gurjit</i>
7	Er.	Gurjot Singh	Assistant Professor	Malwa College, Samrala	<i>Gurjot</i>
8	Er.	Hanit Karwal	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>Hanit</i>
9	Er.	Harjot Kaur Gill	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>Harjot</i>
10	Er.	Harpeet Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>Harpeet</i>
11	Er.	Harsimran Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	<i>Harsimran Kaur</i>
12	Er.	Jagdeep Singh	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>Jagdeep</i>
13	Er.	Jasmine Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>Jasmine</i>
14	Dr.	K.S. Mann	Professor	Guru Nanak Dev Engineering College, Ludhiana	<i>K.S. Mann</i>

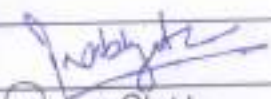
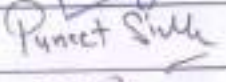
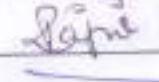
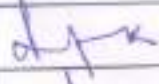
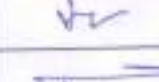

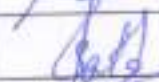
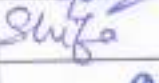


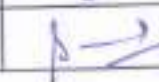



**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**

**Registration for the Course on Dated 31.12.2018**

S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Signature with Date
15	Dr.	Kamaljit Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
16	Er.	Kanwalpreet Singh Sidhu	Assistant Professor	Bhutta College of Engineering and Technology, Ludhiana	
17	Er.	Kapil Kumar	Assistant Professor	Lingaya's Vidyapeeth, Faridabad	 31/12/18
18	Er.	Karamjit Singh Gill	Assistant Professor	Bhutta College of Engineering and Technology, Ludhiana	
19	Mr.	Karanbir Singh	CEO	Up2Mark Technologies Pvt. Ltd.	 31/12/18
20	Dr.	Kiran Jyoti	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
21	Er.	Mandeep Kaur	Assistant Professor	Khalsa College for Women, Ludhiana	 31/12/18
22	Er.	Mandeep Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	
23	Er.	Navpreet Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	
24	Er.	Nidhi Sharma	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
25	Er.	Nitish Sharma	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	
26	Dr.	Pankaj Bhambri	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
27	Ms.	Parminder Kaur	Assistant Professor	Khalsa College for Women, Ludhiana	 31/12/18
28	Er.	Prabhjot Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	

**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**

**Registration for the Course on Dated 31.12.2018**

S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Signature with Date
29	Er.	Prabhjot Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
30	Mr.	Puneet Singh	Director	Up2Mark Technologies Pvt. Ltd.	
31	Er.	Rajni Puri	Assistant Professor	Gujranwala Guru Nanak Institute of Management & Technology, Ludhiana	
32	Er.	Ravinder Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
33	Er.	Rupinder Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
34	Er.	Sachin Bagga	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
35	Er.	Samreet Kaur Gosal	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
36	Er.	Sandeep Kumar Singla	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	 31.12.18
37	Er.	Sartinderpal Singh	AP (CP)/ CP, Computer Centre	Guru Nanak Dev Engineering College, Ludhiana	
38	Er.	Shifa Grover	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	 Shifa Grover
39	Er.	Shivani Arora Abrol	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
40	Er.	Sidharth Jain	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
41	Dr.	Sumeet Kaur Sehra	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
42	Ms.	Sunanda Lal	Assistant Professor	Gujranwala Guru Nanak Institute of Management & Technology, Ludhiana	

**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**

**Registration for the Course on Dated 31.12.2018**

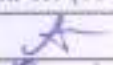
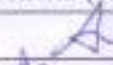
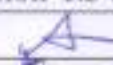



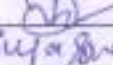
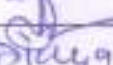

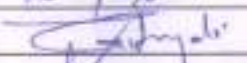
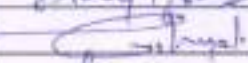
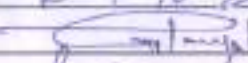
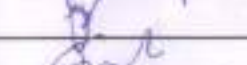
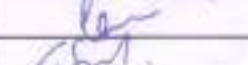


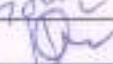


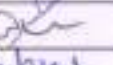

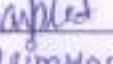
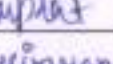
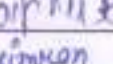
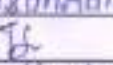

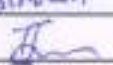

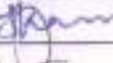

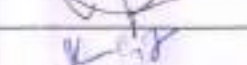
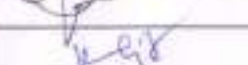
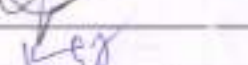
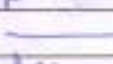
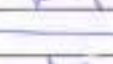
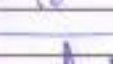















S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Signature with Date
43	Er.	Sunil Aggarwal	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	
44	Er.	Swaranjit Singh	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	Swaranjit Singh
45	Ms.	Taranpreet Kaur	Assistant Professor	Mata Gujri College, Fatehgarh Sahib	M. Kaur 31/12/18
46	Dr.	V.J. Rai	Principal	Bhutta College of Engineering and Technology, Ludhiana	
47	Dr.	Vikas Singla	Assistant Professor	Malout Institute of Management & Information Technology, Malout	Vikas Singla
48	Er.	Yadvir Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	Yadvir Kaur

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 31st December 2018 (Monday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 1 (Signatures)		
				Session-1.1 (11-12:30pm)	Session-1.2 (1:15-2:45pm)	Session-1.3 (3-4:30pm)
1	Dr.	Amit Kamra	Assistant Professor			
2	Er.	Birpal Kaur	Assistant Professor			
3	Er.	Dinesh Anand	Assistant Professor			
4	Er.	Divya Sharma	Research Scholar			
5	Er.	Gitanjali	Research Scholar			
6	Er.	Gurjit Kaur	Assistant Professor			
7	Er.	Gurjot Singh	Assistant Professor			
8	Er.	Hanit Karwal	Assistant Professor			
9	Er.	Harjot Kaur Gill	Assistant Professor			
10	Er.	Harpeet Kaur	Assistant Professor			
11	Er.	Harsimran Kaur	Research Scholar			
12	Er.	Jagdeep Singh	Assistant Professor			
13	Er.	Jasmine Kaur	Assistant Professor			
14	Dr.	K.S. Mann	Professor			
15	Dr.	Kamaljit Kaur	Assistant Professor			
16	Er.	Kanwalpreet Singh Sidhu	Assistant Professor			
17	Er.	Kapil Kumar	Assistant Professor			

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 31st December 2018 (Monday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

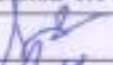

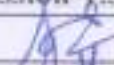


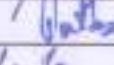
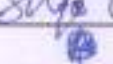
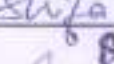
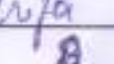
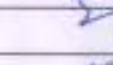
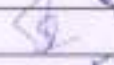
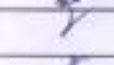
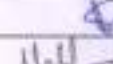
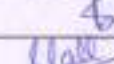
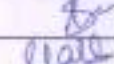
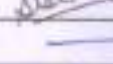
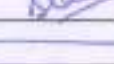
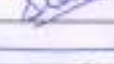

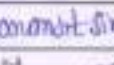
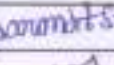



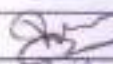

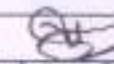

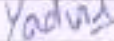
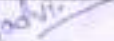









S.No.		Name of the Participant	Designation	Day 1 (Signatures)		
				Session-1.1 (11-12:30pm)	Session-1.2 (1:15-2:45pm)	Session-1.3 (3-4:30pm)
18	Er.	Karamjit Singh Gill	Assistant Professor			
19	Mr.	Karanbir Singh	CEO	Karanbir Singh	Karanbir Singh	Karanbir Singh
20	Dr.	Kiran Jyoti	Assistant Professor			
21	Er.	Mandeep Kaur	Assistant Professor	NK	NK	NK
22	Er.	Mandeep Kaur	Research Scholar	Mandeep Kaur	Mandeep Kaur	Mandeep Kaur
23	Er.	Navpreet Kaur	Research Scholar	Navpreet Kaur	Navpreet Kaur	Navpreet Kaur
24	Er.	Nidhi Sharma	Assistant Professor	Nidhi Sharma	Nidhi Sharma	Nidhi Sharma
25	Er.	Nitish Sharma	Research Scholar			
26	Dr.	Pankaj Bhambri	Assistant Professor	Pankaj Bhambri	Pankaj Bhambri	Pankaj Bhambri
27	Ms.	Parminder Kaur	Assistant Professor	Parminder Kaur	Parminder Kaur	Parminder Kaur
28	Er.	Prabhjot Kaur	Research Scholar	Prabhjot Kaur	Prabhjot Kaur	Prabhjot Kaur
29	Er.	Prabhjot Kaur	Assistant Professor	Prabhjot Kaur	Prabhjot Kaur	Prabhjot Kaur
30	Mr.	Puneet Singh	Director	Puneet Singh	Puneet Singh	Puneet Singh
31	Er.	Rajni Puri	Assistant Professor	Rajni Puri	Rajni Puri	Rajni Puri
32	Er.	Ravinder Kaur	Assistant Professor			
33	Er.	Rupinder Kaur	Assistant Professor	Rupinder Kaur	Rupinder Kaur	Rupinder Kaur
34	Er.	Sachin Bagga	Assistant Professor	Sachin Bagga	Sachin Bagga	Sachin Bagga
35	Er.	Samreet Kaur Gosal	Assistant Professor			

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 31st December 2018 (Monday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 1 (Signatures)		
				Session-1.1 (11-12:30pm)	Session-1.2 (1:15-2:45pm)	Session-1.3 (3-4:30pm)
36	Er.	Sandeep Kumar Singla	Assistant Professor			
37	Er.	Sartinderpal Singh	AP (CPV CP, Computer Centre)			
38	Er.	Shifa Grover	Research Scholar			
39	Er.	Shivani Arora Abrol	Assistant Professor			
40	Er.	Sidharth Jain	Assistant Professor			
41	Dr.	Sumeet Kaur Sehra	Assistant Professor			
42	Ms.	Sunanda Lal	Assistant Professor			
43	Er.	Sunil Aggarwal	Research Scholar			
44	Er.	Swaranjit Singh	Research Scholar			
45	Ms.	Taranpreet Kaur	Assistant Professor			
46	Dr.	V.J. Rai	Principal			
47	Dr.	Vikas Singla	Assistant Professor			
48	Er.	Yadvir Kaur	Assistant Professor			

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 01st January 2019 (Tuesday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 2 (Signatures)			
				Session-2.1 (09.00-10:30am)	Session-2.2 (10.45-12:15pm)	Session-2.3 (01.00-02:30pm)	Session-2.4 (02.45-04:15pm)
1	Dr.	Amit Kamra	Assistant Professor				
2	Er.	Birpal Kaur	Assistant Professor				
3	Er.	Dinesh Anand	Assistant Professor				
4	Er.	Divya Sharma	Research Scholar				
5	Er.	Gitanjali	Research Scholar				
6	Er.	Gurjit Kaur	Assistant Professor				
7	Er.	Gurjot Singh	Assistant Professor				
8	Er.	Hanit Kaur	Assistant Professor				
9	Er.	Harjot Kaur Gill	Assistant Professor				
10	Er.	Harpreet Kaur	Assistant Professor				
11	Er.	Harsimran Kaur	Research Scholar				
12	Er.	Jagdeep Singh	Assistant Professor				
13	Er.	Jasmine Kaur	Assistant Professor				
14	Dr.	K.S. Mann	Professor				
15	Dr.	Kamaljit Kaur	Assistant Professor				
16	Er.	Kapil Kumar	Assistant Professor				

Kapil Kumar  
01/01/2019

Kapil Kumar

Kapil Kumar

Kapil Kumar

22

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 01st January 2019 (Tuesday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 2 (Signatures)			
				Session-2.1 (09.00-10:30am)	Session-2.2 (10.45-12:15pm)	Session-2.3 (01.00-02:30pm)	Session-2.4 (02.45-04:15pm)
17	Mr.	Karanbir Singh	CEO				
18	Dr.	Kiran Jyoti	Assistant Professor				
19	Er.	Mandeep Kaur	Assistant Professor				
20	Er.	Mandeep Kaur	Research Scholar				
21	Er.	Navpreet Kaur	Research Scholar				
22	Er.	Nidhi Sharma	Assistant Professor				
23	Dr.	Pankaj Bhambri	Assistant Professor				
24	Ms.	Parminder Kaur	Assistant Professor				
25	Er.	Prabhjot Kaur	Research Scholar				
26	Er.	Prabhjot Kaur	Assistant Professor				
27	Mr.	Puneet Singh	Director				
28	Er.	Rajni Puri	Assistant Professor				
29	Er.	Rupinder Kaur	Assistant Professor				
30	Er.	Sachin Bagga	Assistant Professor				
31	Er.	Sandeep Kumar Singla	Assistant Professor				
32	Er.	Sartinderpal Singh	AP (CPV) CP, Computer Centre				
33	Er.	Shifa Grover	Research Scholar				


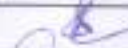
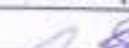


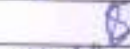


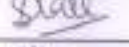




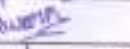

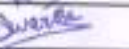
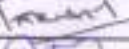
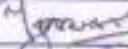
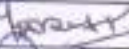




--	--	--	--	--	--	--	--

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 01st January 2019 (Tuesday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana


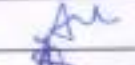






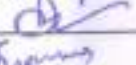

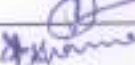
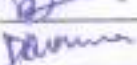
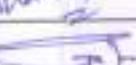
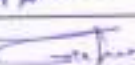
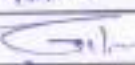

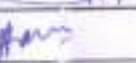
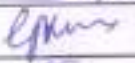

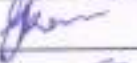
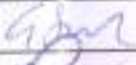










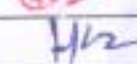
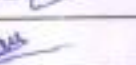
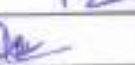
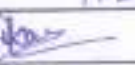


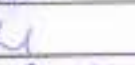
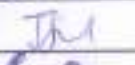

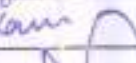
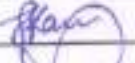
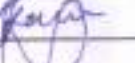
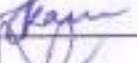





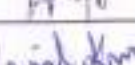
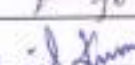
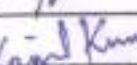
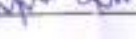











S.No.		Name of the Participant	Designation	Day 2 (Signatures)			
				Session-2.1 (09.00-10:30am)	Session-2.2 (10.45-12:15pm)	Session-2.3 (01.00-02:30pm)	Session-2.4 (02.45-04:15pm)
34	Er.	Shivani Arora Abrol	Assistant Professor				
35	Er.	Sidharth Jain	Assistant Professor				
36	Dr.	Sumeet Kaur Sehra	Assistant Professor				
37	Ms.	Sunanda Lal	Assistant Professor				
38	Er.	Swaranjit Singh	Research Scholar				
39	Ms.	Taranpreet Kaur	Assistant Professor				
40	Dr.	Vikas Singla	Assistant Professor				
41	Er.	Yadvir Kaur	Assistant Professor				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 02nd January 2019 (Wednesday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.				Day 3 (Signatures)			
				Session-3.1 (09.00-10:30am)	Session-3.2 (10.45-12:15pm)	Session-3.3 (01.00-02:30pm)	Session-3.4 (02.45-04:15pm)
1	Dr.	Amit Kamra	Assistant Professor				
2	Er.	Birpal Kaur	Assistant Professor				
3	Er.	Dinesh Anand	Assistant Professor				
4	Er.	Divya Sharma	Research Scholar				
5	Er.	Gitanjali	Research Scholar				
6	Er.	Gurjit Kaur	Assistant Professor				
7	Er.	Gurjot Singh	Assistant Professor				
8	Er.	Hanit Kaur	Assistant Professor				
9	Er.	Harjot Kaur Gill	Assistant Professor				
10	Er.	Harpreet Kaur	Assistant Professor				
11	Er.	Harsimran Kaur	Research Scholar				
12	Er.	Jagdeep Singh	Assistant Professor				
13	Er.	Jasmine Kaur	Assistant Professor				
14	Dr.	K.S. Mann	Professor				
15	Dr.	Kamaljit Kaur	Assistant Professor				
16	Er.	Kapil Kumar	Assistant Professor				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 02nd January 2019 (Wednesday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 3 (Signatures)			
				Session-3.1 (09.00-10:30am)	Session-3.2 (10.45-12:15pm)	Session-3.3 (01.00-02:30pm)	Session-3.4 (02.45-04:15pm)
17	Mr.	Karanbir Singh	CEO				
18	Dr.	Kiran Jyoti	Assistant Professor				
19	Er.	Mandeep Kaur	Assistant Professor				
20	Er.	Mandeep Kaur	Research Scholar				
21	Er.	Navpreet Kaur	Research Scholar				
22	Er.	Nidhi Sharma	Assistant Professor				
23	Dr.	Pankaj Bhambri	Assistant Professor				
24	Ms.	Parminder Kaur	Assistant Professor				
25	Er.	Prabhjot Kaur	Research Scholar				
26	Er.	Prabhjot Kaur	Assistant Professor				
27	Mr.	Puneet Singh	Director				
28	Er.	Rajni Puri	Assistant Professor				
29	Er.	Rupinder Kaur	Assistant Professor				
30	Er.	Sachin Bagga	Assistant Professor				
31	Er.	Sandeep Kumar Singla	Assistant Professor				
32	Er.	Sartinderpal Singh	AP (CP)/ CP, Computer Centre				
33	Er.	Shifa Grover	Research Scholar				

--	--	--	--	--	--	--	--

## Attendance Sheet

**Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing**

**Date: 02nd January 2019 (Wednesday)**

**Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana**













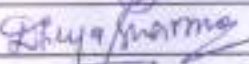


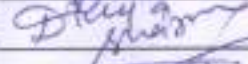
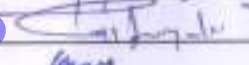















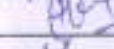



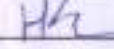



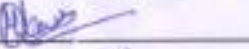
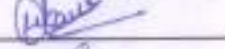







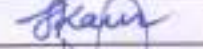










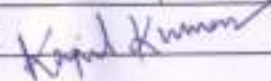
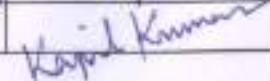
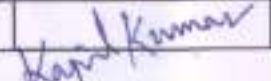
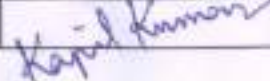
S.No.		Name of the Participant	Designation	Day 3 (Signatures)			
				Session-3.1 (09.00-10:30am)	Session-3.2 (10.45-12:15pm)	Session-3.3 (01.00-02:30pm)	Session-3.4 (02.45-04:15pm)
34	Er.	Shivani Arora Abrol	Assistant Professor				
35	Er.	Sidharth Jain	Assistant Professor				
36	Dr.	Sumeet Kaur Sehra	Assistant Professor				
37	Ms.	Sunanda Lal	Assistant Professor				
38	Er.	Swaranjit Singh	Research Scholar				
39	Ms.	Taranpreet Kaur	Assistant Professor				
40	Dr.	Vikas Singla	Assistant Professor				
41	Er.	Yadvir Kaur	Assistant Professor				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 03rd January 2019 (Thursday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana



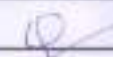
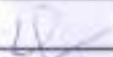
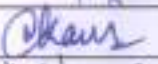
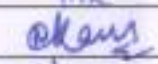
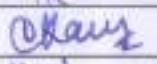
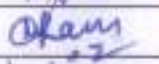
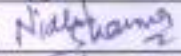







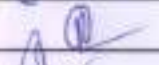

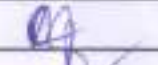
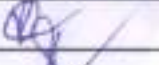
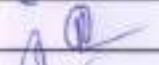

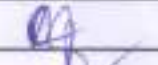
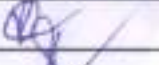
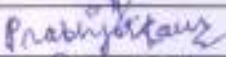



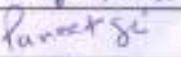
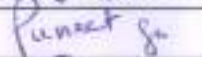
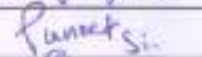
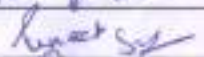





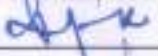


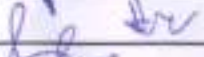
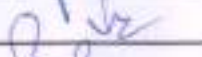
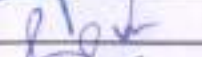









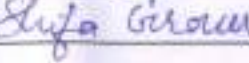
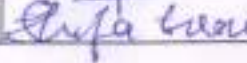
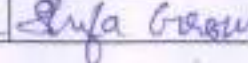
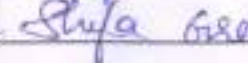
S.No.			Designation	Day 4 (Signatures)			
				Session-4.1 (09.00-10:30am)	Session-4.2 (10.45-12:15pm)	Session-4.3 (01.00-02:30pm)	Session-4.4 (02.45-04:15pm)
1	Dr.	Amit Kamra	Assistant Professor				
2	Er.	Birpal Kaur	Assistant Professor				
3	Er.	Dinesh Anand	Assistant Professor				
4	Er.	Divya Sharma	Research Scholar				
5	Er.	Gitanjali	Research Scholar				
6	Er.	Gurjit Kaur	Assistant Professor				
7	Er.	Gurjot Singh	Assistant Professor				
8	Er.	Hanit Kaur	Assistant Professor				
9	Er.	Harjot Kaur Gill	Assistant Professor				
10	Er.	Harpreet Kaur	Assistant Professor				
11	Er.	Harsimran Kaur	Research Scholar				
12	Er.	Jagdeep Singh	Assistant Professor				
13	Er.	Jasmine Kaur	Assistant Professor				
14	Dr.	K.S. Mann	Professor				
15	Dr.	Kamaljit Kaur	Assistant Professor				
16	Er.	Kapil Kumar	Assistant Professor				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 03rd January 2019 (Thursday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 4 (Signatures)			
				Session-4.1	Session-4.2	Session-4.3	Session-4.4
18	Dr.	Kiran Jyoti	Assistant Professor				
19	Er.	Mandeep Kaur	Assistant Professor	MK	MK	MK	MK
20	Er.	Mandeep Kaur	Research Scholar	MK	MK	MK	MK
21	Er.	Navpreet Kaur	Research Scholar				
22	Er.	Nidhi Sharma	Assistant Professor				
23	Dr.	Pankaj Bhambri	Assistant Professor				
24	Ms.	Parminder Kaur	Assistant Professor				
25	Er.	Prabhjot Kaur	Research Scholar				
26	Er.	Prabhjot Kaur	Assistant Professor				
27	Mr.	Puneet Singh	Director				
28	Er.	Rajni Puri	Assistant Professor				
29	Er.	Rupinder Kaur	Assistant Professor				
30	Er.	Sachin Bagga	Assistant Professor				
31	Er.	Sandeep Kumar Singla	Assistant Professor				
32	Er.	Sartinderpal Singh	AP (CP)/ CP, Computer Centre				
33	Er.	Shifa Grover	Research Scholar				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 03rd January 2019 (Thursday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 4 (Signatures)			
				Session-4.1	Session-4.2	Session-4.3	Session-4.4
35	Er.	Sidharth Jain	Assistant Professor				
36	Dr.	Sumeet Kaur Sehra	Assistant Professor				
37	Ms.	Sunanda Lal	Assistant Professor				
38	Er.	Swaranjit Singh	Research Scholar				
39	Ms.	Taranpreet Kaur	Assistant Professor				
40	Dr.	Vikas Singla	Assistant Professor				
41	Er.	Yadvir Kaur	Assistant Professor				
42	Ms.	Shivani A Ahrol	A-P				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 04th January 2019 (Friday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 5 (Signatures)			
				Session-5.1 (09.00-10:30am)	Session-5.2 (10.45-12:15pm)	Session-5.3 (01.00-02:30pm)	Session-5.4 (02.45-04:15pm)
1	Dr.	Amit Kamra	Assistant Professor				
2	Er.	Birpal Kaur	Assistant Professor				
3	Er.	Dinesh Anand	Assistant Professor				
4	Er.	Divya Sharma	Research Scholar				
5	Er.	Gitanjali	Research Scholar				
6	Er.	Gurjit Kaur	Assistant Professor				
7	Er.	Gurjot Singh	Assistant Professor				
8	Er.	Hanit Kaur	Assistant Professor				
9	Er.	Harjot Kaur Gill	Assistant Professor				
10	Er.	Harpreet Kaur	Assistant Professor				
11	Er.	Harsimran Kaur	Research Scholar				
12	Er.	Jagdeep Singh	Assistant Professor				
13	Er.	Jasmine Kaur	Assistant Professor				
14	Dr.	K.S. Mann	Professor				
15	Dr.	Kamaljit Kaur	Assistant Professor				
16	Er.	Kapil Kumar	Assistant Professor				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 04th January 2019 (Friday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 5 (Signatures)			
				Session-5.1	Session-5.2	Session-5.3	Session-5.4
18	Dr.	Kiran Jyoti	Assistant Professor				
19	Er.	Mandeep Kaur	Assistant Professor				
20	Er.	Mandeep Kaur	Research Scholar				
21	Er.	Navpreet Kaur	Research Scholar				
22	Er.	Nidhi Sharma	Assistant Professor				
23	Dr.	Pankaj Bhambri	Assistant Professor				
24	Ms.	Parminder Kaur	Assistant Professor				
25	Er.	Prabhjot Kaur	Research Scholar				
26	Er.	Prabhjot Kaur	Assistant Professor				
27	Mr.	Puneet Singh	Director				
28	Er.	Rajni Puri	Assistant Professor				
29	Er.	Rupinder Kaur	Assistant Professor				
30	Er.	Sachin Bagga	Assistant Professor				
31	Er.	Sandeep Kumar Singla	Assistant Professor				
32	Er.	Sartinderpal Singh	AP (CP)/ CP, Computer Centre				
33	Er.	Shifa Grover	Research Scholar				

## Attendance Sheet

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

Date: 04th January 2019 (Friday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	Day 5 (Signatures)			
				Session-5.1	Session-5.2	Session-5.3	Session-5.4
35	Er.	Sidharth Jain	Assistant Professor				
36	Dr.	Sumeet Kaur Sehra	Assistant Professor				
37	Ms.	Sunanda Lal	Assistant Professor				
38	Er.	Swaranjit Singh	Research Scholar				
39	Ms.	Taranpreet Kaur	Assistant Professor				
40	Dr.	Vikas Singla	Assistant Professor				
41	Er.	Yadvir Kaur	Assistant Professor				
42	Ms.	Shivani A Ahluwalia	A.P.				

## Cosolidated Attendance Sheet (QIP-STC)

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

31st December 2018 (Monday) - 04th January 2019 (Friday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	31.12.2018	1.1.2019	2.1.2019	3.1.2019	4.1.2019
1	Dr.	Amit Kamra	Assistant Professor	A	A	A	A	A
2	Er.	Birpal Kaur	Assistant Professor	B	B	B	B	B
3	Er.	Dinesh Anand	Assistant Professor	D	D	D	D	D
4	Er.	Divya Sharma	Research Scholar	Divya Sharma	Divya Sharma	Divya Sharma	Divya Sharma	Divya Sharma
5	Er.	Gitanjali	Research Scholar	Gitanjali	Gitanjali	Gitanjali	Gitanjali	Gitanjali
6	Er.	Gurjit Kaur	Assistant Professor	GKaur	GKaur	GKaur	GKaur	GKaur
7	Er.	Gurjot Singh	Assistant Professor	GS	GS	GS	GS	GS
8	Er.	Hanit Kaur	Assistant Professor	HK	HK	HK	HK	HK
9	Er.	Harjot Kaur Gill	Assistant Professor	HKG	HKG	HKG	HKG	HKG
10	Er.	Harpreet Kaur	Assistant Professor	HK	HK	HK	HK	HK
11	Er.	Harsimran Kaur	Research Scholar	HKaur	HKaur	HKaur	HKaur	HKaur
12	Er.	Jagdeep Singh	Assistant Professor	JS	JS	JS	JS	JS
13	Er.	Jasmine Kaur	Assistant Professor	JKaur	JKaur	JKaur	JKaur	JKaur
14	Dr.	K.S. Mann	Professor	KSM	KSM	KSM	KSM	KSM
15	Dr.	Kamaljit Kaur	Assistant Professor	KK	KK	KK	KK	KK
16	Er.	Kapil Kumar	Assistant Professor	Kapil Kumar	Kapil Kumar	Kapil Kumar	Kapil Kumar	Kapil Kumar

Karanbir S

## Cosolidated Attendance Sheet (QIP-STC)

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing

31st December 2018 (Monday) - 04th January 2019 (Friday)

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.	Name of the Participant	Designation	31.12.2018	1.1.2019	2.1.2019	3.1.2019	4.1.2019
18	Dr. Kiran Jyoti	Assistant Professor					
19	Er. Mandeep Kaur	Assistant Professor	MK	MK	MK	MK	MK
20	Er. Mandeep Kaur	Research Scholar					
21	Er. Navpreet Kaur	Research Scholar					
22	Er. Nidhi Sharma	Assistant Professor					
23	Dr. Pankaj Bhambri	Assistant Professor					
24	Ms. Parminder Kaur	Assistant Professor					
25	Er. Prabhjot Kaur	Research Scholar					
26	Er. Prabhjot Kaur	Assistant Professor					
27	Mr. Puneet Singh	Director					
28	Er. Rajni Puri	Assistant Professor					
29	Er. Rupinder Kaur	Assistant Professor					
30	Er. Sachin Bagga	Assistant Professor					
31	Er. Sandeep Kumar Singla	Assistant Professor					
32	Er. Sartinderpal Singh	AP (CP) CP, Computer Centre					
33	Er. Shifa Grover	Research Scholar					

## Cosolidated Attendance Sheet (QIP-STC)

Name of the Course: AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing  
31st December 2018 (Monday) - 04th January 2019 (Friday)


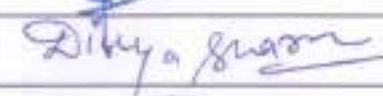
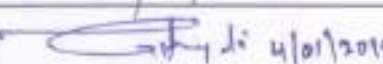


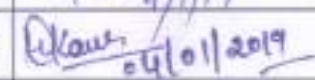
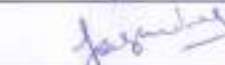
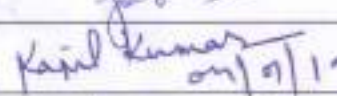
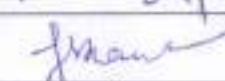

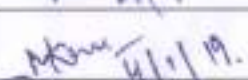
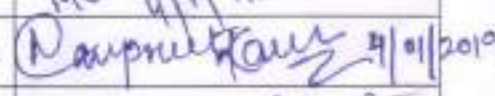
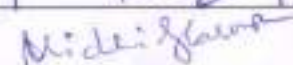

Venue: Consultancy Seminar Hall, Guru Nanak Dev Engineering College Ludhiana

S.No.		Name of the Participant	Designation	31.12.2018	1.1.2019	2.1.2019	3.1.2019	4.1.2019
35	Er.	Sidharth Jain	Assistant Professor					
36	Dr.	Sumeet Kaur Sehra	Assistant Professor					
37	Ms.	Sunanda Lal	Assistant Professor					
38	Er.	Swaranjit Singh	Research Scholar					
39	Ms.	Taranpreet Kaur	Assistant Professor					
40	Dr.	Vikas Singla	Assistant Professor					
41	Er.	Yadvir Kaur	Assistant Professor					
42	Ms.	Shirvani A. Absol	A.P					

43 Mr. Ranjeet Chander  
Dr. Kuran Tyche

**QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana**

**Receiving Slip of 16GB Pen Drive**

S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Signature with Date
1	Er.	Birpal Kaur	Assistant Professor	GNA University, Phagwara	
2	Er.	Divya Sharma	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	
3	Er.	Gitanjali	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	 4/01/2019
4	Er.	Gurjit Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
5	Er.	Gurjot Singh	Assistant Professor	Malwa College, Samrala	 4/1/19
6	Er.	Harsimran Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	 04/01/2019
7	Er.	Jasmine Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
8	Er.	Kapil Kumar	Assistant Professor	Lingaya's Vidyapeeth, Faridabad	 01/01/19
9	Mr.	Karanbir Singh	CEO	Up2Mark Technologies Pvt. Ltd.	
10	Er.	Mandeep Kaur	Assistant Professor	Khalsa College for Women, Ludhiana	 4/1/19
11	Er.	Mandeep Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	 4/1/19
12	Er.	Navpreet Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	 4/01/2019
13	Er.	Nidhi Sharma	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	
14	Ms.	Parminder Kaur	Assistant Professor	Khalsa College for Women, Ludhiana	 4/1/19

**QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana**

**Receiving Slip of 16GB Pen Drive**

S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Signature with Date
15	Er.	Prabhjot Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	Prabhjot Kaur 4/1/19
16	Er.	Prabhjot Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	Prabhjot Kaur 4/1/19
17	Mr.	Puneet Singh	Director	Up2Mark Technologies Pvt. Ltd.	Puneet Singh 4/1/19
18	Er.	Rajni Puri	Assistant Professor	Gujranwala Guru Nanak Institute of Management & Technology, Ludhiana	Rajni Puri 4/1/19
19	Er.	Sartinderpal Singh	AP (CP)/ CP, Computer Centre	Guru Nanak Dev Engineering College, Ludhiana	Sartinderpal Singh 4/1/19
20	Er.	Shifa Grover	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	Shifa Grover 4/1/19
21	Er.	Shivani Arora Abrol	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	Shivani Arora Abrol 4/1/19
22	Dr.	Sumeet Kaur Sehra	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	Sumeet Kaur Sehra 4/1/19
23	Ms.	Sunanda Lal	Assistant Professor	Gujranwala Guru Nanak Institute of Management & Technology, Ludhiana	Sunanda Lal 4/10/2019
24	Er.	Swaranjit Singh	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	Swaranjit Singh 4/1/2019
25	Ms.	Taranpreet Kaur	Assistant Professor	Mata Gujri College, Fatehgarh Sahib	Taranpreet Kaur 4/1/2019
26	Dr.	Vikas Singla	Assistant Professor	Malout Institute of Management & Information Technology, Malout	Vikas Singla 4/1/2019

**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**  
**Photograph on Dated 31.12.2018**

S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Remarks for the Photographer
1	Dr.	Amit Kamra	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5156
2	Er.	Birpal Kaur	Assistant Professor	GNA University, Phagwara	5159
3	Er.	Dinesh Anand	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5173
4	Er.	Divya Sharma	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5278
5	Er.	Gitanjali	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5281
6	Er.	Gurjit Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5267
7	Er.	Gurjot Singh	Assistant Professor	Malwa College, Samrala	5157
8	Er.	Hanit Karwal	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5168
9	Er.	Harjot Kaur Gill	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5176
10	Er.	Harpeet Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5175
11	Er.	Harsimran Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5164
12	Er.	Jagdeep Singh	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5153
13	Er.	Jasmine Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5265
14	Dr.	K.S. Mann	Professor	Guru Nanak Dev Engineering College, Ludhiana	5273

**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During  
Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**

**Photograph on Dated 31.12.2018**

S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Remarks for the Photographer
15	Dr.	Kamaljit Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5165
16	Er.	Kanwalpreet Singh Sidhu	Assistant Professor	Bhutta College of Engineering and Technology, Ludhiana	X
17	Er.	Kapil Kumar	Assistant Professor	Lingaya's Vidyapeeth, Faridabad	5158
18	Er.	Karamjit Singh Gill	Assistant Professor	Bhutta College of Engineering and Technology, Ludhiana	X
19	Mr.	Karanbir Singh	CEO	Up2Mark Technologies Pvt. Ltd.	5263
20	Dr.	Kiran Jyoti	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5274
21	Er.	Mandeep Kaur	Assistant Professor	Khalsa College for Women, Ludhiana	5178
22	Er.	Mandeep Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5277
23	Er.	Navpreet Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5279
24	Er.	Nidhi Sharma	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5268
25	Er.	Nitish Sharma	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	X
26	Dr.	Pankaj Bhambri	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5160
27	Ms.	Parminder Kaur	Assistant Professor	Khalsa College for Women, Ludhiana	5161
28	Er.	Prabhjot Kaur	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5276

**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During  
Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**

**Photograph on Dated 31.12.2018**

S. No.	Dr./ Er./ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Remarks for the Photographer
29	Er.	Prabhjot Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5269
30	Mr.	Puneet Singh	Director	Up2Mark Technologies Pvt. Ltd.	5262
31	Er.	Rajni Puri	Assistant Professor	Gujranwala Guru Nanak Institute of Management & Technology, Ludhiana	5172
32	Er.	Ravinder Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	α
33	Er.	Rupinder Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5266
34	Er.	Sachin Bagga	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5154
35	Er.	Samreet Kaur Gosal	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	α
36	Er.	Sandeep Kumar Singla	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5285
37	Er.	Sartinderpal Singh	AP (CPY CP, Computer Centre)	Guru Nanak Dev Engineering College, Ludhiana	5174
38	Er.	Shifa Grover	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5283
39	Er.	Shivani Arora Abrol	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5288
40	Er.	Sidharth Jain	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5169
41	Dr.	Sumeet Kaur Sehra	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5286
42	Ms.	Sunanda Lal	Assistant Professor	Gujranwala Guru Nanak Institute of Management & Technology, Ludhiana	5170

**Attendance Sheet (QIP Short Term Course on AI, Big Data and HPC Aligned Applications - A Modern Approach of Computing During Dec. 31st 2018 – Jan. 04th 2019 by the Dept. of Info. Tech., GNDEC Ludhiana)**

**Photograph on Dated 31.12.2018**

S. No.	Dr./ Er/ Mr./ Ms./ Mrs.	Participant Name	Designation	Affiliation	Remarks for the Photographer
43	Er.	Sunil Aggarwal	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	✓
44	Er.	Swaranjit Singh	Research Scholar	Guru Nanak Dev Engineering College, Ludhiana	5163
45	Ms.	Taranpreet Kaur	Assistant Professor	Mata Gujri College, Fatehgarh Sahib	5162
46	Dr.	V.J. Rai	Principal	Bhutta College of Engineering and Technology, Ludhiana	✓
47	Dr.	Vikas Singla	Assistant Professor	Malout Institute of Management & Information Technology, Malout	5264
48	Er.	Yadvir Kaur	Assistant Professor	Guru Nanak Dev Engineering College, Ludhiana	5177

No. IT/QJP/Jan.2019/04



## **Guru Nanak Dev Engineering College**

AN AUTONOMOUS COLLEGE u/s 2(f) & 12(B) OF UGC ACT 1956

Gill Road, Ludhiana - 141006 (Pb.) INDIA

**Department of Information Technology**

**QIP SHORT TERM COURSE**



### *Certificate of Participation*

This is to certify that Er. Divya Sharma from GNDEC, Ludhiana  
participated in the Short Term Course on "AI, Big Data and HPC Aligned  
Applications - A Modern Approach of Computing" from 31<sup>st</sup> December 2018  
to 04<sup>th</sup> January 2019.

*[Signature]*

*[Signature]*

*[Signature]*  
QIP Coordinator

No. IT/QIP/Jan.2019/21



## **Guru Nanak Dev Engineering College**

**AN AUTONOMOUS COLLEGE u/s 2(f) & 12(B) OF UGC ACT 1956**

Gill Road, Ludhiana - 141006 (Pb.) INDIA

**Department of Information Technology**

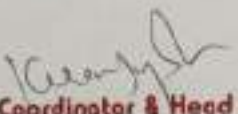
**QIP SHORT TERM COURSE**



### *Certificate of Participation*

*This is to certify that Er. Navpreet Kaur from GNDEC, Ludhiana  
participated in the Short Term Course on "AI, Big Data and HPC Aligned  
Applications - A Modern Approach of Computing" from 31<sup>st</sup> December 2018  
to 04<sup>th</sup> January 2019.*

  
Course Coordinator

  
Faculty Coordinator & Head of Dept.

  
QIP Coordinator

**GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA**

An Autonomous College u/s 2(f) and 12(B) of UGC Act 1956

**Department of Production Engineering**

**Consolidated report on Faculty Development Program on 'Tribological Analysis on Four Dimensional Printed Engineering Materials'.**

The faculty development program sponsored by QIP on 'Tribological Analysis on Four Dimensional Printed Engineering Materials' was organized by the Production Engineering department from 9 – 13 October, 2018. FDP was held under the guidance of Principal GNDEC, Ludhiana and HOD Production Engineering. The program was designed for industrialist, medical field representatives, researchers and faculty of Various fields of Engineering, as it was an interdisciplinary course.

The experts from the various reputed institutes were present to deliver lectures and share their experiences in Four dimensional printing of engineering materials. More than 40 participants from various institutions had attended the program to take benefits of expert talks and enhanced their knowledge in the field of four dimensional printing.

**Objectives of the program:**

1. Material development for 4D printing.
2. Hands on experience for preparation of 4D print by additive manufacturing.
3. Tribological analysis by using erosion and wear studies.
4. Lab testing of functional prototypes as per ASTM standards.

**Sessions of the program:**

Session I: 09:15 am – 10:45 am

Tea break (10:45 am – 11:00 am)

Session II: 11:00 am – 12:30 pm

Lunch break (12:30 pm – 01:15 pm)

Session III: 01:15 pm - 02:45 pm

Tea break (02:45 pm – 03:00 pm)

Session IV: 03:00 pm – 04:30 pm

**Course contents:**

- Role of 4D printed functional prototypes.
- Additive manufacturing for 4D printed components.
- Tribological analysis.
- Design of experiment (various tools for process optimization)
- Case studies on dental/ortho 4D materials.
- Practice session for lab testing as per ASTM standards.

**Speakers:**

Dr. Buta Singh (MRS Punjab Techninal University, Bathinda)

Dr. Satya Prakash (IIT Roorkee)

Dr. Bhupinder Singh Bhoop (PU, Chandigarh)

Dr. IPS Ahuja (Punjabi University, Patiala)

Dr. JS NS Vyas (IIT Kanpur)

Dr. Sanjeev Kumar (PEC, Chandigarh)

Dr. Sandeep Grover (YMCA, Faridabad)

Dr. Harpreet Singh (IIT Ropar)

Dr. Rupinder Singh (GNDEC, Ludhiana)

Dr. JS Grewal (GNDEC Ludhiana)

**Organizing Committee:**

Dr. JS Grewal (Patron)

Dr. Rupinder Singh (Course Coordinator)

Er. Manjot Singh Bedi

Dr. Harpuneet Singh

Er. Jagdeep Singh

Er. Kanwalpreet Sahni

Er. Arshpreet Kaur

Er. Gulraj Singh  
Er. Gurleen Singh

  
HOD PE

**QIP Short term Course**  
**on**  
**Tribological Analysis of Four Dimensional Printed Engineering Materials**  
**Nov. 19 – 24, 2018**

**Schedule of Expert Talks**

<b>Date: 19/11/2018</b>		
1.	9:00 AM – 09:15 AM	Registration
2.	09:15 AM – 10:45 AM	Lecture by Dr. O.P. Singh, BCET, Gurdaspur
3.	10:45 AM – 11:00 AM	High Tea
4.	11:00 AM – 12:30 PM	Lecture by Dr. H.S. Bedi
5.	12:30 PM – 01:15 PM	Lunch
6.	01:15 PM – 02:45PM	Lecture by Dr. Amit Kamra, GNDEC, Ludhiana
7.	02:45 PM – 03:00 PM	Tea
8.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, LDH
<b>Date: 20/11/2018</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Ishbir Singh, CU, Gharuan
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. G.S. Brar, GNDEC, LDH
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Rupinder Singh, GNDEC, LDH
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. J.S. Grewal, GNDEC, Ludhiana
<b>Date: 21/11/2018</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Damandeep Singh
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Harwinder Singh, GNDEC, Ludhiana
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Dixit Garg
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
<b>Date: 22/11/2018</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. J.S. Grewal, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Jatinder Kapoor, GNDEC, Ludhiana
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. J.S. Grewal, GNDEC, LDH
<b>Date: 23/11/2018</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. G.S. Brar, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Amit Kamra, GNDEC, Ludhiana
4.	12:30 PM – 01:15 PM	Lunch

5.	01:15 PM – 02:45PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. J.S. Grewal, GNDEC, LDH
<b>Date: 24/11/2018</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. R.S. Dhall
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Manpreet Singh
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Valedictory function cum expert talk by Chief guest

Attendance of students for FDP on 'Tribological Analysis of 4-Dimensional Printed Engineering Materials'							
S. No.	Name of student	19/11/2018	20/11/2018	21/11/2018	22/11/2018	23/11/2018	24/11/2018
1	Daljit Singh	Daljit S.	Daljit S.	Daljit S.	Daljit S.	Daljit S.	Daljit S.
2	Gurchetan Singh	G.S.	G.S.	G.S.	G.S.	G.S.	G.S.
3	Gurkanwal Singh Punia	G.S.P.	G.S.P.	G.S.P.	G.S.P.	G.S.P.	G.S.P.
4	Jagroop Singh Bhatti	J.S.Bhatti	J.S.Bhatti	J.S.Bhatti	J.S.Bhatti	J.S.Bhatti	J.S.Bhatti
5	Jaskaran Singh Kang	J.S.K.	J.S.K.	J.S.K.	J.S.K.	J.S.K.	J.S.K.
6	Rahul Blotra	R.B.	R.B.	R.B.	R.B.	R.B.	R.B.
7	Saravjot Singh	S.S.	S.S.	S.S.	S.S.	S.S.	S.S.



# Guru Nanak Dev Engineering College, Ludhiana

AN AUTONOMOUS COLLEGE u/s [2(f) & 12(B)] OF UGC ACT-1956

## Department of Production Engineering

### QIP short term course

### Certificate of Participation

*This is to certify that Mr. Jaskaran Singh From GNDEC, Ludhiana participated in the 5 days course in "Tribological Analysis of Four Dimensional Printed Engineering Materials" from November 19-24, 2018.*

*RS*  
Course Coordinator

*JS Grewal*  
Faculty Coordinator & Head of Dept.

*RS*  
QIP Coordinator

No. QIP/PE/81/2018





# Guru Nanak Dev Engineering College, Ludhiana

AN AUTONOMOUS COLLEGE u/s [2(f) & 12(B)] OF UGC ACT-1956

Department of Production Engineering

QIP short term course

Certificate of Participation

*This is to certify that Mr. Gurchetan Singh From GNDEC, Ludhiana participated in the 5 days course in "Tribological Analysis of Four Dimensional Printed Engineering Materials" from November 19-24, 2018.*

*RE*  
Course Coordinator

*J. Grewal*  
Faculty Coordinator & Head of Dept.

*RS*  
QIP Coordinator

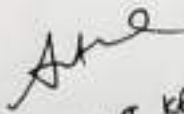
No. QIP/PE/82/2018



**Event Report of 1 week FDP "Insights of Image Processing and their recent trends" held from 07/03/2018 - 11/03/2018 conducted by IT Department.**

Information Technology department conducted FDP on o give a brief about this course that started on 7 March 2018 where Dr Akshay Girdhar from GNDEC started with basic of Image Processing. Dr. Anjali Goyal from GNIMT Ludhiana lecture was based on CBIR, medical imaging, biomedical engineering and health informatics. Dr Jagroop Singh, from DAVIET Jalandhar spoke about image compression. Mr. Jagdeep singh from GNDEC gave hands on session for MATLAB and weka . To cater the issue of plagiarism, Dr Akshay Girdhar presented a very detailed presentation on how to avoid plagiarism.

Dr. Vipul Sharma from IKGPTU gave lecture on how to use mendeley and writing a world class paper. He also explained use of Mendely, how to access various database. Dr. Jitender Vermani, CSIO Chandigarh spoke about image resolution and his research on cancer diagnosis. Dr Mandeep Singh from Thapar University presented his views on Liver Characterization. The FDP is designed to bring Researchers, Academia and Technocrats from different parts of the country to a common gathering for exchanging and sharing the recent developments in the field of Medical imaging. Dr. Navdeep Kanwal from Punjabi university spoke on image forensics. On the final day Dr. Savita Gupta, director UIET presented some latest case studies and practical examples that enrich concept in the field of Medical imaging, Biomedical Engineering. Principal GNDEC and HOD (IT) thanks all the participants for their keen learning on image processing applications .

  
Dr. AMIT KAMEA

Schedule for QIP sponsored STC on “Insights of Image Processing and their recent trends “from 7<sup>th</sup> March to 11<sup>th</sup> March 2018.

Day/Date	<u>9.45 am-11:15 am</u>	<u>9:45am-11:15am</u>	<u>11:15am-12:45pm</u>	<u>12:45pm-1:45pm</u> <u>Lunch</u>	<u>1:45 pm-3:15pm</u> <u>Session</u>	<u>3:15 pm-3:30pm</u> <u>Tea</u>	<u>3:30 pm-5:00 pm</u> <u>Session</u>
<b>Wed (07/03/18)</b>	Introduction to Image Processing <b>Dr. Amit Kamra</b> GNDEC Ludhiana	Tea	Pixel Relationships <b>Dr. Anjali Goyal</b> GNIMT Ludhiana		Image Enhancement <b>Dr. Jagroop Singh</b> DAVIET Jalandhar		Histogram Processing <b>Dr.Akshay Girdhar</b> GNDEC Ludhiana
	<u>9:00 am-10:30 am</u> <u>Session 1</u>	<u>10:30am-10:45am</u> <u>Tea</u>	<u>10.45 am-12:15 pm</u> <u>Session 2</u>	<u>12:15pm-1:15 pm</u> <u>Lunch</u>	<u>1:15 pm-2.45 pm</u> <u>Session 3</u>	<u>2.45 pm-3:0 pm</u> <u>Tea</u>	<u>3:00 pm-4.30 pm</u> <u>Session 4</u>
<b>Thursday (08/03/18)</b>	Image Sharpening <b>Harjot Kaur</b> GNDEC Ludhiana		Frequency Domain Dr. Jatinder Varmani, CSIO Chd		Image Restoration Dr. Jatinder Varmani, CSIO Chd		Wavelets Jappreet Kaur GNDEC Ludhiana
<b>Friday (09/03/18)</b>	Wavelets Jappreet Kaur GNDEC Ludhiana		Image Compression Dr. Vipul Sharma IKGPTU Jalandhar		Image Compression Dr. Vipul Sharma IKGPTU Jalandhar		Plagiarism <b>Dr.Akshay Girdhar</b> GNDEC Ludhiana
<b>Saturday (10/03/18)</b>	Image Segmentation Navdeep Kanwal Pbi. Univ. Patiala		Image Segmentation Navdeep Kanwal Pbi. Univ. Patiala		Image Morphology <b>Amit Kamra</b>		Image Features Representation and Description <b>Navdeep Kanwal</b>
	<u>9.00am-10:30 am</u>	<u>10.30:10.45</u> <u>Tea</u>	<u>10:45am-12:00 pm</u> <u>Keynote Address</u>	<u>12:00 pm-12.45 pm</u> <u>Lunch</u>	<u>12.45 pm-2.15 pm</u> <u>Session</u>	<u>2.15 pm-3:45m</u>	<u>3:45pm-4.30 pm</u> <u>Session</u>
<b>Sunday (11/03/18)</b>	Research Oriented Amit Kamra		Research Dr. Mandeep Singh		Research Dr. Sukhwinder Singh	Research Dr Savita Gupta	Valedictory/High Tea

- Registration of course will be done from 9 am to 9.45 am on 07/03/2018.

**Coordinator (STC)**

QIP sponsored STC by IT Deptt. From 7/3/18 to 11/3/18

Name	Session 1	Session 2	Session 3	Session 4
Priyanka Arora				
Mandeep Singh	MSI	MSI	MSI	MSI
Gagandeep Kaur	Gagan	Gagan	Gagan	Gagan
Jasmin Kaur	Jasmin Kaur	Jasmin Kaur	Jasmin Kaur	Jasmin Kaur
Purnima Bakshi				
Vimal Vairwala	Vimal	Vimal	Vimal	Vimal
Bhaskinder Kaur	Bhaskinder Kaur	Bhaskinder Kaur	Bhaskinder Kaur	Bhaskinder Kaur
Divyadeep Kaur	Divyadeep	Divyadeep	Divyadeep	Divyadeep
Maninder Kaur	Maninder Kaur	Maninder Kaur	Maninder Kaur	Maninder Kaur
Taranjit Kaur	Taranjit Kaur	Taranjit Kaur	Taranjit Kaur	Taranjit Kaur
Gurwinder Kaur	Gurwinder	Gurwinder	Gurwinder	Gurwinder
Nancy	Nancy	Nancy	Nancy	Nancy
Kamal Nain Sharma	Kamal	Kamal	Kamal	Kamal
Gurpreet Kaur	Gurpreet Kaur	Gurpreet Kaur	Gurpreet Kaur	Gurpreet Kaur
Gayatri	Gayatri	Gayatri	Gayatri	Gayatri
Hardeep Kaur	Hardeep Kaur	Hardeep Kaur	Hardeep Kaur	Hardeep Kaur
Mehak	Mehak	Mehak	Mehak	Mehak
Dinesh Anand	D	D	D	D
Manan Kawatra	Manan	Manan	Manan	Manan
Divya Sharma	Divya Sharma	Divya Sharma	Divya Sharma	Divya Sharma
Hardeep Singh Jawanda			AS	AS
Kriti Verma	Kriti Verma	Kriti Verma	Kriti Verma	Kriti Verma
Ashima Malhotra	Ashima Malhotra	Ashima Malhotra	Ashima Malhotra	Ashima Malhotra
Gurwinder Singh				

Sanvet Sapra	Sanvet	Sanvet	Sanvet	Sanvet
Geetika Gupta	Geetika Gupta	Geetika Gupta	Geetika Gupta	Geetika Gupta
Japreet Kaur	Japreet	Japreet	Japreet	Japreet
Sukhdeep Kaur	Sukhdeep	Sukhdeep	Sukhdeep	Sukhdeep
Maninder Kaur	Maninder Kaur	Maninder Kaur	Maninder Kaur	Maninder Kaur
Manjot Kaur	Manjot Kaur	Manjot Kaur	Manjot Kaur	Manjot Kaur
Harjot Kaur Gill	Harjot	Harjot	Harjot	Harjot
K S Mann	K S Mann	K S Mann	K S Mann	K S Mann
Manpreet Singh	Manpreet	Manpreet	Manpreet	Manpreet
Amit Kamra	Amit	Amit	Amit	Amit
Kamaljit Kaur Dhillon	Kamaljit	Kamaljit	Kamaljit	Kamaljit
Pankaj Bhambri				
Karwardeep Singh	Karwardeep	Karwardeep	Karwardeep	Karwardeep
Rupinder Kaur	Rupinder	Rupinder	Rupinder	Rupinder
Jasmeen Gill	Jasmeen	Jasmeen	Jasmeen	Jasmeen
Shaminder Singh	Shaminder	Shaminder	Shaminder	Shaminder
Hitika Gupta	Hitika Gupta	Hitika Gupta	Hitika Gupta	Hitika Gupta
Navtej Singh Ghuman	Navtej Singh	Navtej Singh	Navtej Singh	Navtej Singh



## GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA



(Punjab Govt. Aided Status)

An Autonomous College u/s 2(f) and 12(B) of UGC Act 1956


NAAC (A Grade), IET Accredited U.G. Programmes, AICTE Approved

Affiliated to I.K.G. Punjab Technical University, Jalandhar

It is certified that Divyadeep Kaur, Research Scholar of Guru Nanak Dev Engineering College, Ludhiana has attended One Week Short Term Course on **"Insights of Image Processing and their Recent Trends"** sponsored by Quality Improvement Programme (QIP), organised by Department of Information Technology from 07<sup>th</sup> March – 11<sup>th</sup> March, 2018.

  
Course Coordinator

  
Head of Department

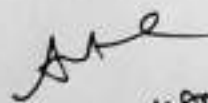
  
QIP Coordinator

**Event Report of 2 week FDP "Research Opportunities in Medical Imaging, Biomedical Engineering and Health Informatics" held from 23/10/2017 -03/11/2017 conducted by IT Department**

Information Technology department conducted FDP on to give a brief about this course that started on 23<sup>rd</sup> Oct 2017 where Dr Sukhwinder Singh of UIET was the chief guest. The keynote address of Dr Sukhwinder Singh was based on insights of medical imaging, biomedical engineering and health informatics. An MOU with Conjoint Health care solutions was signed on FDP for providing research assistance to the M.Tech and PhD Scholars of GNDEC. Dr A S Arora from SLIET Longowal presented his views on his recent research happening in the field of biomedical engineering. Dr. Amit Kamra from GNDEC talk was on Designing Biometric authentication techniques using MATLAB. To cater the issue of plagiarism, Dr Akshay Girdhar presented a very detailed presentation on how to avoid plagiarism.

The talk of Dr. Vipul Sharma from IKGPTU was very informative as he presented how to write a world class paper. He also explained use of Mendely, how to access various database. Dr. K S Mann gave his ideas on health informatics and how to use HL7 in research purpose. Dr Ajay and Dr Manpreet Singh presented their views on recent trends on Bioinformatics. Dr Mandeep Singh from Thapar University presented his views on Liver Characterization. The participants were provided hands on session to two tools i.e WEKA and MATLAB. I hope the participants must have gained some practical knowledge from that session. A one day visit was organized to Mayo Diagnostic and Orison Hospital where Dr Sunil Mittal and his team gave live demonstration of Working of X ray Images, CT

Scan, MRI and Mammography. The FDP is designed to bring Researchers, Academia and Technocrats from different parts of the country to a common gathering for exchanging and sharing the recent developments in the field of Medical imaging, biomedical engineering and health informatics. As the course is of interdisciplinary nature, Dr Rupinder singh of Production department will be presenting a talk on biomedical implants. To inculcate research ideas among young scholars, we have managed to arrange one lecture from Mr Mandeep singh Kwatra who is visiting India from England. Dr Arvind Dhingra gave a talk on MATLAB and its applications. Dr Parminder Singh, share his research ideas on Language processing as machine learning and data mining are two pillars of any research problem. Case studies and practical examples enrich their concept in the field of Medical imaging, Biomedical Engineering, Image Processing, Data mining and it will help them to do better teaching and to conduct research activities at their institutes. HOD presented vote of thanks at valedictory ceremony.

  
(Dr. AMIT KAMRA)

## Schedule for AICTE sponsored FDP on Research Opportunities in Medical Imaging, Biomedical Engineering and Health Informatics

From 23<sup>rd</sup> Oct to 3<sup>rd</sup> Nov 2017.

Day/Date	<u>10.00am-10:45 am</u> <u>Inaugural Address</u>	<u>10:45am-11:15am</u> <u>High Tea</u>	<u>11:15am-12:45pm</u> <u>Keynote Address</u>	<u>12:45pm-1:45pm</u> <u>Lunch</u>	<u>1:45 pm-3:15pm</u> <u>Session</u>	<u>3:15 pm-3:30pm</u> <u>Tea</u>	<u>3:30 pm-5:00 pm</u> <u>Session</u>
<b>Monday</b> <b>(23/10/17)</b>	Inaugural Ceremony		Dr. Sukhwinder Singh, UIET Chd Keynote Address		Dr A S Arora SLIET Longowal		Dr. Amit Kamra, GNDEC Ludhiana
	<u>9:15am-10:45 am</u> <u>Session 1</u>	<u>10:45am-11:00am</u> <u>Tea</u>	<u>11:00am-12:30pm</u> <u>Session 2</u>	<u>12:30pm-1:30 pm</u> <u>Lunch</u>	<u>1:30 pm-3:00pm</u> <u>Session 3</u>	<u>3:00 pm-3:15 pm</u> <u>Tea</u>	<u>3:15 pm-4.45 pm</u> <u>Session 4</u>
<b>Tuesday</b> <b>(24/10/17)</b>	Dr. Akshay Girdhar GNDEC Ludhiana		Dr. Vipul Sharma, IKGPTU Bhikiwind Campus		Dr. Vipul Sharma, IKGPTU Bhikiwind Campus		Dr. K S Mann GNDEC Ludhiana
<b>Wednesday</b> <b>(25/10/17)</b>	Dr. Rupinder Singh, GNDEC Ludhiana		Dr. Birmohan Singh, SLIET Longowal		Dr. Manpreet Kaur, SLIET Longowal		Dr. Amit Kamra, GNDEC Ludhiana
<b>Thursday</b> <b>(26/10/17)</b>	Dr. Ajay Shiv Sharma GNDEC Ludhiana		Dr. Manpreet Singh, GNDEC Ludhiana		Dr Leenu		Dr. K S Mann GNDEC Ludhiana
<b>Friday</b> <b>(27/10/17)</b>	Dr. Mandeep Singh, Thapar University		Dr. Mandeep Singh, Thapar University		Hands On WEKA Sachin Bagga, GNDEC Ludhiana		Hands On WEKA Jagdeep Singh GNDEC Ludhiana
<b>Saturday</b> <b>(28/10/17)</b>	Hands On MATLAB Dr. Amit Kamra GNDEC Ludhiana		Hands On MATLAB Jagdeep Singh, GNDEC Ludhiana		Hands On MATLAB Pradeep GNDEC Ludhiana		Hands On MATLAB Pradeep GNDEC Ludhiana
<b>Sunday</b> <b>(29/10/17)</b>	Dr. Pradeep GNDEC Ludhiana	Visit to Mayyo Imaging & Diagnostic Centre, Ludhiana and Visit to Orison Hospital Ludhiana (Lectures by Dr. Sunil Mittal / Dr. K P Singh/ Demonstration of Various Imaging Solutions))					
<b>Monday</b> <b>(30/10/17)</b>	Mandeep Singh Kwatra London, UK		Dr. Puneet Goyal IIT Ropar		Dr. KS Mann IIT Ropar		Dr. Arvind Dhingra GNDEC Ludhiana
<b>Tuesday</b> <b>(31/10/17)</b>	Dr. Jitender Varmani, CSIO Chandigarh		Dr. Jitender Varmani, CSIO Chandigarh		Dr. Ajay GNDEC Ludhiana		Inderjit GNDEC Ludhiana
<b>Wednesday</b> <b>(01/11/17)</b>	Dr. Anjali Goyal GNIMT Ludhiana		Mr. Navdeep Kanwal Pbi Univ. Patiala		Dr. Parminder Singh GNDEC Ludhiana		Visit to Research Lab Dr. Rupinder Singh, GNDEC Ludhiana
<b>Thursday</b> <b>(02/11/17)</b>	Dr. Amit Mehndiratta, IIT Delhi		Dr. Amit Mehnidratta, IIT Delhi		Dr. Anup Singh IIT Delhi		Dr. Anup Singh IIT Delhi
<b>Friday</b> <b>(03/11/17)</b>	Dr. Anupama Gupta GZSCET Bathinda		Dr. Ravi Kumar NIT Hamirpur		Valedictory, Ceremony,	High Tea	

**Coordinator (FDP)**

Date 2/11/2017

S.No	Name	Session 1	Session 2	Session 3	Session 4
1	Apar Shriv Sharma				
2	Amit Kumar				
3	Arvind Dhillon				
4	Ashima	Ashima	Ashima	Ashima	Ashima
5	Baljeet Kaur	Baljeet	Baljeet	Baljeet	Baljeet
6	Balaender Singh Dholiwal				
7	Bharti Koul				
8	Baljeet Singh				
9	Chenu Chander Pant				
10	Dinesh Anand				
11	Divyadeep Kaur	Divyadeep K	Divyadeep K	Divyadeep K	Divyadeep K
12	Gagandeep	Gagandeep K	Gagandeep K	Gagandeep K	Gagandeep K
13	Gayatri	Gayatri	Gayatri	Gayatri	Gayatri
14	Gurpreet Kaur Wafar				
15	Gurpreet Kaur	Gurpreet	Gurpreet	Gurpreet	Gurpreet
16	Gursharan Singh	Gursharan Singh	Gursharan Singh	Gursharan Singh	Gursharan Singh
17	Hardeep Kaur	Hardeep	Hardeep	Hardeep	Hardeep
18	Hardeep Singh Kang	Hardeep	Hardeep	Hardeep	Hardeep
19	Harjot Kaur	Harjot	Harjot	Harjot	Harjot
20	Harmanjot Kaur	Harmanjot Kaur	Harmanjot Kaur	Harmanjot Kaur	Harmanjot Kaur
21	Harpreet Kaur Grewal	—	—	—	—
22	Inderjeet Singh				
23	Inderjit Singh Dhanoli				
24	Jagdeep Singh				
25	Jasbir Singh Saini				
26	Jasmeet Kaur	Jasmeet	Jasmeet	Jasmeet	Jasmeet
27	Kamal Nain Sharma	Kamal	Kamal	Kamal	Kamal
28	Kamaldeep Kaur				

	Karanjit Singh	Kelasa Singh	Kalender Singh	Kalender Singh
29 Karanjit Singh	Karanjit Singh	Kelasa Singh	Kalender Singh	Kalender Singh
30 Kiran Jyoti				
31 KS Mann				
32 Lovepreet Kaur	KS	KS	KS	KS
33 Mandeep Kaur	Mann	Mann	Mann	Mann
34 Manjot Kaur Gill	Mann	Mann	Mann	Mann
35 Manpreet Singh				
36 Mohak	Mohak	Mohak	Mohak	Mohak
37 Mohanjit Kaur	Mohanjit Kaur	Mohanjit Kaur	Mohanjit Kaur	Mohanjit Kaur
38 Munish Rattan	Munish Rattan	Munish Rattan	Munish Rattan	Munish Rattan
39 Naazia Makkar	Naazia	Naazia	Naazia	Naazia
40 Nancy	Nancy	Nancy	Nancy	Nancy
41 Narwant Singh Grewal				
42 Pankaj Bhamiri				
43 Prabhjot Kaur	Pankaj	Pankaj	Pankaj	Pankaj
44 Prabhjot Kaur	Prabhjot Kaur	Prabhjot Kaur	Prabhjot Kaur	Prabhjot Kaur
45 Pradeep Jiswal	Pradeep	Pradeep	Pradeep	Pradeep
46 Priyanka Arora	Priyanka	Priyanka	Priyanka	Priyanka
47 Puneet Kaur	Puneet Kaur	Puneet Kaur	Puneet Kaur	Puneet Kaur
48 Purnima Bakshi	PB	PB	PB	PB
49 Randhir Singh	Randhir	Randhir	Randhir	Randhir
50 Ranjodh Kaur	RK	RK	RK	RK
51 Ruchi Bansal	Ruchi Bansal	Ruchi Bansal	Ruchi Bansal	Ruchi Bansal
52 Rupinder Kaur	RKaur	RKaur	RKaur	RKaur
53 Sachin Bagga	Sachin	Sachin	Sachin	Sachin
54 Sandeep Kumar Singla	Sandeep	Sandeep	Sandeep	Sandeep
55 Sidharath Jain	Sidharath	Sidharath	Sidharath	Sidharath
56 Simranjit Kaur	Simranjit	Simranjit	Simranjit	Simranjit
57 Sumeet Kaur Seehra	Sumeet	Sumeet	Sumeet	Sumeet
58 Tarandeep Singh	Tarandeep	Tarandeep	Tarandeep	Tarandeep
59 Jagraj Singh Gill	Jagraj	Jagraj	Jagraj	Jagraj



# GURU NANAK DEV ENGINEERING COLLEGE, (LUDHIANA)

(Punjab Govt. Aided Status)



An Autonomous College u/s 2(f) and 12(B) of UGC Act 1956

NAAC (A Grade), IEI Accredited U.G. Programmes, AICTE Approved  
Affiliated to I.K.G. Punjab Technical University, Jalandhar

It is certified that Divyadeep Kaur (Research Scholar) of GINDEC LUDHIANA  
has attended Two Weeks AICTE Sponsored Faculty Development Programme on  
"Research Opportunities in Medical Imaging, Biomedical Engineering and Health Informatics"  
Organized by Department of Information Technology from 23<sup>rd</sup> Oct. to 03<sup>rd</sup> Nov. 2017.

Dr. K.S. Mann

(Coordinator)

Dr. Harpal Singh

(Principal)



# GURU NANAK DEV ENGINEERING COLLEGE, (LUDHIANA)




(Punjab Govt. Aided Status)

**An Autonomous College u/s 2(f) and 12(B) of UGC Act 1956**

**NAAC (A Grade), IEI Accredited U.G. Programmes, AICTE Approved  
Affiliated to I.K.G. Punjab Technical University, Jalandhar**

It is certified that Prabhjot Kaur (Research Scholar) of GNDEC LUDHIANA  
has attended Two Weeks AICTE Sponsored Faculty Development Programme on  
“Research Opportunities in Medical Imaging, Biomedical Engineering and Health Informatics”  
Organized by Department of Information Technology from 23<sup>rd</sup> Oct. to 03<sup>rd</sup> Nov. 2017.

  
**Dr. K.S. Mann**

(Coordinator)

  
**Dr. Harpal Singh**

(Principal)

## **GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA**

An Autonomous College u/s 2(f) and 12(B) of UGC Act 1956

**Department of Production Engineering**

### **Consolidated report on Faculty Development Program on 'Waste Management by Additive Manufacturing'.**

The faculty development program sponsored by AICTE on 'Waste Management by Additive Manufacturing' was organized by the Production Engineering department from 11 – 23 December, 2017. FDP was held under the guidance of Director GNDEC, Ludhiana and HOD Production Engineering. The program was designed for industrialist, environmentalist, researchers and faculty of various fields of Engineering, as it was an interdisciplinary course.

The experts from the various reputed institutes were present to deliver lectures and share their experiences in waste management and additive manufacturing. More than 45 participants from various institutions have attended the program to take benefits of expert talks and enhanced their knowledge in the field of waste management using additive manufacturing.

#### **Objectives of the program:**

1. To enhance the knowledge of participants in the field of additive manufacturing.
2. Waste management of plastic waste using additive manufacturing techniques.
3. Practice session on FDM to make samples using recycled plastic.
4. Knowledge related to blending of plastics to enhance their mechanical, electrical and thermal properties.

#### **Sessions of the program:**

Session I: 09:15 am – 10:45 am

Tea break (10:45 am – 11:00 am)

Session II: 11:00 am – 12:30 pm

Lunch break (12:30 pm – 01:15 pm)

Session III: 01:15 pm – 02:45 pm

Tea break (02:45 pm – 03:00 pm)

Session IV: 03:00 pm – 04:30 pm

A handwritten signature, possibly 'S. Grewal', is written in black ink. To the right of the signature are two sets of initials, 'A' and 'B', also written in black ink.

**Key points of FDP:**

- Types of waste and its management
- Introduction to additive manufacturing
- Various additive manufacturing techniques
- Management of waste using additive manufacturing
- Cost reduction in waste management
- E-waste management
- Solid waste management
- Investment casting for Plastic solid waste
- Blending of plastics for enhancing the properties as compare to matric materials
- Practice session using FDM setup

**Speakers:**

Dr. Buta Singh (MRS Punjab Techninal University, Bathinda)  
Dr. Sukhpal Singh (Punjabi University, Talwandi Sabo campus)  
Dr. IPS Ahuja (Punjabi University, Patiala)  
Dr. JS Dureja (Punjabi University, Patiala)  
Dr. OP Singh (BCET, Gurdaspur)  
Dr. Sanjeev Kumar (PEC, Chandigarh)  
Dr. Sandeep Grover (YMCA, Faridabad)  
Dr. Amit Kamra (GNDEC, Ludhiana)  
Dr. Akshay Girdhar (GNDEC, Ludhiana)  
Dr. Rupinder Singh (GNDEC, Ludhiana)

**Organizing Committee:**

Dr. MS Saini (Chief Patron)  
Dr. JS Grewal (Patron)  
Dr. Rupinder Singh (Course Coordinator)  
Er. Manjot Singh Bedi (Course Co-coordinator)  
Dr. Harpuneet Singh  
Er. Jagdeep Singh



Er. Kanwalpreet Sahni

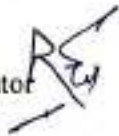
Er. Paramjit Singh

Er. Gauravdeep Singh

Er. Arshpreet Kaur

Er. Gulraj Singh

Course Coordinator

A handwritten signature in black ink, appearing to be 'Raj', with two arrows pointing outwards from the letters.

HOD PE

A large, stylized handwritten signature in black ink, possibly reading 'J. Singh', written over the text 'HOD PE'.

**Schedule of FDP on ‘Waste Management by Additive Manufacturing’**

<b>Date: 11/12/2017</b>		
1.	9:00 AM – 09:15 AM	Registration
2.	09:15 AM – 10:45 AM	Lecture by Dr. O.P. Singh, BCET, Gurdaspur
3.	10:45 AM – 11:00 AM	High Tea
4.	11:00 AM – 12:30 PM	Lecture by Dr. O.P. Singh, BCET, Gurdaspur
5.	12:30 PM – 01:15 PM	Lunch
6.	01:15 PM – 02:45PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
7.	02:45 PM – 03:00 PM	Tea
8.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, LDH
<b>Date: 12/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. G. Dhuria, DAVIET, Jalandhar
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Sanjeev Kumar, PEC, Chandigarh
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Sanjeev Kumar, PEC, Chandigarh
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Amit Kamra, GNDEC, Ludhiana
<b>Date: 13/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Harpal Singh, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Harpal Singh, GNDEC, Ludhiana
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. J.S. Dureja, PU, Patiala
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Amit Kamra, GNDEC, Ludhiana
<b>Date: 14/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Harwinder Singh, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. H.S. Rai, GNDEC, Ludhiana
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, LDH
<b>Date: 15/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Rupinder Singh, GNDEC, LDH
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. S.S. Sehgal, CU, Gharuan
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Harwinder Singh, GNDEC, Ludhiana
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, LDH
<b>Date: 16/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. A. Girdhar, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. A. Girdhar, GNDEC, Ludhiana

4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
<b>SUNDAY</b>		
<b>Date: 18/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Buta Singh, IKG-PTU, Kapurthala
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Buta Singh, IKG-PTU, Kapurthala
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. G.S. Brar, GNDEC, Ludhiana
<b>Date: 19/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Harmeet Singh, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. I.P.S. Ahuja, PU, Patiala
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. I.P.S. Ahuja, PU, Patiala
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. J.S.Grewal, GNDEC, LDH
<b>Date: 20/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Ishbir Singh, CU, Gharuan
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Ishbir Singh, CU, Gharuan
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Harwinder Singh, GNDEC, Ludhiana
<b>Date: 21/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. G.S. Brar, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	High Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Vikas Chawla, IKG-PTU, Kapurthala
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Vikas Chawla, IKG-PTU, Kapurthala
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
<b>Date: 22/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. G.S. Brar, GNDEC, Ludhiana
2.	10:45 AM – 11:00 AM	Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Vikas Chawla, IKG-PTU, Kapurthala
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Vikas Chawla, IKG-PTU, Kapurthala
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana
<b>Date: 23/12/2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Rupinder Singh, GNDEC, Ludhiana

2.	10:45 AM – 11:00 AM	High Tea
3.	11:00 AM – 12:30 PM	Lecture by Dr. Ajay Batish, Thappar University, Patiala
4.	12:30 PM – 01:15 PM	Lunch
5.	01:15 PM – 02:45PM	Lecture by Dr. Sandeep Grover, YMCA, Faridabad
6.	02:45 PM – 03:00 PM	Tea
7.	03:00 PM – 04:30 PM	Lecture by Dr. Sandeep Grover, YMCA, Faridabad

Attendance of students for FDP on 'Waste Management by Additive Manufacturing'							
S. No.	Name of student	11/12/2017	12/12/2017	13/12/2017	14/12/2017	15/12/2017	16/12/2017
1	Anmol Singh Mangat	Anmol	Anmol	Anmol	Anmol	Anmol	Anmol
2	Hardeep Singh	H Singh	H Singh	H Singh	H Singh	H Singh	H Singh
3	Harpreet Singh	Harpreet	Harpreet	Harpreet	Harpreet	Harpreet	Harpreet
4	Harsimrandeep Singh	Harsimrandeep	Harsimrandeep	Harsimrandeep	Harsimrandeep	Harsimrandeep	Harsimrandeep
5	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh
6	Ramanpreet Singh	Ramanpreet	Ramanpreet	Ramanpreet	Ramanpreet	Ramanpreet	Ramanpreet

S. No.	Name of student	18/12/2017	19/12/2017	20/12/2017	21/12/2017	22/12/2017	23/12/2017
1	Anmol Singh Mangat	Anmol	Anmol	Anmol	Anmol	Anmol	Anmol
2	Hardeep Singh	H Singh	H Singh	H Singh	H Singh	H Singh	H Singh
3	Harpreet Singh	Harpreet	Harpreet	Harpreet	Harpreet	Harpreet	Harpreet
4	Harsimrandeep Singh	Harsimrandeep	Harsimrandeep	Harsimrandeep	Harsimrandeep	Harsimrandeep	Harsimrandeep
5	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh	Karanvir Singh
6	Ramanpreet Singh	Ramanpreet	Ramanpreet	Ramanpreet	Ramanpreet	Ramanpreet	Ramanpreet



Department of Production Engineering,  
Guru Nanak Dev Engineering College,  
Ludhiana

Sr. No. 18

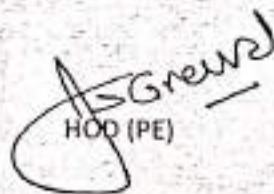


AICTE SPONSORED TWO WEEK FACULTY DEVELOPMENT PROGRAMME  
CERTIFICATE OF PARTICIPATION

This is to certify that Prof/Dr./Mr/Ms Harpreet Singh  
From GNDEC, Ldh participated in the course

WASTE MANAGEMENT BY ADDITIVE MANUFACTURING

December 11-23, 2017

  
HOD (PE)

  
Course Coordinator



Department of Production Engineering,  
Guru Nanak Dev Engineering College,  
Ludhiana

Sr. No. 28

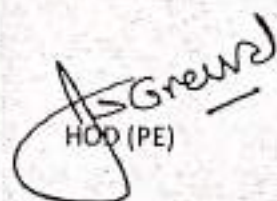


**AICTE SPONSORED TWO WEEK FACULTY DEVELOPMENT PROGRAMME  
CERTIFICATE OF PARTICIPATION**

This is to certify that Prof/Dr./Mr/Ms Anmol Singh Mangat  
From GNDEC, Ldh. participated in the course

**WASTE MANAGEMENT BY ADDITIVE MANUFACTURING**

December 11-23, 2017

  
HOD (PE)

  
Course Coordinator

## **GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA**

An Autonomous College u/s 2(f) and 12(B) of UGC Act 1956

### **Department of Production Engineering**

#### **Consolidated report on Faculty Development Program on 'Optimization, Life Enhancement of Bio-Medical Implants by Additive Manufacturing and Protective Coatings'.**

The faculty development program sponsored by QIP on 'Optimization, Life Enhancement of Bio-Medical Implants by Additive Manufacturing and Protective Coatings' was organized by the Production Engineering department from 4 – 8 September, 2017. FDP was held under the guidance of Director GNDEC, Ludhiana and HOD Production Engineering. The program was designed for industrialist, medical field representatives, researchers and faculty of Various fields of Engineering, as it was an interdisciplinary course.

The experts from the various reputed institutes were present to deliver lectures and share their experiences in Bio-Medical implants by additive manufacturing. More than 50 participants from various institutions had attended the program to take benefits of expert talks and enhanced their knowledge in the field of Bio-Medical implants by additive manufacturing and their life enhancement.

#### **Objectives of the program:**

1. Application of optimization techniques for life enhancement of biomedical implants.
2. Hand on experience for preparation of bio medical implants by additive manufacturing.
3. Lab testing of protective coatings as per ASTM standards.

#### **Sessions of the program:**

Session I: 09:15 am – 10:45 am

Tea break (10:45 am – 11:00 am)

Session II: 11:00 am – 12:30 pm

Lunch break (12:30 pm – 01:15 pm)

Session III: 01:15 pm - 02:45 pm

Tea break (02:45 pm – 03:00 pm)

Session IV: 03:00 pm – 04:30 pm

**Course contents:**

- Role of optimization for biomedical implants.
- Additive manufacturing for biomedical implants.
- Biomedical/protective coatings.
- Design of experiment (various tools for process optimization)
- Case studies on dental/ortho 4D materials.
- Practice session for lab testing as per ASTM standards.

**Speakers:**

Dr. Buta Singh (MRS Punjab Techninal University, Bathinda)

Dr. Satya Prakash (IIT Roorkee)

Dr. Bhupinder Singh Bhoop (PU, Chandigarh)

Dr. IPS Ahuja (Punjabi University, Patiala)

Dr. JS Dureja (Punjabi University, Patiala)

Dr. Sanjeev Kumar (PEC, Chandigarh)

Dr. Sandeep Grover (YMCA, Faridabad)

Dr. Rupinder Singh (GNDEC, Ludhiana)

Dr. GS Brar (GNDEC, Ludhiana)

**Organizing Committee:**

Dr. MS Saini (Chief Patron)

Dr. JS Grewal (Patron)

Dr. Rupinder Singh (Course Coordinator)

Er. Manjot Singh Bedi

Dr. Harpuneet Singh

Er. Jagdeep Singh

Er. Gauravdeep Singh

Er. Paramjit Singh

Er. Kanwalpreet Sahni

Er. Arshpreet Kaur

Er. Gulraj Singh

  
HOD PE

**Schedule of FDP on ‘Optimization, Life Enhancement of Bio-Medical Implants by Additive Manufacturing and Protective Coatings’**

Sr No.	<b>DAY 1- 4<sup>TH</sup> SEPTEMBER, 2017</b>		
1.	9:00 AM – 09:15 AM	Registration	Area
2.	09:15 AM – 10:45 AM	Lecture by Dr. Ravi Kumar, NIT Hamirpur	Material Characterization for biomedical implants
3.	10:45 AM – 11:00 AM	High Tea	
4.	11:00 AM – 12:30 PM	Lecture by Dr. S.B.Singh, GNDEC, LDH	Prospectus in inhouse development of biomedical implants
5.	12:30 PM – 01:15 PM	Lunch	
6.	01:15 PM – 02:45PM	Lecture by Dr. G.S. Brar , GNDEC, LDH	FEM analysis of Biomedical implants
7.	02:45 PM – 03:00 PM	Tea	
8.	03:00 PM – 04:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, LDH	Fused deposition modelling hand on practice for orthopedic implants
Sr No.	<b>DAY 2- 5<sup>TH</sup> SEPTEMBER, 2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Niraj Bala, BBSBEC, Fgh. Sahib	Plasma based protective coatings for biomedical implants
2.	10:45 AM – 11:00 AM	Tea	
3.	11:00 AM – 12:30 PM	Lecture by Dr. IPS Ahuja, Pbi. Uni, Pta.	TPM application for optimization in industrial environment
4.	12:30 PM – 01:15 PM	Lunch -	
5.	01:15 PM – 02:45PM	Lecture by Dr. Harwinder Singh , GNDEC, LDH	Optimization using TOPSIS
6.	02:45 PM – 03:00 PM	Tea	
7.	03:00 PM – 04:30 PM	Lecture by Dr. JS Dureja, Pbi. Uni, Pta.	RSM based optimization
Sr No.	<b>DAY 3- 6<sup>TH</sup> SEPTEMBER, 2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. O.P. Singh, BCET, Gurdaspur	Optimization in supply chain management
2.	10:45 AM – 11:00 AM	Tea	
3.	11:00 AM – 12:30 PM	Lecture by Dr. Rupinder Singh, GNDEC, LDH.	Biomedical implants fabrication through investment casting
4.	12:30 PM – 01:15 PM	Lunch	
5.	01:15 PM – 02:45PM	Lecture by Dr. Amit Kamra , GNDEC, LDH	Implant corrosion protection
6.	02:45 PM – 03:00 PM	Tea	
7.	03:00 PM – 04:30 PM	Lecture by Dr. JS Grewal, GNDEC, LDH	Lab training on Wear and erosion analysis
Sr No.	<b>DAY 4- 7<sup>TH</sup> SEPTEMBER, 2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Sanjeev	Taguchi Based optimization

		Thakkar, PEC, CHD	
2.	10:45 AM – 11:00 AM	Tea	
3.	11:00 AM – 12:30 PM	Lecture by Dr. Sanjeev Thakkar, PEC, CHD	Taguchi optimization Tutorials
4.	12:30 PM – 01:15 PM	Lunch	
5.	01:15 PM – 02:45PM	Lecture by Dr. JS Pandher, NIT Jalandhr	Multi objective optimization
6.	02:45 PM – 03:00 PM	Tea	
7.	03:00 PM – 04:30 PM	Lecture by Dr. Akshay Girdhar, GNDEC, LDH	Plagiarism/ similarity analysis through Turnitin software
Sr No.	<b>DAY 5- 8<sup>TH</sup> SEPTEMBER, 2017</b>		
1.	09:15 AM – 10:45 AM	Lecture by Dr. Rupinder Singh, GNDEC, LDH	Dental implants through 3D/4D printing
2.	10:45 AM – 11:00 AM	Tea	
3.	11:00 AM – 12:30 PM	Lecture by Dr. Dixit Garg, NIT, Kurukshetra	Multi criteria decision making
4.	12:30 PM – 01:15 PM	Lunch	
5.	01:15 PM – 02:45PM	Lecture by Dr. Sandeep Grover, YMCA	Optimization through Graph theory
6.	02:45 PM – 03:00 PM	Tea	
7.	03:00 PM – 04:30 PM	Valedictory speech By Dr. R.S.Seehra and Dr. Sandeep Grover, YMCA	

**Attendance of students for FDP on 'Optimization Life Enhancement of Bio-Medical Implants by Additive Manufacturing and Protective Coatings'**

S. No.	Name of student	4/9/2017	5/9/2017	6/9/2017	7/9/2017	8/9/2017
1	Amritjot Singh Riat	<i>ASR</i>	<i>ASR</i>	<i>ASR</i>	<i>ASR</i>	<i>ASR</i>
2	Baldeep Singh	<i>Baldeep</i>	<i>Baldeep</i>	<i>Baldeep</i>	<i>Baldeep</i>	<i>Baldeep</i>
3	Harman Raj Singh	<i>HSR</i>	<i>HSR</i>	<i>HSR</i>	<i>HSR</i>	<i>HSR</i>
4	Jagdeep Singh Cheema	<i>Jagdeep</i>	<i>Jagdeep</i>	<i>Jagdeep</i>	<i>Jagdeep</i>	<i>Jagdeep</i>
5	Kamalpreet Singh Riat	<i>K Singh</i>	<i>K Singh</i>	<i>K Singh</i>	<i>K Singh</i>	<i>K Singh</i>
6	Rahul	<i>Rahul</i>	<i>Rahul</i>	<i>Rahul</i>	<i>Rahul</i>	<i>Rahul</i>
7	Rohit Kumar	<i>R Kumar</i>	<i>R Kumar</i>	<i>R Kumar</i>	<i>R Kumar</i>	<i>R Kumar</i>
8	Jagmeet Singh	<i>Jagmeet</i>	<i>Jagmeet</i>	<i>Jagmeet</i>	<i>Jagmeet</i>	<i>Jagmeet</i>

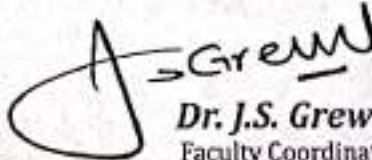
# Certificate of Participation

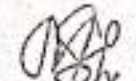


**QIP Short Term Course  
on  
Optimization, Life Enhancement of  
Bio-Medical Implants by Additive Manufacturing and Protective Coatings**

This is awarded to Dr/Mr/Ms Rohit kumar  
of GNDEC, Ldh. for participation in QIP short term course on  
"Optimization, Life Enhancement of Bio-Medical Implants by Additive Manufacturing and  
Protective Coatings" held from 4<sup>th</sup> September, 2017 to 8<sup>th</sup> September 2017, organized by Department of  
Production Engineering, Guru Nanak Dev Engineering College, Ludhiana.

  
**Dr. Rupinder Singh**  
Course Coordinator

  
**Dr. J.S. Grewal**  
Faculty Coordinator

  
**Dr. M.S. Saini**  
Director

# Certificate of Participation

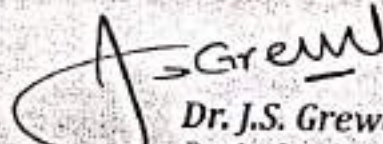


**QIP Short Term Course  
on**

**Optimization, Life Enhancement of  
Bio-Medical Implants by Additive Manufacturing and Protective Coatings**

This is awarded to Dr/Mr/Ms Amritgot Singh Riat  
of GNDEC, Ldh for participation in QIP short term course on  
"Optimization, Life Enhancement of Bio-Medical Implants by Additive Manufacturing and  
Protective Coatings" held from 4<sup>th</sup> September, 2017 to 8<sup>th</sup> September 2017, organized by Department of  
Production Engineering, Guru Nanak Dev Engineering College, Ludhiana.

  
**Dr. Rupinder Singh**  
Course Coordinator

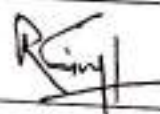
  
**Dr. J.S. Grewal**  
Faculty Coordinator

  
**Dr. M.S. Saini**  
Director

**Global Initiative of Academic Network (GIAN) Programme  
GURU NANAK DEV ENGINEERING COLLEGE, GILL ROAD, GILL  
PARK, LUDHIANA-141006**

**Report on Conduct of GIAN Course**

<b>Title of GIAN Course</b>	Waste management by three dimensional/four dimensional printing		
<b>GIAN Course ID</b>	175043L02		
<b>Period of Course</b>	18-12-2017 to 22-12-2017		
<b>Name and Department of Faculty from &lt;GNDEC Ludhiana&gt;</b>			
Prof. Rupinder Singh, Dept. of Production Engineering (GNDEC, Ludhiana)			
<b>Course Coordinator</b>			
Name	Prof. Rupinder Singh		
Department	Production Engineering		
<b>Co-host Faculty, if any</b>		<b>N.A</b>	
Name	N.A		
Department	N.A		
<b>Name and Affiliation of International Faculty</b>			
Name	Prof. Fernando Fraternali		
Affiliation	Univ. of Salerno, Italy		
<b>Name and Affiliation of National Faculty, if any</b>			
Name	Prof. Rupinder Singh		
Affiliation	GNDEC Ludhiana		
<b>Structure of the Course</b>			
Duration of course (1 week or 2 weeks)	1 Week		
Number of credits (1 or 2)	01		
Total number of lectures in the course	10		
Number of lectures by International Faculty	06		
Number of lectures by Host Faculty	04		
Number of hours of laboratory/tutorial sessions	10 (06 by International Faculty+04 by Host Faculty)		
<b>Participants of the Course</b>	41		
Number of student participants	24		
Number of participants from Industry/ Research Organisations	01		
Number of Faculty participants	16		

Number of participants	41
Number of participants who credited for the course	41
<b>Course Generated Fund</b>	
Sponsorship, if any (in Rs.)	NIL
Registration Fee Collected	NIL
<b>Total amount</b>	NIL
<b>Interaction with International Faculty</b>	
<p><u>Interaction of Host Faculty:</u> The interaction of host faculty (Prof. Rupinder Singh from GNDEC Ludhiana) was very fruitful. As a result of this joint effort a frame work for common project for possible submission under Indo-Italian joint project (sponsored by DST) has been finalized. With the research group of Host Faculty and International Faculty around 10 research papers in reputed Internal SCI Journals have been published. The International faculty has floated the option for joint Ph.D programme of both the Indian and Italian University and MOU in this regards is going to be signed very shortly. Overall the interaction was very helpful for expanding the research domain of Host Faculty as per International requirements.</p>	
<p><u>Interaction of other faculty from GNDEC Ludhiana:</u> The International Faculty has given the option to the Faculty from host Institute to work in the research group of Prof. Fraternali under joint projects especially in the area of structure engineering (by using 3D and 4D materials). The offer has been floated by International Faculty for sponsored Ph.D programme (initially 02 numbers) with full 03 years stipend and rent free accommodation at University of Salerno, Italy.</p>	
<p><u>Interaction of faculty/researchers from other institutes/organizations:</u> The faculty and researchers from other Institutions were exposed to the Lab facilities available at GNDEC, Ludhiana with live demonstration of 3D/4D printing and detailed assembly/manufacturing line for development of feed stock filament to be used on commercial 3D printers. Along with this the ASTM/ISO standards for working in International market were also explained. Overall the interaction was two way with lot of tutorial and practical sessions for direct implementation in field.</p>	
Signature of Course Coordinator	
Date of submission of report	13-02-2018 Professor (Prod. Engg.) Guru Nanak Dev. Engg. College Ludhiana-141006



Students Attendance for GIAN course on 'Waste Management by 3 Dimensional/4 Dimensional Printing'						
S. No.	Name	18/12/2017	19/12/2017	20/12/2017	21/12/2017	22/12/2017
1	Rasanpreet Singh Khangura	Rasan	Rasan	Rasan	Rasan	Rasan
2	Sumeet Sharma	S Sharma	S Sharma	S Sharma	S Sharma	S Sharma
3	Gurchetan Singh	G	G	G	G	G
4	Gurdeep SINGH	Gurdeep Singh	Gurdeep Singh	Gurdeep Singh	Gurdeep Singh	Gurdeep Singh
5	Gurmail Singh	G	G	G	G	G
6	Jagroop Singh Bhatti	Jy Singh	Jy Singh	Jy Singh	Jy Singh	Jy Singh
7	Jaskaran Singh Kang	J	J	J	J	J
8	Jaswinder Singh	Jaswinder Singh	Jaswinder Singh	Jaswinder Singh	Jaswinder Singh	Jaswinder Singh
9	Khalid Bashir Wani	KB Wani	KB Wani	KB Wani	KB Wani	KB Wani
10	Manavdeep Singh	M Singh	M Singh	M Singh	M Singh	M Singh
11	Mandeep Singh	Mandeep	Mandeep	Mandeep	Mandeep	Mandeep

**Attendance list of FDP on Solid Waste Management in Indian Cities – Issues  
& concerns organized by Civil Engineering Department from August 23, 2016  
to August 28, 2016.**

Sr. No.	Name of Participants	Institute	23/08/2016	24/08/2016	25/08/2016	26/08/2016	27/08/2016	28/08/2016
1	Gurjot Kaur	GNDEC, Ludhiana	Gurjot Kaur	Gurjot Kaur	Gurjot Kaur	Gurjot Kaur	Gurjot Kaur	Gurjot Kaur
2	Magray Owaes Hassan	GNDEC, Ludhiana	Magray	Magray	Magray	Magray	Magray	Magray
3	Manvir Kaur	GNDEC, Ludhiana	Manvir	Manvir	Manvir	Manvir	Manvir	Manvir
4	Pallvi Verma	GNDEC, Ludhiana	Pallvi	Pallvi	Pallvi	Pallvi	Pallvi	Pallvi
5	Rajwinder Singh	GNDEC, Ludhiana	Rajwinder	Rajwinder	Rajwinder	Rajwinder	Rajwinder	Rajwinder
6	Rajvinder Kaur	GNDEC, Ludhiana	Rajvinder	Rajvinder	Rajvinder	Rajvinder	Rajvinder	Rajvinder
7	Raznish Kaur	GNDEC, Ludhiana	Raznish	Raznish	Raznish	Raznish	Raznish	Raznish
8	Shelly	GNDEC, Ludhiana	Shelly	Shelly	Shelly	Shelly	Shelly	Shelly
9	Sukhdeep Kaur	GNDEC, Ludhiana	Sukhdeep	Sukhdeep	Sukhdeep	Sukhdeep	Sukhdeep	Sukhdeep
10	Simranjit Singh	GNDEC, Ludhiana	Simranjit	Simranjit	Simranjit	Simranjit	Simranjit	Simranjit
11	Tanveer Singh Jhaji	GNDEC, Ludhiana	Tanveer	Tanveer	Tanveer	Tanveer	Tanveer	Tanveer
12	Manroop Kaur	GNDEC, Ludhiana	Manroop	Manroop	Manroop	Manroop	Manroop	Manroop
13	Navjot Kaur	GNDEC, Ludhiana	Navjot	Navjot	Navjot	Navjot	Navjot	Navjot
14	Somli Thakur	GNDEC, Ludhiana	S. Thakur	S. Thakur	S. Thakur	S. Thakur	S. Thakur	S. Thakur
15	Sonakshi Gurung	GNDEC, Ludhiana	Sonakshi	Sonakshi	Sonakshi	Sonakshi	Sonakshi	Sonakshi
16	Arvind Kumar	GNDEC, Ludhiana	Arvind	Arvind	Arvind	Arvind	Arvind	Arvind

**Report of Short Term Training Program on Solid Waste Management in Indian Cities-  
Issues and Concerns**

The TEQIP-II sponsored short term training program on "Solid Waste Management in Indian Cities- Issues and Concerns" was inaugurated on 23<sup>rd</sup> August, 2016 in the presence of Dr. R.K. Kohli, Vice-Chancellor, Central University of Punjab, Bathinda who was the worthy chief guest for the occasion. He was accompanied by Dr. K.S. Gill, Head of Department, Civil Engineering, GNDEC and Prof. Puneet Pal Singh Cheema, the program coordinator.

"Nothing is a waste, everything is a resource. It's just that we do not know its use", said Dr. R.K. Kohli during his keynote address. He emphasized on the need of initiatives at the individual level which supplement the government efforts and the role of composting practices in achieving those desired objectives.

A total of 40 participants which included faculty members from various technical institutions of Punjab, Himachal Pradesh, Chandigarh and Orissa and engineers from government organizations enrolled for this program. The course focused on various issues related to solid waste management in Indian cities such as the increasing waste generation rates, the inefficient management etc. and the latest techniques which are available and are being practiced or can be adopted in field. There were 14 detailed lectures on topics like landfills, incineration techniques, composting, Solid Waste Management Rules, 2016 and software like LandGEMS etc. by the experts from the prestigious institutes like IIT Delhi, Central University of Punjab, PGIMER, Panjab University, Punjab Agricultural University, and GNDU. Officials from Punjab Pollution Control Board also delivered a talk in the program. The course also comprised a field visit to Nimbua Greenfields Pvt. Ltd., a hazardous waste management facility in Dera Bassi in order to have a deep insight into the actual conditions at the ground level.

The Chief Guest for the valedictory ceremony was Dr. Manoj Datta, Professor at IIT, Delhi and the guest of honor was Dr. B.J. Alappat, Professor at IIT Delhi. The coordinator of the program, Prof. Puneet Pal Singh Cheema said that this course would surely have been a great learning experience for the participants and must have provided them with new ideas to ponder upon.

*Puneet*  
(Course Coordinator)

Schedule of TEQIP-II sponsored STTP, 'Solid Waste Management in Indian Cities: Issues and Concerns', August 23<sup>rd</sup> - 28<sup>th</sup>, 2016, Department of Civil Engineering, Guru Nanak Dev Engineering College, Ludhiana

Day	Time	Activity
Tuesday (23/08/16)	8:30-9:30 am	Registration
	9:30-10:15 am	Inauguration (Chief Guest- Dr. R.K. Kohli, V.C., Central University of Punjab, Bathinda)
	10:15– 10:45 am	High Tea
	10:45 am – 12:15 pm	Session -1 (Dr. Manpreet Singh Bhatti, Deptt. of Botanical and Env. Sciences, GNDU, Amritsar)
	12:15 – 1:15 pm	Introduction by participants (max. 5 minutes or max. 5 slides: about the research carried out in your institution/teaching/consultancy/college/environmental issues of your region)
	1:15 -2:15 pm	Lunch
	2:15-3:45 pm	Session -2 (Dr. K.S. Gill, Deptt. of Civil Engg., GNDEC, Ludhiana)
	3:45 – 4:00 pm	Tea/Coffee Break
	4:00-5:30 pm	Session-3 (Dr. Ashwani Kumar Soni, School of Energy Studies for Agriculture, PAU, Ludhiana)
Wednesday (24/08/16)	7:30 am- Departure from GNDEC	Visit to Hazardous Waste Management Facility (Nimbua, Dera Bassi)
Thursday (25/08/16)	9:30 am-11:00 am	Session -4 (Dr. S.K. Arora, Deptt. of Civil Engg., PEC Univ. of Technology, Chandigarh)
	11:00 – 11:15 am	Tea/Coffee Break
	11:15 am- 12:45 pm	Session -5 (Dr. V.K. Garg, Centre for Environmental Sci. & Technology, Central University of Punjab, Bathinda)
	12:45 -1:45 pm	Lunch
	1:45-3:15 pm	Session -6 (Dr. V.K. Garg, Centre for Environmental Sci. & Technology, Central University of Punjab, Bathinda)
	3:15-3:30 pm	Tea/Coffee Break
	3:30- 5:00 pm	Session -7 (Dr. A.S. Reddy, School of Energy and Environment, Thapar University, Patiala)
Friday (26/08/16)	9:30-11:00 am	Session -8 (Dr. A.S. Reddy, School of Energy and Environment, Thapar University, Patiala)
	11:00 – 11:15 am	Tea/Coffee Break
	11:15 am- 12:45 pm	Session -9 (Dr. Ravindra Khaiwal, School of Public Health, PGIMER, Chandigarh)
	12:45-1:45 pm	Lunch
	1:45-3:15 pm	Session -10 (Lecture by officials of Punjab Pollution Control Board)
	3:15-3:30 pm	Tea/Coffee Break
	3:30- 5:00 pm	Session -11 (Dr. J.N. Jha, Principal, Govt. Engg. College, Bihar)
Saturday (27/08/16)	9:30-11:00 am	Session -12 (Dr. B.J. Alappat, Deptt. of Civil Engg., IIT Delhi)
	11:00 – 11:15 am	Tea/Coffee Break
	11:15 am- 12:45 pm	Session -13 (Dr. B.J. Alappat, Deptt. of Civil Engg., IIT Delhi)
	12:45-1:45 pm	Lunch
	1:45-3:15 pm	Session -14 (Er. Puneet Pal Singh, GNDEC, Ludhiana)
	3:15-3:30 pm	Tea/Coffee Break

	3:30- 5:00 pm	<b>Session-15</b> (Dr. A.K. Sodhi, GNDEC, Ludhiana)
<b>Sunday</b> <b>(28/08/16)</b>	9:30-11:00 am	<b>Session -16</b> (Dr. Manoj Datta, Deptt. of Civil Engg., IIT Delhi)
	11:00 – 11:45 am	Valedictory and Certificate Distribution
	11:45 am	<b>Lunch</b>



TEQIP-II

# Guru Nanak Dev Engineering College

An Autonomous College U/s [2(f) & 12(B)] of UGC Act -1956

Gill Park, Gill Road, Ludhiana-141006, Punjab (India)

## Certificate of Participation

This certificate is awarded to Dr./ Mr./ Ms. GURJOT KAUR  
of GNDCE, Ludhiana for participation in workshop / Seminar /  
FDP / SDP / Training on the subject Solid Waste Management in  
Indian Cities - Issues & Concerns Organized  
by Civil Engineering Department / Branch / Section  
from August 23, 2016 to August 28, 2016 under TEQIP- II,  
Sub Component 1.1, a World Bank Aided Project through MHRD, Govt. of India.

  
Activity Co-ordinator

  
Co-ordinator TEQIP-II

  
Director



TEQIP II

# Guru Nanak Dev Engineering College

An Autonomous College U/S [2(f) & 12(B)] of UGC Act -1956

Gill Park, Gill Road, Ludhiana-141006, Punjab (India)

## Certificate of Participation

This certificate is awarded to Dr./ Mr./ Ms. MAGRAY OWAES HASSAN

of GNDEC, Ludhiana for participation in workshop / Seminar /

Solid Waste Management in  
FDP / SDP / Training on the subject Indian Cities - Issues & Concerns Organized

by Civil Engineering Department / Branch / Section

from August 23, 2016 to August 28, 2016 under TEQIP- II,

Sub Component 1.1, a World Bank Aided Project through MHRD, Govt. of India.

Activity Co-ordinator

Co-ordinator TEQIP-II

Director

### Attendance of students for FDP on 'Waste Management on Optimization Techniques'

S. No.	Name of student	28/12/2015	29/12/2015	30/12/2015	31/12/2015	
1	Aashish Dhiman	Ash	Ash	Ash	Ash	
2	Vinay Kumar	Vinay	Vinay	Vinay	Vinay	
3	Atul Babbar	Atul	Atul	Atul	Atul	
4	Gundeep Singh	Gundeep	Gundeep	Gundeep	Gundeep	
5	Inderdeep Singh	Inder	Inder	Inder	Inder	
6	Manish Vijan	M. Vijan	M. Vijan	M. Vijan	M. Vijan	
7	Manjinder Singh	Manjinder	Manjinder	Manjinder	Manjinder	
8	Ranjvijay Kumar	Ranjvijay	Ranjvijay	Ranjvijay	Ranjvijay	
9	Sandeep Singh	SS.	SS.	SS.	SS.	
10	Sudhir Kumar	SKumar	SKumar	SKumar	SKumar	

S. No.	Name of student	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/1/2016
1	Aashish Dhiman	Ash	Ash	Ash	Ash	Ash
2	Vinay Kumar	Vinay	Vinay	Vinay	Vinay	Vinay
3	Atul Babbar	Atul	Atul	Atul	Atul	Atul
4	Gundeep Singh	Gundeep	Gundeep	Gundeep	Gundeep	Gundeep
5	Inderdeep Singh	Inder	Inder	Inder	Inder	Inder
6	Manish Vijan	M. Vijan	M. Vijan	M. Vijan	M. Vijan	M. Vijan
7	Manjinder Singh	Manjinder	Manjinder	Manjinder	Manjinder	Manjinder
8	Ranjvijay Kumar	Ranjvijay	Ranjvijay	Ranjvijay	Ranjvijay	Ranjvijay
9	Sandeep Singh	SS.	SS.	SS.	SS.	SS.
10	Sudhir Kumar	SKumar	SKumar	SKumar	SKumar	SKumar



# Guru Nanak Dev Engineering College, Ludhiana

AN AUTONOMOUS COLLEGE u/s [2(f) & 12(B)] OF UGC ACT - 1956

Department of Production Engineering

## Certificate of participation

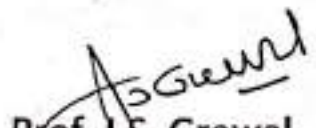
2-WEEK FACULTY DEVELOPMENT PROGRAM


ON

*"Waste Management and Optimization Techniques"*

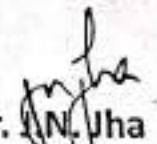
(under : TEQIP - II)

This certificate is awarded to ~~Ms./Mrs.~~ Mr. Atul Babbar of Guru Nanak Dev Engineering College; Ludhiana for participation in 2 Week Faculty Development Program on 'Waste Management and Optimization Techniques' (Under : TEQIP-II), held from 27<sup>th</sup> Dec. 2015 to 5<sup>th</sup> Jan. 2016, organized by Department of Production Engineering, Guru Nanak Dev Engineering College, Ludhiana.

  
Prof. J.S. Grewal  
Chairman

  
Dr. Rupinder Singh  
Coordinator



  
Dr. J.N. Jha  
TEQIP-II Coordinator



# Guru Nanak Dev Engineering College, Ludhiana

AN AUTONOMOUS COLLEGE u/s [2(f) & 12(B)] OF UGC ACT - 1956

Department of Production Engineering

## Certificate of participation

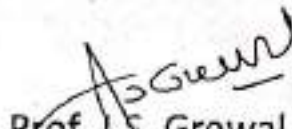
2-WEEK FACULTY DEVELOPMENT PROGRAM


ON

*"Waste Management and Optimization Techniques"*

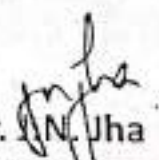
(under : TEQIP - II)

This certificate is awarded to ~~Ms./Mrs.~~ Mr. Vinay Kumar of  
Guru Nanak Dev Engineering College; Ludhiana for participation in  
2 Week Faculty Development Program on 'Waste Management and Optimization Techniques' (Under : TEQIP-II),  
held from 27<sup>th</sup> Dec. 2015 to 5<sup>th</sup> Jan. 2016, organized by Department of Production Engineering, Guru Nanak  
Dev Engineering College, Ludhiana.

  
Prof. J.S. Grewal  
Chairman

  
Dr. Rupinder Singh  
Coordinator



  
Dr. N. Jha  
TEQIP-II Coordinator

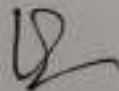
**Event Report of Short Term Course "Latest Trends in Information and Communication Technologies" Conducted by the IT Dept. during 04<sup>th</sup>-08<sup>th</sup> August 2014**

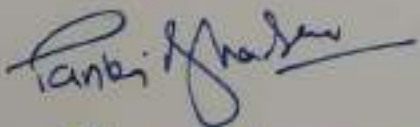
Information Technology Department of Guru Nanak Dev Engineering College, Ludhiana conducted the weeklong series of lectures and hands-on practice sessions of Short Term Course (STC) on title "Latest Trends in Information and Communication Technologies". This STC was sponsored by Technical Education Quality Improvement Programme (TEQIP-II) cell of the Institute. The valediction programme of this course was organized in the seminar hall of the campus on 08<sup>th</sup> Aug. 2014 (Wed.). **This programme was organized with the objective of sharing recent developments in the areas network security, bioinformatics, image processing, natural language processing, firewall implementation and configuration with practical demonstration. As many as 17 resource persons in this programme shared their views and further research areas among the participants.**

Dr. O.P. Gupta, Dy. Director, School of Electrical Engineering at Punjab Agriculture University Ludhiana was invited as chief guest of the valediction programme. In his speech, chief guest emphasised that awareness of technology trends in IT and ICT is the need of the hour, but at same time security of information transferred is important area of concern. He further elaborated that security measures can be implemented at the personal level by doing simple encryption of personal data by oneself. TEQIP-II coordinator, Dr. J.N.Jha mentioned the benefits as well as wastage of resources due to updation in technology every day.

Sh. Amolak Singh Kalsi, Technical Director & District Informatics Officer at National Informatics Centre, Jalandhar was invited as Chief Guest in the inauguration of the programme. Mr. Kalsi pointed out various innovative ideas implemented at the industry and government level for the concern of ICT. In the whole five day programme the academicians, software professional and researchers were invited to deliver the expert talk during the course. During this programme, Dr. Sarbjeet Singh, Associate Prof. from Panjab University Chandigarh elaborated the **role of social media, mobility, analytics and cloud computing** in the programme. Dr. Maninder Singh, Associate Prof. from Thapar University Patiala shared his views on **social network analysis and big data deluge**. Dr. Manpreet Singh from GNDEC Ludhiana explained the topic titled "Bioinformatics: From Evolution to Computation". Dr. Anjali Garg from GNIMT Ludhiana elaborated the **Local and Global Feature based Descriptors for Shape based Image Retrieval**. Mr. Amit Kamra from GNDEC Ludhiana presented new research ideas in the filed of biomedical imaging. Mr. Vipin Gupta from U-Net solution organized the **hands on session on Firewall Implementation and Configuration and Public/ Private Key based Authentication using Secure Protocols like SSH, SFTP and HTTPS**. Mr. Sanjeev Kumar from DAV University Jalandhar and Dr. Parminder Singh from GNDEC Ludhiana delivered expert talk on Natural Language Processing with its Various Research Areas and Text to Speech Synthesis System respectively. Dr. Harish Kumar in his speech specified the role of Cyber Security and Information Retrieval.

Dr. K.S. Mann, HOD of IT Dept. and chief coordinator of this course presented the summary & feedback report of this short term course at valediction programme. He discussed the significance of these types of courses for faculties as well as researchers and congratulated the coordinators for organizing this STC. Participation Certificates were issued to 63 participants, which came from different regions of the country to attend this STC.

  
Dr. Kiam Jyoti (PANKAR SHAMBER)  
HOD(IT)

  
PANKAR SHAMBER

TEQIP-II SPONSORED SHORT TERM COURSE ON LATEST TRENDS IN INFORMATION AND COMMUNICATION TECHNOLOGIES (04TH - 08TH OCTOBER, 2014)						
SCHEDULE						
Day 1: 04th October, 2014 (Saturday)						
9:00am-9:30am Registration	10:30am-11:15am	11:15am-12:45pm	12:45pm-1:45pm	1:45pm-3:15pm	3:15pm-3:30pm	3:30pm-5:00pm
9:30am-10:30am Inauguration	Tea	Session - 1.1	Lunch	Session - 1.2	Tea	Session - 1.3
Chief Guest	Mr. Amolak Singh Kalsi Technical Director and District Informatics Officer, National Informatics Centre Jalandhar					
Session - 1.1	Dr. Sarbjeet Singh UIET, Panjab University Chandigarh		Social Media, Mobility, Analytics and Cloud Computing			
Session - 1.2	Dr. Maninder Singh Thapar University, Patiala		Social Network Analysis			
Session - 1.3	Dr. Maninder Singh Thapar University, Patiala		Big Data Deluge			
Session - 1.4 (5.00-5.30pm)	Discussion cum Feedback Session so as to incorporate corrective measures/ suggestion for the Short Term Course					
Day 2: 05th October, 2014 (Sunday)						
9:30am-11:00am	11:00am-11:15am	11:15am-12:45pm	12:45pm-1:45pm	1:45pm-3:15pm	3:15pm-3:30pm	3:30pm-5:00pm
Session - 2.1	Tea	Session - 2.2	Lunch	Session - 2.3	Tea	Session - 2.4
Session - 2.1	Mr. Harpreet Khattar Secugenius, Chandigarh		Information and Network Security with Practical Demonstration			
Session - 2.2	Mr. Kshitiz Secugenius, Chandigarh		Latest Trends of Technologies used for Education with Practical Demonstration			
Session - 2.3	Mr. Pankaj Bhambri GNDEC, Ludhiana		Era of Bioinformatic Applications			
Session - 2.4	Dr. Manpreet Singh GNDEC, Ludhiana		Bioinformatics: From Evolution to Computation			
Day 3: 06th October, 2014 (Monday)						
9:30am-11:00am	11:00am-11:15am	11:15am-12:45pm	12:45pm-1:45pm	1:45pm-3:15pm	3:15pm-3:30pm	3:30pm-5:00pm
Session - 3.1	Tea	Session - 3.2	Lunch	Session - 3.3	Tea	Session - 3.4
Session - 3.1	Mr. Naveen Duhan PAU, Ludhiana		Bioinformatics: A Step towards Innovation			
Session - 3.2	Dr. Parteek Bhatia Thapar University, Patiala		Data Mining with WEKA			
Session - 3.3	Dr. Anjali Garg GNIMT, Ludhiana		Local and Global Feature based Descriptor for Shape based Image Retrieval			
Session - 3.4	Mr. Amit Kamra GNDEC, Ludhiana		Biomedical Imaging and Computer Vision			
Day 4: 07th October, 2014 (Tuesday)						
9:30am-11:00am	11:00am-11:15am	11:15am-12:45pm	12:45pm-1:45pm	1:45pm-3:15pm	3:15pm-3:30pm	3:30pm-5:00pm
Session - 4.1	Tea	Session - 4.2	Lunch	Session - 4.3	Tea	Session - 4.4
Session - 4.1	Mr. Vipin Gupta U-Net Solutions, Moga		Firewall Implementation and Configuration with Practical Demonstration			
Session - 4.2	Mr. Vipin Gupta U-Net Solutions, Moga		Public/Private Key based Authentication using Secure Protocols like SSH, SFTP, and HTTPS with Practical Demonstration			
Session - 4.3	Any Participant of this Short Term Course		Expert Lecture/ Hands on Training on any topic related with the theme of short term course			
Session - 4.4	Mr. Sanjeev Kumar DAV University, Jalandhar		Natural Language Processing and its Various Research Areas			
Day 5: 08th October, 2014 (Wednesday)						
9:30am-11:00am	11:00am-11:15am	11:15am-12:45pm	12:45pm-1:45pm	1:45pm-2:30pm		
Session - 5.1	Tea	Session - 5.2	Valediction	Lunch		
Session - 5.1	Dr. Parminder Singh GNDEC, Ludhiana		Text to Speech Synthesis Systems			
Session - 5.2	Dr. Harish Kumar UIET, Panjab University, Chandigarh		Cyber Security and Information Retrieval			
Chief Guest	Dr. O.P. Gupta Dy. Director, School of Info. Tech., PAU Ludhiana					
Venues						
Sessions	Consultancy Seminar Hall, Testing and Consultancy Cell					
Lunch	Consultancy Hall, Testing and Consultancy Cell					
Tea	Consultancy Hall, Testing and Consultancy Cell					

--- ORGANISED BY ---

Department of Information Technology



## List of Participants (Latest Trends in Information and Communication Technologies)

S.No.	Name	Designation	Affiliation
1	Ajay Shiv Sharma	Assistant Professor	GNDEC, LUDHIANA
2	Akshay Girdhar	Associate Professor	GNDEC, LUDHIANA
3	Amandeep Kaur	Assistant Professor	BHSBIET, LEHRAGAGA
4	Amardeep Singh	Application Developer	PAU, LUDHIANA
5	Amit Kamra	Assistant Professor	GNDEC, LUDHIANA
6	Angaddeep Singh	Lecturer	SRSGPC, LUDHIANA
7	Anil Kumar	Librarian	GNDEC, LUDHIANA
8	Anurag Sharma	Research Scholar	GNDEC, LUDHIANA
9	Arunjot Kaur	Assistant Professor	GNDEC, LUDHIANA
10	Bindia Tarika	Computer Programmer	GNDEC, LUDHIANA
11	Blossom	Assistant Professor	GNDEC, LUDHIANA
12	Charanjeet Kaur	Assistant Professor	DBU, MANDI GOBINDGARH
13	Deepika	Assistant Professor	LCET, LUDHIANA
14	Deepinder Kaur Dhaliwal	Assistant Professor	DBU, MANDI GOBINDGARH
15	Dipti Kunra	Assistant Professor	GNDEC, LUDHIANA
16	Gagandeep Kaur	Lecturer	BCET, LUDHIANA
17	Gaurav Tandon	Assistant Professor	DBU, MANDI GOBINDGARH
18	Gurjit Singh	Research Scholar	PECUT, CHANDIGARH
19	Gurpreet Kaur	Research Scholar	GNDEC, LUDHIANA
20	Gurpreet Singh	Assistant Professor	GGI, KHANNA
21	Gursharan Singh	Lecturer	BCET, LUDHIANA
22	Gurvir Singh	Research Scholar	GNDEC, LUDHIANA
23	Hanit Karwal	Assistant Professor	GGI, KHANNA
24	Harbhag Singh	Assistant Professor	GNDEC, LUDHIANA
25	Hardeep Singh Handa	IT Incharge	RELIANCE, LUDHIANA
26	Hardeep Singh Jawa	HOD	GNDPC, LUDHIANA
27	Harmanjeet Kaur	Research Scholar	GNDEC, LUDHIANA
28	Harinder Kaur	Research Scholar	GNDEC, LUDHIANA
29	Harmohan Singh Dhall	Assistant Professor	GNDEC, LUDHIANA
30	Harpreet Kaur Grewal	Associate Professor	GNDEC, LUDHIANA
31	Inderjeet Singh	Computer Programmer	GNDEC, LUDHIANA
32	Jagreet Kaur	Assistant Professor	PU, CHANDIGARH
33	Jappreet Kaur	Assistant Professor	GNDEC, LUDHIANA
34	Jasbir Singh Saini	Associate Professor	GNDEC, LUDHIANA
35	Jaspreet Kaur	Lecturer	LPU DEP CENTRE, LUDHIANA
36	Kamaldeep Arora	Assistant Professor	GGI, KHANNA
37	Kamaldeep Kaur	Assistant Professor	GNDEC, LUDHIANA
38	Kamaljit Kaur	Assistant Professor	GNDEC, LUDHIANA
39	Karamjit Singh	Lecturer	BCET, LUDHIANA
40	Kiran Jyoti	Assistant Professor	GNDEC, LUDHIANA
41	Kulvinder Singh Mann	Associate Professor	GNDEC, LUDHIANA
42	Kulwinder Singh	Assistant Professor	GGI, KHANNA
43	Lolita Singh	Assistant Professor	HJDITE, GUJRAT
44	Lovepreet Kaur Somal	Assistant Professor	GNDEC, LUDHIANA

45	Manmeet Kaur	Lecturer	SRSGPC, LUDHIANA
46	Manpreet Kaur Grewal	Assistant Professor	GNDEC, LUDHIANA
47	Manpreet Singh	Assistant Professor	GNDEC, LUDHIANA
48	Mohit Kumar	Lecturer	DBU, MANDI GOBINDGARH
49	Pankaj Bhambri	Assistant Professor	GNDEC, LUDHIANA
50	Parminder Kaur Wadhwa	Assistant Professor	GNDEC, LUDHIANA
51	Parminder Singh	Associate Professor	GNDEC, LUDHIANA
52	Prabhjot Kaur	Research Scholar	GNDEC, LUDHIANA
53	Priyanka Arora	Assistant Professor	GNDEC, LUDHIANA
54	Rajan Manro	Assistant Professor	DBU, MANDI GOBINDGARH
55	Randhir Singh	Assistant Professor	GNDEC, LUDHIANA
56	Raninder Kaur	Assistant Professor	GNDEC, LUDHIANA
57	Ranjodh Singh	Assistant Professor	DAV UNI., JALANDHAR
58	Saravpreet Kaur	Assistant Professor	LCET, LUDHIANA
59	Satwinderjit Kaur	Associate Professor	GNDEC, LUDHIANA
60	Shairy	Lecturer	LPU DEP CENTRE, LUDHIANA
61	Sukhjot Singh Sehra	Assistant Professor	GNDEC, LUDHIANA
62	Sumeet Kaur Sehra	Assistant Professor	GNDEC, LUDHIANA
63	Tanpreet Singh	Assistant Professor	AIT, GHARUAN



TEQIP II

## Guru Nanak Dev Engineering College

An Autonomous College u/s [2(f) & 12(B)] of UGC Act -1956

Gill Park, Gill Road, Ludhiana-141006, Punjab (India)

### Certificate of Participation

This certificate is awarded to Dr./ Mr./ Ms. Gurvir Singh

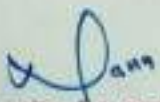
of GNDEC, Ludhiana for participation in workshop / Seminar /

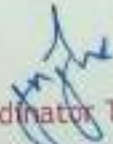
"Latest Trends in Information and  
STC/FDP / SDP / Training on the subject Communication Technology Organized

by Information Technology Department / Branch / Section

from 04 October, 2014 to 08 October, 2014 under TEQIP- II,

Sub Component 1.1, a World Bank Aided Project through MHRD, Govt. of India.

  
Activity Co-ordinator

  
Co-ordinator TEQIP-II

  
Director



TEQIP II

## Guru Nanak Dev Engineering College

An Autonomous College u/s [2(f) & 12(B)] of UGC Act -1956

Gill Park, Gill Road, Ludhiana-141006, Punjab (India)

### Certificate of Participation

This certificate is awarded to Dr./ Mr./ Ms. Harninder Kaur


of GNDEC, Ludhiana for participation in workshop / Seminar /


"Latest Trends in Information and  
STC/FDP / SDP / Training on the subject Communication Technology" Organized


by Information Technology Department / Branch / Section

from 04 October, 2014 to 08 October, 2014 under TEQIP- II,

Sub Component 1.1, a World Bank Aided Project through MHRD, Govt. of India.

  
Activity Co-ordinator

  
Co-ordinator TEQIP-II

  
Director