

Date- 25/06/2018

# Hindustan College of Science & Technology

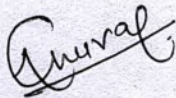
(Farah, Mathura)

## Chemical Engineering Department

### Notice

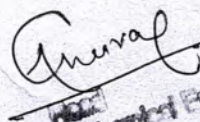
This is for information to all the students of 2<sup>nd</sup>, 3<sup>rd</sup> year that the Value Added Course **(Process Equipment Design & Solid Waste Management)** shall begin from 14<sup>th</sup> of July 2018. All the students of 2<sup>nd</sup>, 3<sup>rd</sup> year are directed to register themselves and fill up the registration form in the departments before start of the regular classes for the above courses.

The registration can be done from 2<sup>nd</sup> July 2018 up to 07<sup>th</sup> July 2018.



Mr. Anurag Bajpai

Head, Department of Chemical Engineering



Department of Chemical Engineering  
Hindustan College of Science & Technology  
Farah, Mathura



Director  
Hindustan College of  
Science & Technology  
FARAH (MATHURA)



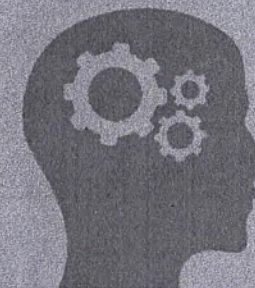
HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY,  
FARAH -MATHURA

DEPARTMENT OF CHEMICAL ENGINEERING



*Value Added Course*  
**VAC-1702-Solid Waste Management**

**14<sup>th</sup> July 2018 – 17<sup>th</sup> Nov 2018 - Every Saturday: 3:10 PM – 4:50 PM**



By

*Mr. Sandeep Kumar Verma*  
**Chemical Engineering**

Registration Dates  
2<sup>nd</sup> July 2018 – 07<sup>th</sup> July 2018

For Registration: Please contact  
Mr. Raj Kumar, Office Staff, Department of Chemical Engineering

*Raj Kumar*  
Office Staff  
Department of Chemical Engineering  
Hindustan College of Science & Technology  
Farah Mathura

*Raj Kumar*  
Director  
Hindustan College of  
Science & Technology  
FARAH (MATHURA)



# HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY, FARAH -MATHURA



## DEPARTMENT OF CHEMICAL ENGINEERING

*Value Added Course*

**VAC -1702 -Solid Waste Management**

**14<sup>th</sup> July 2018 – 17<sup>th</sup> Nov 2018 - Every Saturday: 3:10 PM – 4:50 PM**

### Course Objectives

The main objective of this value added course are as follows:

1. Plan logistics for waste collection and disposal .
2. Formulate strategies for segregation of waste and waste reduction.
3. Plan appropriate recycles facility for heterogeneous wastes.
- 4 Plan and design waste collection systems.

### Course Syllabus

Units	Details	Course Out comes
1	Introduction to waste management Logistics, importance, methods of logistics, human components, technological components- waste handling equipment and technology, and managerial goals, steps in waste management logistics	CO1
2	Waste collection system and organization Environmental aspects of waste collection, role of public authority and private sector in waste collection, organizing collection of residential waste, fee schemes, public awareness programs	CO2
3	Source segregation and collection source-segregated waste, Purpose of source segregation, segregation criteria and guidance, segregation potential and efficiencies, systems for collecting segregated fraction	CO3
4	Waste transfer stations Waste delivery, waste transfer, transportation of the reloaded waste, siting and Design of waste transfer station, economical considerations, recycling solid wastes, materials recovery facilities	CO4

*Anurag*  
 HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY  
 DEPARTMENT OF CHEMICAL ENGINEERING  
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**HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY,  
FARAH -MATHURA**



**DEPARTMENT OF CHEMICAL ENGINEERING**

*Value Added Course*

**VAC-1702 - Solid Waste Management**

**14<sup>th</sup> July 2018 – 17<sup>th</sup> Nov 2018 - Every Saturday: 3:10 PM – 4:50 PM**

**Course Outcomes**

- CO1 Plan logistics for waste collection and disposal  
Formulate strategies for segregation of waste and waste reduction.
- CO2
- CO3 Plan appropriate recycles facility for heterogeneous wastes.
- CO4 Plan and design waste collection systems.

**CO-PO Mappings**

COS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	3											2		
CO2	2	3											2		
CO3	2			3						2	2	2	2		
CO4			2	3						2	2	2		3	
Average	2	3	2	3						2	2	2	2	3	

**Evaluation Criteria: 1. Evaluation of Practical assignments, Group project, Viva/Quiz**

*Dr. Anil K. Singh*

Head  
Department of Chemical Engineering  
Hindustan College of Science & Technology  
Farah, Mathura

*Dr. Anil K. Singh*

Director  
Hindustan College of  
Science & Technology  
FARAH (MATHURA)



**HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY, FARAH -MATHURA**  
**DEPARTMENT OF CHEMICAL ENGINEERING**

*Value Added Course*  
**VAC-1702 - Solid Waste Management**



**Program Schedule**

**14<sup>th</sup> July 2018 – 17<sup>th</sup> Nov 2018 - Every Saturday: 3:10 PM – 4:50 PM**

Session	Date	Time	No of Lectures	Session Topic	Resource Person
1	21-07-2018	3:10 PM – 4:50 PM	2	Topic 1:Logistics, importance, methods of logistics	Dr. Sandeep Kumar Verma
2	28-07-2018	3:10 PM – 4:50 PM	2	Topic 2:human components, technological components	Dr. Sandeep Kumar Verma
3	04-08-2018	3:10 PM – 4:50 PM	2	Topic 3:waste handling equipment and technology	Dr. Sandeep Kumar Verma
4	11-08-2018	3:10 PM – 4:50 PM	2	Topic 4:managerial goals, steps in waste management logistics	Dr. Sandeep Kumar Verma
5	18-08-2018	3:10 PM – 4:50 PM	2	Topic 5:Environmental aspects of waste collection	Dr. Sandeep Kumar Verma
6	25-08-2018	3:10 PM – 4:50 PM	2	Topic 6:role of public authority and private sector in waste collection	Dr. Sandeep Kumar Verma
7	01-09-2018	3:10 PM – 4:50 PM	2	Topic 7:organizing collection of residential waste	Dr. Sandeep Kumar Verma
8	08-09-2018	3:10 PM – 4:50 PM	2	Topic 8: fee schemes, public awareness programs	Dr. Sandeep Kumar Verma
9	15-09-2018	3:10 PM – 4:50 PM	2	Topic 9:source-segregated waste	Dr. Sandeep Kumar Verma
10	22-09-2018	3:10 PM – 4:50 PM	2	Topic 10:Purpose of source segregation	Dr. Sandeep Kumar Verma
11	29-09-2018	3:10 PM – 4:50 PM	2	Topic 11:segregation criteria and guidance	Dr. Sandeep Kumar Verma
12	06-10-2018	3:10 PM – 4:50 PM	2	Topic 12:segregation potential and efficiencies	Dr. Sandeep Kumar Verma
13	13-10-2018	3:10 PM – 4:50 PM	2	Topic 13:systems for collecting segregated fraction	Dr. Sandeep Kumar Verma
14	20-10-2018	3:10 PM – 4:50 PM	2	Topic 14:Waste delivery, waste transfer	Dr. Sandeep Kumar Verma
15	27-10-2018	3:10 PM – 4:50 PM	2	Topic 15: transportation of the reloaded waste	Dr. Sandeep Kumar Verma
16	03-11-2018	3:10 PM – 4:50 PM	3	Topic 16:siting and Design of waste transfer station	Dr. Sandeep Kumar Verma
17	10-11-2018	3:10 PM – 4:50 PM	3	Topic 17:economical considerations, recycling solid wastes	Dr. Sandeep Kumar Verma
18	17-11-2018	3:10 PM – 4:50 PM		Topic 18: materials recovery facilities	Dr. Sandeep Kumar Verma
<b>Total Number of Hours covered</b>			<b>36 (30 Hours)</b>		

*[Handwritten Signature]*

  
 Director  
 Hindustan College of  
 Science & Technology  
 FARAH (MATHURA)

## Value Added Course-2

### Solid Waste Management (VAC-1702)

#### 1. Introduction to waste management:

Logistics, importance, methods of logistics, human components, technological components- waste handling equipment and technology, and managerial goals, steps in waste management logistics.

#### 2. Waste collection system and organization:

Environmental aspects of waste collection, role of public authority and private sector in waste collection, organizing collection of residential waste, fee schemes, public awareness programs.

#### 3. Source segregation and collection:

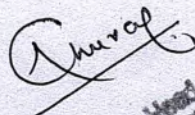
source-segregated waste, Purpose of source segregation, segregation criteria and guidance, segregation potential and efficiencies, systems for collecting segregated fraction

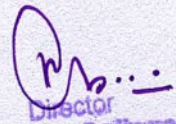
#### 4. Waste transfer stations:

Waste delivery, waste transfer, transportation of the reloaded waste, siting and Design of waste transfer station, economical considerations, recycling solid wastes, materials recovery facilities.

**Course Outcomes:** At the end of the course, the student will be able to:

1. Plan logistics for waste collection and disposal .
2. Formulate strategies for segregation of waste and waste reduction.
3. Plan appropriate recycles facility for heterogeneous wastes.
- 4 Plan and design waste collection systems.

  
Head  
Department of Chemical Engrg  
Hindustan College of Science & Technology  
Farah Mathura

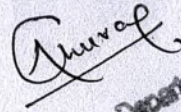
  
Director  
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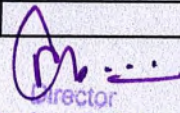
# Hindustan College of Science and Technology - Mathura

## Department Name: CHEMICAL ENGINEERING

### CLASS TIME TABLE FOR ODD SEMESTER 2018-19

<b>SESSION:</b>	2018-19		<b>W.E.F :</b>	7/24/2018	<b>CLASS TEACHER:</b>	Mr. Sandeep kr. Verma			
<b>YEAR/SEM-SEC:</b>	II Year/ (III Sem)		<b>ROOM.NO :</b>	501	<b>COUNSELLORS :</b>	Mr. Sandeep kr. Verma			
<b>Time / Day</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>	<b>VIII</b>	
	10:10 TO 11:00	11:00 TO 11:50	11:50 TO 12:40	12:40 TO 01:30	01:30 TO 02:20	02:20 TO 03:10	03:10 TO 04:00	04:00 TO 04:50	
<b>MONDAY</b>	EPMC	HVPE	Computer Application Lab		<b>LUNCH</b>	PDP		MATH TUTE	
	HL	KD	VR					MP	
	501	501	404-A					501	
<b>TUESDAY</b>	M&B	EPMC	MATH	FM		MO	HVPE PRACTICE LAB		
	AKS	HL	MP	SKV		AB	KD		
	501	501	501	501		501	333		
<b>WEDNESDAY</b>	EPMC	HVPE	MO	FM		EPMC LAB		MO TUTE	
	HL	KD	AB	SKV		HL		AB	
	501	501	501	501		431		501	
<b>THURSDAY</b>	FM	M&B	M&B	MATH		MO	FM LAB		
	SKV	AKS	AKS	MP		AB	SKV		
	501	501	501	501		501	431		
<b>FRIDAY</b>	EPMC	HVPE	MATH	MO		FM	MO LAB		
	HL	KD	MP	AB		SKV	AB		
	501	501	501	501	501	501			
<b>SATURDAY</b>	M&B	PDP		EPMC TUTE	MATH	VAC-1702			
	AKS			HL	MP				
	501			501	501				
<b>Name of the Subject</b>			<b>Subject Code</b>	<b>Name of the Faculty</b>	<b>Total No. of Lect./Tut./Practical</b>				
					<b>Lect.</b>	<b>Tut.</b>	<b>Pract.</b>		
MATHEMATICS III			RAS301	Dr. M.P.Singh	4	1	0		
Human Values and Professional Ethics			RVE301	Dr. Keshav Dev	3	0	2		
Environmental Pollution Monitoring & Control			RCH301	Dr. HEMANT LAL	4	1	0		
CHEMICAL ENGG. FLUID MECHNACIS			RCH304	Mr. SANDEEP KUMAR VERMA	4	1	0		
Material & Energy Balance			RCH303	Mr. Anoop kumar sengar	4	1	0		
MECHANICAL OPERATIONS			RCH302	Mr. ANURAG BAJPAI	3	1	0		
Environmental Pollution Monitoring & Control Lab			RCH351	Dr. Suruchi	0	0	2		
Chemical Engg. Fluid Mechanics Lab			RCH354	Mr. SANDEEP KUMAR VERMA/ Mr. Venktesh	0	0	2		
Computer Application Lab			RCH353	Dr. Vandna Rathore	0	0	2		
Mechanical Operation Lab			RCH352	Mr. ANURAG BAJPAI/Mr. Venktesh	0	0	2		

  
 Head  
 Department of Chemical Engg.  
 Hindustan College of Science & Technology  
 Farah Mathura

  
 Director  
 Hindustan College of  
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 FARAH (MATHURA)

# Hindustan College of Science & Technology

Department of Chemical Engineering

Value Added Course - Registration Form

## Solid Waste Management

Session 2018-19

From 14th July, 2018 to 17th Nov, 2018

Sr. No.	Roll No.	Name	Department	Semester	Signature of Student
1	1706451001	ANKIT KASHYAP	Chemical	III	Ankit
2	1706451003	CHETAN SHARMA	Chemical	III	Chetan
3	1706451004	DEVESH GUPTA	Chemical	III	Devesh
4	1706451005	KM MANSI SHARMA	Chemical	III	Km. Mansi
5	1706451006	RAJESH KUMAR RAJPUT	Chemical	III	Rx Rajput
6	1706451008	RAM PRASAD	Chemical	III	Ram
7	1706451009	ROMIL CHAUDHARY	Chemical	III	Romil
8	1706451010	SHOBHITA SHARMA	Chemical	III	Shobhita
9	1706451011	SUMEDHA SHARMA	Chemical	III	Sumedha
10	1806451902	GAURAV KUMAR GUPTA	Chemical	III	Gaurav Gupta
11	1806451905	VINAY KUMAR RANA	Chemical	III	Vinay Rana
12	1806451903	PRAVEEN YADAV	Chemical	III	Praveen
13	1806451906	SUMIT KUMAR GUPTA	Chemical	III	Sumit
14	1806451901	BHUVENESH PAL	Chemical	III	Bhuvanesh
15	1806451904	SIDDHANT SRIVASTAVA	Chemical	III	Siddhant

*Sumit*

Head  
Department of Chemical Engg.  
Hindustan College of Science & Technology  
Farah, Mathura

*R...*  
Director  
Hindustan College of  
Science & Technology  
FARAH (MATHURA)



# Hindustan College of Science & Technology

Department of Chemical Engineering

Value Added Course - Registration Form

## Solid waste Management

Session 2018-19 (Odd Sem)

session wise Attendance Sheet

Sl. No.	Roll No.	Name	SEM	Signature of the Student by Session																		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
				21.07	28.07	04.08	11.08	18.08	25.08	01.09	08.09	15.09	22.09	29.09	06.10	13.10	20.10	27.10	3.11	10.11	17.11	24.11
1	1706451001	ANKIT KASHYAP	III	Ankit	Ankit	Ankit	Ankit	A	Ankit	Ankit	Ankit	A	Ankit	Ankit	Ankit	A	A	Ankit	Ankit	Ankit	Ankit	
2	1706451003	CHETAN SHARMA	III	Chetan	Chetan	Chetan	Chetan	Chetan	A	Chetan	A	Chetan	Chetan	Chetan	Chetan	A	Chetan	Chetan	Chetan	Chetan	Chetan	
3	1706451004	DEVESH GUPTA	III	Devesh	Devesh	Devesh	Devesh	A	Devesh	Devesh	A	Devesh	Devesh	Devesh	Devesh	A	Devesh	Devesh	Devesh	A	Devesh	
4	1706451005	KM MANSI SHARMA	III	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi	Mansi
5	1706451006	RAJESH KUMAR RAJPUT	III	R.K.Rajput	R.K.Rajput	R.K.Rajput	R.K.Rajput	R.K.Rajput	A	R.K.Rajput	R.K.Rajput	A	R.K.Rajput	R.K.Rajput	R.K.Rajput	A	R.K.Rajput	R.K.Rajput	A	R.K.Rajput	R.K.Rajput	
6	1706451008	RAM PRASAD	III	Ram	Ram	A	Ram	Ram	Ram	A	Ram	Ram	Ram	Ram	A	Ram	Ram	Ram	Ram	Ram	A	Ram
7	1706451009	ROMIL CHAUDHARY	III	Romil	Romil	Romil	Romil	Romil	A	Romil	Romil	Romil	A	Romil	Romil	Romil	Romil	Romil	Romil	Romil	A	Romil
8	1706451010	SHOBHITA SHARMA	III	Shobhita	Shobhita	Shobhita	A	Shobhita	Shobhita	A	Shobhita	Shobhita	Shobhita	Shobhita	A	A	Shobhita	Shobhita	Shobhita	Shobhita	Shobhita	Shobhita
9	1706451011	SUMEDHA SHARMA	III	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha	Sumedha
10	1806451902	GAURAV KUMAR GUPTA	III	Gaurav	Gaurav	A	Gaurav	Gaurav	Gaurav	Gaurav	Gaurav	Gaurav	A	Gaurav	Gaurav	Gaurav	Gaurav	A	Gaurav	Gaurav	Gaurav	Gaurav
11	1806451905	VINAY KUMAR RANA	III	Vinay	Vinay	Vinay	A	Vinay	Vinay	Vinay	Vinay	Vinay	Vinay	Vinay	Vinay	Vinay	A	Vinay	Vinay	Vinay	Vinay	Vinay
12	1806451903	PRAVEEN YADAV	III	Praveen	Praveen	Praveen	A	Praveen	A	Praveen	Praveen	Praveen	A	Praveen	Praveen	Praveen	A	Praveen	A	Praveen	Praveen	Praveen
13	1806451906	SUMIT KUMAR GUPTA	III	Sumit	Sumit	Sumit	A	Sumit	Sumit	Sumit	A	Sumit	Sumit	Sumit	A	Sumit	Sumit	A	Sumit	Sumit	Sumit	Sumit
14	1806451901	BHUVENESH PAL	III	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
15	1806451904	SIDDHANT SRIVASTAVA	III	S	S	S	S	A	S	S	S	A	S	S	S	S	A	S	S	S	S	S

Department of Chemical Engineering  
Hindustan College of Science & Technology  
Faridkot, Punjab



HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY  
FARAH, MATHURA



*Certificate of Completion*

DEPARTMENT OF CHEMICAL ENGINEERING  
*Academic Session 2018-19*

*This is to certify that Ms. SUMEDHA SHARMA, Roll No: 1706451011 of Course: B. Tech. Chemical Engineering , III semester has successfully completed 30 hours Value Added Course titled "Solid Waste Management" (Course code: VAC-1702).*

*S. Verma*  
Course Coordinator

*Sumedha*  
Head of Department

*P. S. S.*  
Director, HCST

*Sumedha*  
Head  
Department of Chemical Engng  
Hindustan College of Science & Technology  
Farah, Mathura

*P. S. S.*  
Director  
Hindustan College of  
Science & Technology  
FARAH (MATHURA)



HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY  
FARAH, MATHURA



*Certificate of Completion*

DEPARTMENT OF CHEMICAL ENGINEERING  
*Academic Session 2018-19*

***This is to certify that Mr. GAURAV KUMAR GUPTA, Roll No: 1806451902 of Course: B. Tech. Chemical Engineering , III semester has successfully completed 30 hours Value Added Course titled “Solid Waste Management” (Course code: VAC-1702).***

*S. Verma*  
Course Coordinator

*Gaurav*  
Head of Department

*P. B. ...*  
Director, HCST

*Gaurav*  
Department of Chemical Engineering  
Hindustan College of Science & Technology

*P. B. ...*  
Director  
Hindustan College of  
Science & Technology  
FARAH (MATHURA)