

Date- 24/06/2019

Hindustan College of Science & Technology

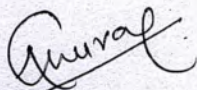
(Farah, Mathura)

Chemical Engineering Department

Notice

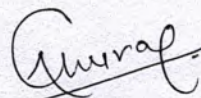
This is for information to all the students of 2nd, 3rd year that the Value Added Course (**Process Equipment Design & Solid Waste Management**) shall begin from 13th of July 2019. All the students of 2nd, 3rd year are directed to register themselves and fill up the registration form in the departments before start of the regular classes for the above courses.

The registration can be done from 2nd July 2019 up to 06th July 2019.

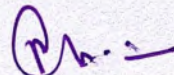


Mr. Anurag Bajpai

Head, Department of Chemical Engineering



Head
Department of Chemical Engg.
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

13th July '2019 – 9th Nov 2019 - Every Saturday: 3:10 PM – 4:50 PM



By

Mr. Sandeep Kumar Verma
Chemical Engineering

Registration Dates
2nd July 2019 – 06th July 2019

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

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

Signature
Director
Hindustan College of
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HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY, FARAH -MATHURA



DEPARTMENT OF CHEMICAL ENGINEERING

Value Added Course

VAC -1702 -Solid Waste Management

13th July '2019 – 9th Nov 2019 - 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 |

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DEPARTMENT OF CHEMICAL ENGINEERING

Value Added Course

VAC-1702 - Solid Waste Management

13th July '2019 – 9th Nov 2019 - 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

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DEPARTMENT OF CHEMICAL ENGINEERING

Value Added Course VAC-1702 - Solid Waste Management



Program Schedule

13th July '2019 – 9th Nov 2019 - Every Saturday: 3:10 PM – 4:50 PM

| Session | Date | Time | No of Lectures | Session Topic | Resource Person |
|-------------------------------|------------|-------------------|----------------|---|-------------------------|
| 1 | 13-07-2019 | 3:10 PM – 4:50 PM | 2 | Topic 1:Logistics, importance, methods of logistics | Dr. Sandeep Kumar Verma |
| 2 | 20-07-2019 | 3:10 PM – 4:50 PM | 2 | Topic 2: human components, technological components | Dr. Sandeep Kumar Verma |
| 3 | 27-07-2019 | 3:10 PM – 4:50 PM | 2 | Topic 3:waste handling equipment and technology | Dr. Sandeep Kumar Verma |
| 4 | 03-08-2019 | 3:10 PM – 4:50 PM | 2 | Topic 4:managerial goals, steps in waste management logistics | Dr. Sandeep Kumar Verma |
| 5 | 10-08-2019 | 3:10 PM – 4:50 PM | 2 | Topic 5:Environmental aspects of waste collection | Dr. Sandeep Kumar Verma |
| 6 | 17-08-2019 | 3:10 PM – 4:50 PM | 2 | Topic 6:role of public authority and private sector in waste collection | Dr. Sandeep Kumar Verma |
| 7 | 24-08-2019 | 3:10 PM – 4:50 PM | 2 | Topic 7:organizing collection of residential waste | Dr. Sandeep Kumar Verma |
| 8 | 31-08-2019 | 3:10 PM – 4:50 PM | 2 | Topic 8: fee schemes, public awareness programs | Dr. Sandeep Kumar Verma |
| 9 | 07-09-2019 | 3:10 PM – 4:50 PM | 2 | Topic 9:source-segregated waste | Dr. Sandeep Kumar Verma |
| 10 | 14-09-2019 | 3:10 PM – 4:50 PM | 2 | Topic 10:Purpose of source segregation | Dr. Sandeep Kumar Verma |
| 11 | 21-09-2019 | 3:10 PM – 4:50 PM | 2 | Topic 11:segregation criteria and guidance | Dr. Sandeep Kumar Verma |
| 12 | 28-09-2019 | 3:10 PM – 4:50 PM | 2 | Topic 12:segregation potential and efficiencies | Dr. Sandeep Kumar Verma |
| 13 | 05-10-2019 | 3:10 PM – 4:50 PM | 2 | Topic 13:systems for collecting segregated fraction | Dr. Sandeep Kumar Verma |
| 14 | 12-10-2019 | 3:10 PM – 4:50 PM | 2 | Topic 14:Waste delivery, waste transfer | Dr. Sandeep Kumar Verma |
| 15 | 19-10-2019 | 3:10 PM – 4:50 PM | 2 | Topic 15: transportation of the reloaded waste | Dr. Sandeep Kumar Verma |
| 16 | 26-10-2019 | 3:10 PM – 4:50 PM | 2 | Topic 16:siting and Design of waste transfer station | Dr. Sandeep Kumar Verma |
| 17 | 02-11-2019 | 3:10 PM – 4:50 PM | 2 | Topic 17:economical considerations, recycling solid wastes | Dr. Sandeep Kumar Verma |
| 18 | 09-11-2019 | 3:10 PM – 4:50 PM | 2 | Topic 18: materials recovery facilities | Dr. Sandeep Kumar Verma |
| Total Number of Hours covered | | | 36 (30 Hours) | | |

General
Head
Department of Chemical Engg
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Farah, Mathura

Director
Director
Hindustan College of
Science & Technology
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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.

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Farah, Mathura

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Hindustan College of Science and Technology - Mathura

Department Name: CHEMICAL ENGINEERING

CLASS TIME TABLE FOR ODD SEMESTER 2019-20

| | | | | | | | | | |
|--|--------------------|----------------|----------------|---|----------------|--|----------------|---------------------------------------|-----|
| SESSION: | 2019-20 | | W.E.F : | 7/23/2019 | CLASS TEACHER: | Mr. Sandeep kr. Verma | | | |
| YEAR/SEM-SEC: | II Year/ (III Sem) | | ROOM.NO : | 501 | COUNSELLORS : | Mr.Chandra Pal Singh | | | |
| Time / Day | I | II | III | IV | V | VI | VII | VIII | |
| | 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 | |
| MONDAY | HTO | UHV | MS | CEFM | LUNCH | Soft Computing Lab | | M&B Tute | |
| | CPS | SR | HL | SKV | | SA | | AB | |
| | 501 | 501 | 501 | 501 | | 404 | | 501 | |
| TUESDAY | CEFM | MS | PP | M&B | | Value Added Course | PP | | UHV |
| | SKV | HL | KJ | AB | | | KJ | | SR |
| | 501 | 501 | 501 | 501 | | | 501 | | 501 |
| WEDNESDAY | MS | M&B | HTO | CEFM | | Chemical Engineering Fluid Mechanics Lab | | | |
| | HL | AB | CPS | SKV | | SKV | | | |
| | 501 | 501 | 501 | 501 | | 503 | | | |
| THURSDAY | MS | PP | M&B | CEFM | | Heat Transfer Operations Lab | | | |
| | HL | KJ | AB | SKV | | CPS | | | |
| | 501 | 501 | 501 | 501 | | 503 | | | |
| FRIDAY | PP | UHV | CEFM Tute | MS Tute | | HTO | | Mini Project or Internship Assessment | |
| | KJ | SR | SKV | HL | | CPS | | CPS | |
| | 501 | 501 | 501 | 501 | | 501 | | 501 | |
| SATURDAY | UHV | PDP | | HTO | | Library | VAC-1702 | | |
| | CPS | | | | | | | | |
| | 501 | | | | | | | | |
| Name of the Subject | | | Subject Code | Name of the Faculty | | Total No. of Lect./Tut./Practical | | | |
| | | | | | | Lect. | Tut. | Pract. | |
| Material Science | | | KOE032 | Dr. Hemant Lal(HL) | | 4 | 1 | 0 | |
| Universal Human Values | | | KVE301 | Dr. Suruchi (SR) | 4 | 0 | 0 | | |
| Material and Energy Balance | | | KCH301 | Mr. Anurag Bajpai(AB) | 4 | 1 | 0 | | |
| Chemical Engineering Fluid Mechanics | | | KCH302 | Mr. Sandeep Kumar Verma(SKV) | 4 | 1 | 0 | | |
| Heat Transfer Operations | | | KCH303 | Mr. Chandra Pal Singh(CPS) | 4 | 0 | 0 | | |
| Python Programming | | | KNC302 | Ms. Khushboo Jain(KJ) | 3 | 1 | 0 | | |
| Chemical Engineering Fluid Mechanics Lab | | | KCH351 | Mr. Sandeep Kumar Verma/Mr. Asim Shukla | 0 | 0 | 3 | | |
| Heat Transfer Operations Lab | | | KCH352 | Mr. Chandra Pal Singh/Mr. Venktesh | 0 | 0 | 3 | | |
| Soft Computing Lab | | | KCH353 | Dr. Salim Ahmed(SA) | 0 | 0 | 2 | | |
| Mini Project or Internship Assessment | | | KCS354 | Mr. Chandra Pal Singh/ Mr. Venktesh | 0 | 0 | 2 | | |
| Skill Development | | | | Mr. Sandeep Kumar Verma(SKV) | 0 | 0 | 2 | | |

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Department of Chemical Engg.
Hindustan College of Science & Technology
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Signature
Mr. Anurag Bajpai
Head of the Department

| Hindustan College of Science & Technology | | | | | |
|---|---------------|----------------|--------------------------------------|----------|----------------------|
| Department of Chemical Engineering | | | | | |
| Value Added Course - Registration Form | | | | | |
| Solid Waste Management | | | | | |
| Session 2019-20 | | | From 13th July,2019 to 09th Nov,2019 | | |
| Sr. No. | Roll No. | Name | Department | Semester | Signature of Student |
| 1 | 1806451001 | AMIT KUMAR | Chemical | III | <i>Amit</i> |
| 2 | 1806451002 | Krishna Kumar | Chemical | III | <i>Krishna</i> |
| 3 | 1806451003 | NAVEEN KUMAR | Chemical | III | <i>Naveen</i> |
| 4 | 1806451004 | SHASHANK GUPTA | Chemical | III | <i>Shanku</i> |
| 5 | 1806451006 | Shuhaib Alam | Chemical | III | <i>Shu</i> |
| 6 | 1806451007 | SUMAN KUNTAL | Chemical | III | <i>Suman</i> |
| 7 | 1806451008 | SUMIT RATHORE | Chemical | III | <i>Sumit</i> |
| 8 | 1806451009 | UJJAWAL SINGH | Chemical | III | <i>Ujjawal</i> |
| 9 | 1806451010 | VAIBHAV SHARMA | Chemical | III | <i>Vaibhav</i> |
| 10 | 1806451011 | VANDNA SINGH | Chemical | III | <i>Vandna</i> |
| 11 | 1806451012 | VIPAN KUMAR | Chemical | III | <i>Vipin</i> |
| 12 | 1900640519001 | Vikash Yadav | Chemical | III | <i>Vyadav</i> |

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Hindustan College of Science & Technology

Department of Chemical Engineering

Value Added Course - Registration Form

Solid waste Management

Session 2019-20 (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 |
| 1 | 1806451001 | AMIT KUMAR | III | Amit | Amit | Amit | Amit | A | Amit | Amit | Amit | Amit | A | Amit | Amit | Amit | A | Amit | Amit | Amit | Amit |
| 2 | 1806451002 | Krishna Kumar | III | Krish | Krish | Krish | Krish | Krish | Krish | A | Krish | Krish | A | Krish | Krish | Krish | Krish | Krish | Krish | Krish | Krish |
| 3 | 1806451003 | NAVEEN KUMAR | III | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | Naveen | A | Naveen | A |
| 4 | 1806451004 | SHASHANK GUPTA | III | Shank | Shank | Shank | Shank | A | Shank | Shank | Shank | Shank | A | Shank | Shank | Shank | Shank | A | Shank | Shank | |
| 5 | 1806451006 | Shuhaib Alam | III | Shu | Shu | Shu | A | Shu | Shu | Shu | Shu | Shu | A | Shu | Shu | Shu | Shu | Shu | Shu | A | |
| 6 | 1806451007 | SUMAN KUNTAL | III | Sun | Sun | A | Sun | Sun | Sun | A | Sun | Sun | Sun | A | Sun | Sun | Sun | Sun | Sun | A | A |
| 7 | 1806451008 | SUMIT RATHORE | III | Sumit | Sumit | Sumit | A | Sumit | Sumit | Sumit | Sumit | Sumit | A | Sumit | Sumit | Sumit | Sumit | A | Sumit | Sumit | A |
| 8 | 1806451009 | UJJAWAL SINGH | III | Ujjwal | Ujjwal | Ujjwal | Ujjwal | A | Ujjwal | Ujjwal | Ujjwal | Ujjwal | Ujjwal | A | A | Ujjwal | Ujjwal | Ujjwal | A | Ujjwal | Ujjwal |
| 9 | 1806451010 | VAIBHAV SHARMA | III | A | A | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | Vaibha | A |
| 10 | 1806451011 | VANDNA SINGH | III | A | Vandana | Vandana | Vandana | Vandana | A | Vandana | Vandana | Vandana | Vandana | Vandana | A | Vandana | Vandana | Vandana | Vandana | Vandana | Vandana |
| 11 | 1806451012 | VIPAN KUMAR | III | Vipin | Vipin | Vipin | Vipin | Vipin | Vipin | Vipin | Vipin | Vipin | A | A | Vipin | Vipin | Vipin | Vipin | Vipin | Vipin | Vipin |
| 12 | 1900640519001 | Vikash Yadav | III | Vyadav | Vyadav | Vyadav | A | Vyadav | Vyadav | Vyadav | Vyadav | Vyadav | A | Vyadav | Vyadav | Vyadav | A | Vyadav | Vyadav | Vyadav | Vyadav |

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**HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY
FARAH, MATHURA**



Certificate of Completion

**DEPARTMENT OF CHEMICAL ENGINEERING
Academic Session 2019-20**

This is to certify that Mr. SUMIT RATHORE, Roll No: 1806451008 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

[Signature]
Head of Department

[Signature]
Director, HCST

[Signature]
**Head of Department
Department of Chemical Engineering
Hindustan College of Science & Technology
Farah Mathura**

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**Director
Hindustan College of
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**HINDUSTAN COLLEGE OF SCIENCE & TECHNOLOGY
FARAH, MATHURA**



Certificate of Completion

**DEPARTMENT OF CHEMICAL ENGINEERING
Academic Session 2019-20**

This is to certify that Mr. AMIT KUMAR, Roll No: 1806451001 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

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Head of Department

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Director, HCST

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

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Director
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