



RAAK

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)

From

Mrs.L. Rogini Devi
Assistant professor/S&H
RAAK College of Engineering and Technology
Puducherry -110

01/08/2022

To

The Principal
RAAK College of Engineering and Technology
Puducherry -110

Respected Sir,

Sub: Requisition for Approval to Conduct Skill Development program / Value added Course on
"22SH01- Mathematical Modeling"- reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on
"22SH01- Mathematical Modeling" for all the first Year Department of Science & Humanities.
Students from 09-08-2022 to 13-08-2022.

The main focus of this program is to provide a better exposure to our students on the Mathematical
Modeling practical applications.

The syllabus and course plan structured are not listed in the Pondicherry University Curriculum and
the same have been verified and approved by the Principal/HoD/Professors and Skill development team.

Hence, I kindly request you to approve event planned. The details and the necessary proofs are
attached with this letter.

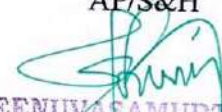
Thanking you,

Yours faithfully,


L. Rogini Devi

AP/S&H




Dr. S. SEENUVASAMURTHI, M.E., Ph.C.
PRINCIPAL
RAAK College of Engineering & Technology
No.1, Muthupillai Palayam Road,
Sulthanpet Post,
Puducherry - 605 110



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**DEPARTMENT OF SCIENCE AND HUMANITIES
PRESENTS**

**VALUE ADDED COURSE ON
MATHEMATICAL MODELING**

2022-2023

DATE: 09/08/2022 to 13/08/2022

VENUE: RAAKCET

TIME: 09 am to 04 pm

Resource Person:

Mr. S. Ravichandran
Assistant Professor,
IFET Engineering college.

For Registration Contact:

Ms. Subathira, AP/ S & H,
8654927135.

HOD

Mr. S. Ramachandran



PRINCIPAL

Dr. S. Seenuvasamurthi

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.
PRINCIPAL

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raakengg@mail.com



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Value Added Courses

2022-2023

Department of Science & Humanities.

22SH01- Mathematical Modeling

Syllabus

Duration: 36 hours

Course Objective:

- This course is an introduction to mathematical modeling based on the use of elementary functions to describe and explore real-world phenomena and data.
- Linear exponential, logarithmic, and polynomial function models are examined closely and are applied to real-world data in course assignments and projects.
- Other function models may also be considered. Throughout the course, computational tools are used to implement, examine, and validate these models.

Course Outcomes:

- To handle freely the concepts used in mathematical modeling
- To analyze a simple physical phenomenon in order to create a mathematical model
- To apply numerical methods to solve systems of ordinary differential equations
- To understand the mechanism of mathematical modeling in chemical engineering.

Module 1: Functions; modeling with linear functions

(9 Hours)

Function definition; domain and range – Functions described by tables, graphs and formulas – increasing and decreasing functions; local and absolute extrema – Concavity; inflection points – average rate of change – Linear functions with applications – Slope – intercept and point – slope forms – Piecewise – Linear functions with applications.

Module 2: Linear Regression; modeling with exponential functions

(9 Hours)

Fitting linear models to data – Evaluating model error; the sum of squared errors – interpreting the correlation coefficient – exponential growth functions with applications – growth factors and rates – doubling time – compound interest – exponential decay functions with applications – decay factors and rates – half-life.

Module 3: Additional topics in exponential modeling, modeling with logarithmic functions; linear systems

(9 Hours)

Fitting exponential models to data – continuous compounding – continuous growth and decay – Newton's law of cooling and heating – logarithmic functions with applications – fitting logarithmic models to data – matrices – representing a system of linear equations with a matrix equation – solving linear systems via matrix equations.



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Module 4: Modeling with polynomial functions

(9 Hours)

Quadratic functions with applications – projectile motion – maxima and minima applications – fitting quadratic models to data – interpreting the coefficient of determination – polynomial functions of higher degree with applications – polynomial interpolation – fitting cubic and quartic models to data.

L. Boged
Course Designed by

Sambhu
Approved by

[Signature]
Principal



[Signature]
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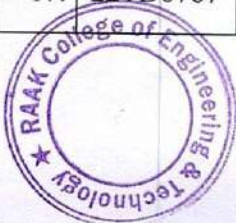
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CO - ATTAINMENT MAPPING

| Sl. No | Register Number | Student Name | CO1 | CO2 | CO3 | CO4 |
|--------|-----------------|------------------|-----|-----|-----|-----|
| 1. | 22TD0751 | Adhityan M | ✓ | ✓ | ✓ | ✓ |
| 2. | 22TD0752 | Anitha P | ✓ | ✓ | ✓ | ✓ |
| 3. | 22TD0753 | Balaji B | ✓ | ✓ | ✓ | ✓ |
| 4. | 22TD0754 | Carllewis F | ✓ | ✓ | ✓ | ✓ |
| 5. | 22TD0755 | Chandru E | ✓ | ✓ | ✓ | ✓ |
| 6. | 22TD0756 | Charulatha M | ✓ | ✓ | ✓ | ✓ |
| 7. | 22TD0757 | Ezhilarasi E | ✓ | ✓ | ✓ | ✓ |
| 8. | 22TD0758 | Gopikrishnan P | ✓ | ✓ | ✓ | ✓ |
| 9. | 22TD0759 | Gurumoorthy B | ✓ | ✓ | ✓ | ✓ |
| 10. | 22TD0760 | Harishkumar K | ✓ | ✓ | ✓ | ✓ |
| 11. | 22TD0761 | Immanuvel A | ✓ | ✓ | ✓ | ✓ |
| 12. | 22TD0762 | Imran Farose J | ✓ | ✓ | ✓ | ✓ |
| 13. | 22TD0763 | Jayavardani S | ✓ | ✓ | ✓ | ✓ |
| 14. | 22TD0764 | Karthik Roshan M | ✓ | ✓ | ✓ | ✓ |
| 15. | 22TD0765 | Kunal M | ✓ | ✓ | ✓ | ✓ |
| 16. | 22TD0766 | Ladislav A | ✓ | ✓ | ✓ | ✓ |
| 17. | 22TD0767 | Lakshmi M | ✓ | ✓ | ✓ | ✓ |



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| | | | | | | |
|-----|----------|----------------------|---|---|---|---|
| 18. | 22TD0768 | Logeshwaran R | ✓ | ✓ | ✓ | ✓ |
| 19. | 22TD0769 | Madhesh P | ✓ | ✓ | ✓ | ✓ |
| 20. | 22TD0770 | Magathi S | ✓ | ✓ | ✓ | ✓ |
| 21. | 22TD0771 | Mahalakshmi R | ✓ | ✓ | ✓ | ✓ |
| 22. | 22TD0772 | Manoranjith R | ✓ | ✓ | ✓ | ✓ |
| 23. | 22TD0773 | Monica P | ✓ | ✓ | ✓ | ✓ |
| 24. | 22TD0774 | Mouhamed Azaroudine | ✓ | ✓ | ✓ | ✓ |
| 25. | 22TD0775 | Muralidharan M | ✓ | ✓ | ✓ | ✓ |
| 26. | 22TD0776 | Naresh B | ✓ | ✓ | ✓ | ✓ |
| 27. | 22TD0777 | Narkees Begam A | ✓ | ✓ | ✓ | ✓ |
| 28. | 22TD0778 | Poovarasam P | ✓ | ✓ | ✓ | ✓ |
| 29. | 22TD0779 | Pravinkumar P | ✓ | ✓ | ✓ | ✓ |
| 30. | 22TD0780 | Rani V | ✓ | ✓ | ✓ | ✓ |
| 31. | 22TD0781 | Saisridhar J | ✓ | ✓ | ✓ | ✓ |
| 32. | 22TD0782 | Sarumathi C | ✓ | ✓ | ✓ | ✓ |
| 33. | 22TD0783 | Selliamma A | ✓ | ✓ | ✓ | ✓ |
| 34. | 22TD0784 | Selvaganapathy J | ✓ | ✓ | ✓ | ✓ |
| 35. | 22TD0785 | Senthil R | ✓ | ✓ | ✓ | ✓ |
| 36. | 22TD0786 | Shaik Mohammad Moosa | ✓ | ✓ | ✓ | ✓ |



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| | | | | | | |
|-----|----------|----------------------------|---|---|---|---|
| 37. | 22TD0787 | Sharfounisha Mr | ✓ | ✓ | ✓ | ✓ |
| 38. | 22TD0788 | Vasanth Kumar G | ✓ | ✓ | ✓ | ✓ |
| 39. | 22TD0789 | Velan A | ✓ | ✓ | ✓ | ✓ |
| 40. | 22TD0790 | Vidiya Sagar Kumar Verma G | ✓ | ✓ | ✓ | ✓ |



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**Value Added Courses
 2022-2023**

Department of Science & Humanities.

22SH01- Mathematical Modeling

COURSE PLAN

| S.no | Date | Hours | Time | Topic | Faculty details |
|--------|----------|-------|-------------------|--|-------------------------------------|
| DAY -1 | | | | | |
| 1 | 09.08.22 | 1,2 | 9AM -11AM | sources of water - Characteristics of water, Water Analysis- study of water samples - acidity.. | Mr.S.Ravichandran & Mr.K.Devanathan |
| 2 | | 3,4 | 11.15AM – 1.15 PM | alkalinity. Hardness, free chlorine, chlorine demand, calcium, magnesium, iron, manganese, zinc | Mr.S.Ravichandran |
| 3 | | 5,6 | 2 PM -4PM | ammonia, nitrate, sulphate and fluoride, DOC, BOD, COD and their importance - Disadvantages of hard water - Scale and sludge formation in boiler Brackish water: | Mr.K.Devanathan |
| DAY 2 | | | | | |
| 4 | 10.08.22 | 7,8 | 9AM -11AM | Introduction -water Pollutants - physical and chemical pollution of water - ground water pollution - harmful effects of ground water pollution - surface water | Mr.S.Ravichandran |
| 5 | | 9,10, | 11.15AM – 1.15 PM | River water and sea water pollution. | Mr.K.Devanathan |
| 6 | | 11,12 | 2 PM -4PM | Oil pollution of water. Effects oil pollution in marine water - Radioactive materials in water- ROLE of pollution control boards. | Mr.S.Ravichandran |
| DAY -3 | | | | | |
| 7 | 11.08.22 | 13,14 | 9AM -11AM | Physico chemical Examination of water 10 Hrs Collection of samples - colour - odour Turbidity pH - | Mr.K.Devanathan |



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| | | | | | |
|--|----------|-------|-------------------|--|-------------------|
| 8 | 12.08.22 | 15,16 | 11.15AM – 1.15 PM | temperature - Soilds: Total Solids, DissolYed solids, suspended solids, settable solids - Acidity - Alkalinity - Hardness - calcium. ~lugnesium | Mr.S.Ravichandran |
| 9 | | 17,18 | 2 PM -4PM | Sodium - Potassium - Iron-Dissolved Qxygen, BOD, COD, biological and chemical treatments. | Mr.K.Devanathan |
| DAY -4 | | | | | |
| 10 | 12.08.22 | 19,20 | 9AM -11AM | Concept of material, energy momentum balance | Mr.S.Ravichandran |
| 11 | | 21,22 | 11.15AM – 1.15 PM | case study of process variables and control in typical unit operation as distillation | Mr.K.Devanathan |
| 12 | | 23,24 | 2 PM -4PM | absorption, reactors, heat exchangers | Mr.S.Ravichandran |
| DAY -5 | | | | | |
| 13 | 13.08.22 | 25,26 | 9AM -11AM | Automation of Assembly lines- Concept of automation in industry,mechanization and automation. | Mr.K.Devanathan |
| 14 | | 27,28 | 11.15AM – 1.15 PM | Automation using Hydraulic systems – Design aspects of various elements of hydraulic systems such as pumps, valves, filters | Mr.S.Ravichandran |
| 15 | | 29,30 | 2 PM -4PM | reservoirs, accumulators, actuators and intensifiers. | Mr.K.Devanathan |
| ***ASSESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION *** | | | | | |

BREAK TIME: 11.00 TO 11.15 AM

LUNCH BREAK: 1.15 PM TO 2.00 PM

L. Rogini Devi
COURSE DESIGNED BY
MRS.L.ROGINI DEVI



Santhosh Kumar
APPROVED BY
SKILL DEVELOPMENT TEAM

Dr. S. Seenuvasamurthi
PRINCIPAL

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VALUE ADDED COURSES

2022-2023

Department of Science & Humanities.

EVENT REPORT

Name of the Course: 22SH01- Mathematical Modeling

Name of the Instructors: Mr.S.Ravichandran & Mr.K.Devanathan

Year/ Branch: I / S&H

Duration of Course: 36 Hours (09-08-2022 to 13-08-2022)

Assessment Date: 20.08.2022

Post Event Summary:

The course was inaugurated on 09-08-2022 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.08.2018 assessment was conducted and feedbacks were collected from all the participants.

CO - Attainment:

CO1: To handle freely the concepts using in mathematical modeling

CO2: To analyze a simple physical phenomena in order to create a mathematical model

CO3: To apply numerical methods to solve systems of ordinary differential equations

CO4: To understand the mechanism of mathematical modeling in chemical engineering.



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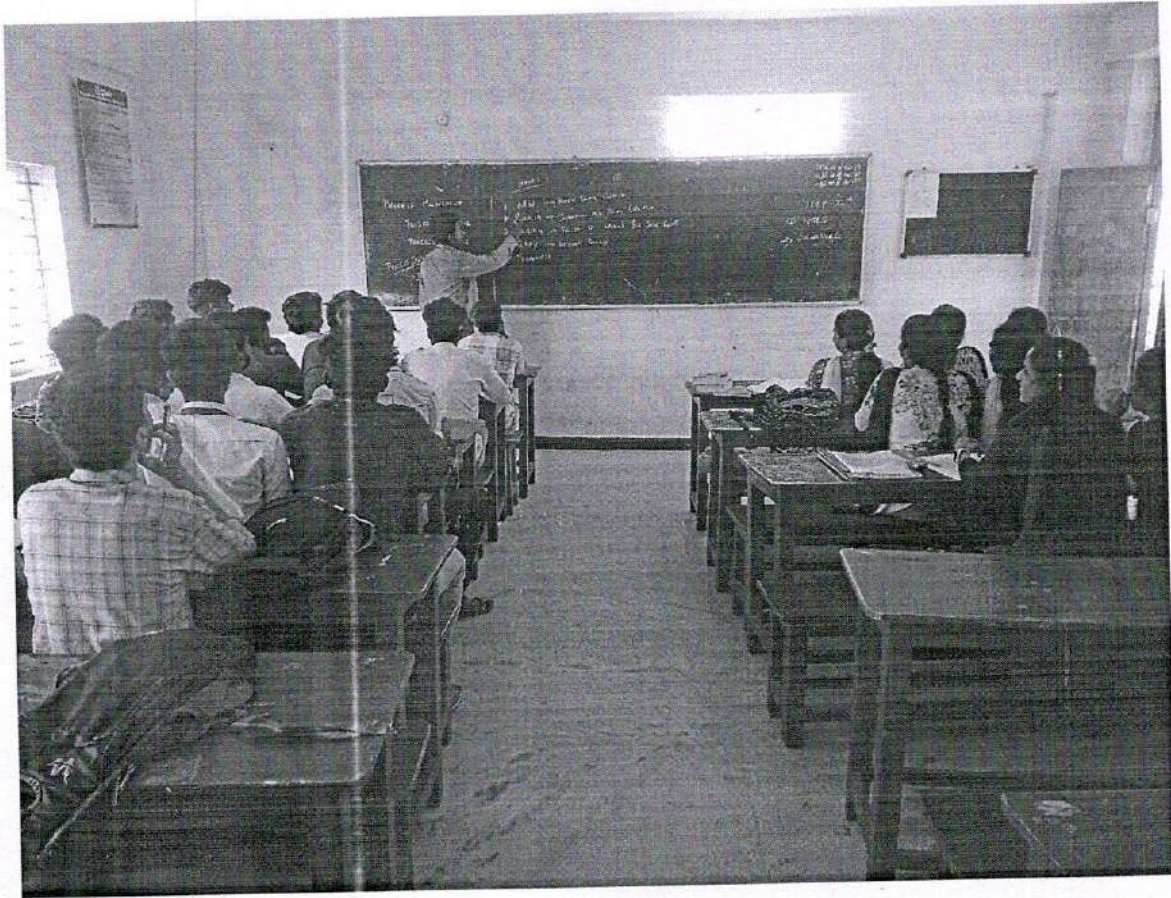


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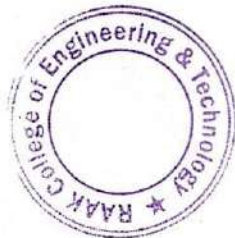
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Value Added Course on Mathematical Modeling 2022-23



case study of process variables and control in typical unit operation as distillation on 12.08.22



S. Seenuvasamurthi
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From

Mrs.L.Rogini Devi
Assistant Professor /S&H
RAAK College of Engineering and Technology
Puducherry -110

To

The Principal
RAAK College of Engineering and Technology
Puducherry -110

Respected sir,

Sub: Requisition for Approval to Conduct Skill Development program / Value added Course on "22SH02- Chemistry of Industrial Process"- reg.

This is to bring to your kind notice that the Skill Development Team is planning to conduct a Program on "22SH02- Chemistry of Industrial Process" for all the first Year Department of Science & Humanities, students from 09-08-2022 to 13-08-2022.

The main focus of this program is to provide a better exposure to our students on the Chemistry Of Industrial Process practical applications.

The syllabus and course plan structured are not listed in the Pondicherry University Curriculum. and the same have been verified and approved by the Principal/HoD/Professors and Skill development team.

Hence, I kindly request you to approve event planned. The details and the necessary proofs are attached with this letter.

Thanking you,

Yours faithfully,

L. Rogini Devi
Mrs.L.Rogini Devi

AP/S&H



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RAAKCET/PRINCIPAL/CIR/AUG2022

02/08/2022

CIRCULAR

This is to inform that the Skill Development Team is planning to conduct a value added course on “22SH02- Chemistry Of Industrial Process” for all the First Year Department of Science & Humanities, students from 09-08-2022 to 13-08-2022. Students are asked to utilize this opportunity and improve their skills


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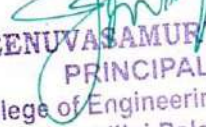
Circulation to:

1. All Students
2. All Faculty & Staff Members
3. All HoDs

Copy to:

1. All HoDs
2. Office




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**DEPARTMENT OF SCIENCE AND HUMANITIES
PRESENTS**

**VALUE ADDED COURSE ON
CHEMISTRY OF INDUSTRIAL PROCESS**

2022-2023

DATE: 09/08/2022 to 13/08/2022

VENUE: RAAKCET

TIME: 09 am to 04 pm

Resource Person:

**Mr. A. Raguraman
Assistant Professor,
Mailam Engineering college.**

For Registration Contact:

**Ms. Aruljothy, AP/ S & H,
9798654831.**

HOD

Mr. S. Ramachandran

PRINCIPAL

Dr. S. Seenuvasamurthi

**Dr. S. SEENUVASAMURTHI, M.E., Ph.C.
PRINCIPAL**

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VALUE ADDED COURSES

2022-2023

Department of Science & Humanities.

22SH02- Chemistry of Industrial Process

Syllabus

Duration: 36 hours

Course Objective:

- Define and implement cleaner production activities, industrial water management strategies for pollution and toxicity prevention.
- To Select the most appropriate treatment technology and design a wastewater treatment methods to treat an industrial effluent stream for a selected industry.
- Integrate cleaner production, industrial water management, wastewater treatment processes, and disposal in the design on an industrial waste treatment process for a selected industry.

Course Outcomes:

- Understand the basic manufacturing various chemicals
- Understand characteristics of chemical reactors
- Understand about case study of process variables and control in unit operation
- Understand about various Automation techniques..

Module 1: Characteristics of water

(9 Hours)

Sources of water - Characteristics of water, Water Analysis- study of water samples - acidity, alkalinity, Hardness, free chlorine, chlorine demand, calcium, magnesium, iron, manganese, zinc, ammonia, nitrate, sulphate and fluoride, DOC, BOD, COD and their importance - Disadvantages of hard water - Scale and sludge formation in boiler Brackish water:

Module 2: Water Pollution

(9 Hours)

Introduction -water Pollutants - physical and chemical pollution of water - ground water pollution - harmful effects of ground water pollution - surface water. River water and sea water pollution. Oil pollution of water. Effects oil pollution in marine water - Radioactive materials in water- Role of pollution control boards.

Module 3: chemical Examination

(9 Hours)

Physico chemical Examination of water 10 Hrs Collection of samples - colour - odour Turbidity pH - temperature - Solids: Total Solids, Dissolved solids, suspended solids, settleable solids - Acidity - Alkalinity - Hardness - calcium, magnesium, Sodium - Potassium - Iron-Dissolved Oxygen, BOD, COD, biological and chemical treatments.

Module 4: Concept of material

(9 Hours)

Concept of material, energy momentum balance, case study of process variables and control in typical unit operation as distillation, absorption, reactors, heat exchangers.



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Module 5: Automation of Assembly lines

(9 Hours)

Automation of Assembly lines- Concept of automation in industry, mechanization and automation. Automation using Hydraulic systems – Design aspects of various elements of hydraulic systems such as pumps, valves, filters, reservoirs, accumulators, actuators and intensifiers.

L. Rogad
Course Designed by

Janevichu
Approved by

[Signature]
Principal



[Signature]
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CO - ATTAINMENT MAPPING

| Sl. No | Register Number | Student Name | CO1 | CO2 | CO3 | CO4 |
|--------|-----------------|-----------------|-----|-----|-----|-----|
| 1. | 22TH0351 | AMARNATH A | ✓ | ✓ | ✓ | ✓ |
| 2. | 22TH0352 | ARCHANA K | ✓ | ✓ | ✓ | ✓ |
| 3. | 22TH0353 | ARTHI S | ✓ | ✓ | ✓ | ✓ |
| 4. | 22TH0354 | BALAMURUGAN P | ✓ | ✓ | ✓ | ✓ |
| 5. | 22TH0355 | DHANUSU E | ✓ | ✓ | ✓ | ✓ |
| 6. | 22TH0356 | GOKULNATH A | ✓ | ✓ | ✓ | ✓ |
| 7. | 22TH0357 | HARIHARAN M | ✓ | ✓ | ✓ | ✓ |
| 8. | 22TH0358 | HARINI P | ✓ | ✓ | ✓ | ✓ |
| 9. | 22TH0359 | HARISH RAJ K | ✓ | ✓ | ✓ | ✓ |
| 10. | 22TH0360 | HEMALATHA P | ✓ | ✓ | ✓ | ✓ |
| 11. | 22TH0361 | JAGANATHAN C | ✓ | ✓ | ✓ | ✓ |
| 12. | 22TH0362 | JAMUNA M | ✓ | ✓ | ✓ | ✓ |
| 13. | 22TH0363 | JAYARAJ AALAS L | ✓ | ✓ | ✓ | ✓ |
| 14. | 22TH0364 | JUNIOR NEWTON K | ✓ | ✓ | ✓ | ✓ |
| 15. | 22TH0366 | KAVIARASAN P | ✓ | ✓ | ✓ | ✓ |
| 16. | 22TH0367 | KISHOTHKUMAR R | ✓ | ✓ | ✓ | ✓ |
| 17. | 22TH0368 | MANOJ A | ✓ | ✓ | ✓ | ✓ |

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| | | | | | | |
|-----|----------|---------------------------------|---|---|---|---|
| 18. | 22TH0369 | MATHINA B | ✓ | ✓ | ✓ | ✓ |
| 19. | 22TH0370 | MOHAMMED IBRAHIM IRFAN S | ✓ | ✓ | ✓ | ✓ |
| 20. | 22TH0371 | NISHANTHI D | ✓ | ✓ | ✓ | ✓ |
| 21. | 22TH0372 | PALAPERAGASAM N | ✓ | ✓ | ✓ | ✓ |
| 22. | 22TH0373 | PERUMAL N | ✓ | ✓ | ✓ | ✓ |
| 23. | 22TH0374 | PRAVIN KUMAR M | ✓ | ✓ | ✓ | ✓ |
| 24. | 22TH0375 | RAMINASH M | ✓ | ✓ | ✓ | ✓ |
| 25. | 22TH0376 | ROHITH V | ✓ | ✓ | ✓ | ✓ |
| 26. | 22TH0377 | SARAVANAN B | ✓ | ✓ | ✓ | ✓ |
| 27. | 22TH0378 | SRIRAM S | ✓ | ✓ | ✓ | ✓ |
| 28. | 22TH0379 | SRIVELAN K | ✓ | ✓ | ✓ | ✓ |
| 29. | 22TH0380 | SUBRAMANIAN ALIAS SANTHOSH K | ✓ | ✓ | ✓ | ✓ |
| 30. | 22TH0381 | SUDHAKAR S | ✓ | ✓ | ✓ | ✓ |
| 31. | 22TH0382 | SURENDER V | ✓ | ✓ | ✓ | ✓ |
| 32. | 22TH0383 | SURYA R | ✓ | ✓ | ✓ | ✓ |
| 33. | 22TH0384 | SURYA S | ✓ | ✓ | ✓ | ✓ |
| 34. | 22TH0385 | THAMIZHSELVAM R | ✓ | ✓ | ✓ | ✓ |
| 35. | 22TH0386 | VENKATESH S | ✓ | ✓ | ✓ | ✓ |
| 36. | 22TH0387 | VETHESH C | ✓ | ✓ | ✓ | ✓ |



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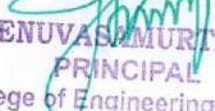
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| | | | | | | |
|-----|----------|-----------------|---|---|---|---|
| 37. | 22TH0388 | VIGNESH KUMAR S | ✓ | ✓ | ✓ | ✓ |
| 38. | 22TH0389 | YOGESH H | ✓ | ✓ | ✓ | ✓ |
| 39. | 22TC0552 | EDWIN J | ✓ | ✓ | ✓ | ✓ |
| 40. | 22TC0553 | JAYAPRRAKASH G | ✓ | ✓ | ✓ | ✓ |
| 41. | 22TC0554 | KIRUBAKARAN S | ✓ | ✓ | ✓ | ✓ |
| 42. | 22TC0555 | MAHESHWARI S | ✓ | ✓ | ✓ | ✓ |
| 43. | 22TC0556 | MUGENDHAN D | ✓ | ✓ | ✓ | ✓ |
| 44. | 22TC0557 | PRAVIN G | ✓ | ✓ | ✓ | ✓ |
| 45. | 22TC0558 | SUBASH S | ✓ | ✓ | ✓ | ✓ |
| 46. | 22TC0559 | SUPRAJA S | ✓ | ✓ | ✓ | ✓ |
| 47. | 22TE0142 | KAVIPRIYA B | ✓ | ✓ | ✓ | ✓ |
| 48. | 22TE0143 | MAHENDRAN P | ✓ | ✓ | ✓ | ✓ |
| 49. | 22TE0144 | MANIBHARATHI S | ✓ | ✓ | ✓ | ✓ |
| 50. | 22TE0145 | SHYAM SAKTHI S | ✓ | ✓ | ✓ | ✓ |
| 51. | 22TE0146 | THULASIDHARAN M | ✓ | ✓ | ✓ | ✓ |
| 52. | 22TB0111 | KEERTHI VASU G | ✓ | ✓ | ✓ | ✓ |
| 53. | 21TB0112 | VIMAL KANTH M | ✓ | ✓ | ✓ | ✓ |




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VALUE ADDED COURSES

2022-2023

Department of Science & Humanities.

22SH02- Chemistry Of Industrial Process

COURSE PLAN

| S.no | Date | Hours | Time | Topic | Resource Person |
|--------|----------|-------|--------------------|--|-------------------------------------|
| DAY -1 | | | | | |
| 1 | 09.08.22 | 1,2 | 9 AM -11 AM | sources of water - Characteristics of water, Water Analysis- study of water samples - acidity.. | Mr.A.Raguraman & Dr.G.Senthilnathan |
| 2 | | 3,4 | 11.15 AM – 1.15 PM | alkalinity. Hardness, free chlorine, chlorine demand, calcium, magnesium. iron. manganese. zinc | Mr.A.Raguraman |
| 3 | | 5,6 | 2 PM -4 PM | ammonia, nitrate, sulphate and fluoride, DOC, BOD, COD and their importance - Disadvantages of hard water - Scale and sludge formation in boiler Brackish water: | Dr.G.Senthilnathan |
| DAY 2 | | | | | |
| 4 | 10.08.22 | 7,8 | 9 AM -11 AM | Introduction -water Pollutants - physical and chemical pollution of water - ground water pollution - harmful effects of ground water pollution - surface water | Mr.A.Raguraman |
| 5 | | 9,10, | 11.15 AM – 1.15 PM | River water and sea water pollution. | Dr.G.Senthilnathan |
| 6 | | 11,12 | 2 PM -4 PM | Oil pollution of water. Effects oil pollution in marine water - Radioactive materials in water- Role of pollution control boards. | Mr.A.Raguraman |
| DAY -3 | | | | | |
| 7 | 11.08.22 | 13,14 | 9 AM -11 AM | Physico chemical Examination of water 10 Hrs Collection of samples - colour - odour Turbidity pH- | Dr.G.Senthilnathan |



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| | | | | | |
|--|----------|-------|--------------------|---|--------------------|
| | | | | temperature - Soilds | |
| 8 | | 15,16 | 11.15 AM – 1.15 PM | Total Solids. Dissolyed solids, suspended solids, setttable solids - Acidity - Alkalinity - Hardness - calcium. ~lugnesium | Mr.A.Raguraman |
| 9 | | 17,18 | 2 PM -4 PM | Sodium - Potassium - Iron-Dissolved Qxygen, BOD, COD, biological and chemical treatments. | Dr.G.Senthilnathan |
| DAY -4 | | | | | |
| 10 | | 19,20 | 9 AM -11 AM | Concept of material, energy momentum balance | Mr.A.Raguraman |
| 11 | 12.08.22 | 21,22 | 11.15 AM – 1.15 PM | case study of process variables and control in typical unit operation as distillation | Dr.G.Senthilnathan |
| 12 | | 23,24 | 2 PM -4 PM | absorption, reactors, heat exchangers | Mr.A.Raguraman |
| DAY -5 | | | | | |
| 13 | | 25,26 | 9 AM -11 AM | Automation of Assembly lines- Concept of automation in industry, mechanization and automation. | Dr.G.Senthilnathan |
| 14 | 13.08.22 | 27,28 | 11.15 AM – 1.15 PM | Automation using Hydraulic systems – Design aspects of various elements of hydraulic systems such as pumps, valves, filters | Mr.A.Raguraman |
| 15 | | 29,30 | 2 PM -4 PM | Reservoirs, accumulators, actuators and intensifiers. | Dr.G.Senthilnathan |
| ***ASESSMENT EXAM WILL BE CONDUCTED AFTER ONE WEEK OF COURSE COMPLETION **** | | | | | |

BREAK TIME: 11.00 TO 11.15 AM

LUNCH BREAK: 1.15 PM TO 2.00 PM

L. Rogini Devi
COURSE DESIGNED BY
MRS.L.ROGINI DEVI

Dr. S. Seenuvasamurthi
APPROVED BY
SKILL DEVELOPMENT TEAM

Dr. S. Seenuvasamurthi
PRINCIPAL
Dr.S.SEENUVASAMURTHI



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VALUE ADDED COURSES

2022-2023

Department of Science & Humanities.

EVENT REPORT

Name of the Course: 22SH02- Chemistry of Industrial Process

Name of the Instructors: Mr.A.Raguraman & Dr.G.Senthilnathan

Year/ Branch: I/ S&H

Duration of Course: 36 Hours (09-08-2022 to 13-08-2022)

Assessment Date: 20.08.2022

Post Event Summary:

The course was inaugurated on 09-08-2022 at 9.30 A.M. by our respectable principal and sessions were continued as per the schedule. Students were enriched their knowledge by attending the course. Finally, the course concluded by vote of thanks.

On 20.08.2022 assessment was conducted and feedbacks were collected from all the participants.

CO - Attainment:

CO1: Understand the basic manufacturing of various chemicals

CO2: Understand characteristics of chemical reactors

CO3: Understand about case study of process variables and control in unit operation

CO4: Understand about various Automation techniques..




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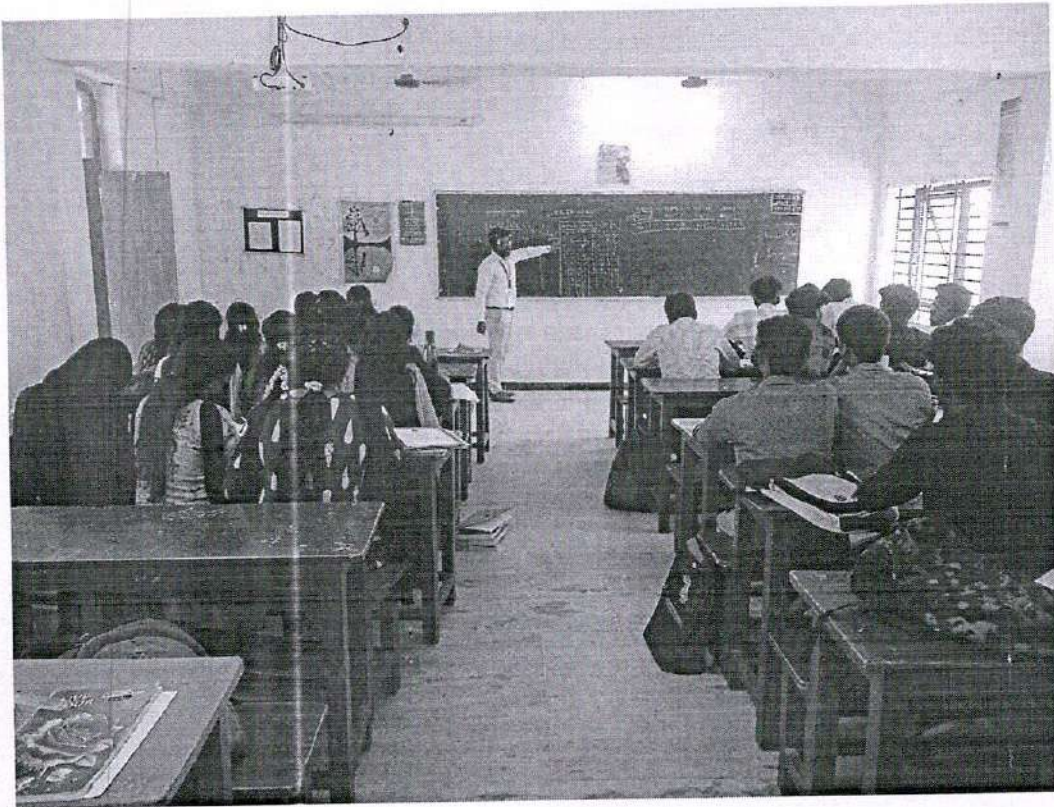


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Value Added Course on Chemistry Of Industrial Process 2022-23



Concept of material, energy momentum balance on 11.08.22




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