Session: 2020-2021

## Lesson Plan

| Name of the Faculty | $:$ | Ms. Nidhi |
| :--- | :--- | :--- |
| Discipline | $:$ | ME |
| Semester | $:$ | $3^{\text {rd }}$ |

Subject : MATHEMATICS - III (BSC-MATH- 203G)
Lesson Plan Duration : (from Aug., 2020 to Nov., 2020)
** Work Load (Lecture) per week (in hours): Lectures-03

| Week | Theory |  |
| :---: | :---: | :---: |
|  | Lecture Day | Topic (including assignment/test) |
|  | $1^{\text {st }}$ | Multivariable Differential Calculus: Limit, |
|  | $2^{\text {nd }}$ | Continuity |
|  | $3^{\text {rd }}$ | Partial derivatives |
| $2^{\text {nd }}$$(08 / 08 / 20)$To$(15 / 08 / 20)$ | $1^{\text {st }}$ | Homogeneous functions, Euler's Theorem |
|  | $2^{\text {nd }}$ | Total derivative, |
|  | $3^{\text {rd }}$ | Maxima, Minima and Saddle points, |
| $\begin{gathered} 3^{\text {rd }} \\ (15 / 08 / 20) \\ \text { To } \\ (22 / 08 / 20) \end{gathered}$ | $1^{\text {st }}$ | Lagrange's method of undetermined multipliers |
|  | $2^{\text {nd }}$ | Multivariable Integral Calculus: Double integral |
|  | $3^{\text {rd }}$ | Change of order of integration |
| $\begin{gathered} 4^{\text {th }} \\ (22 / 08 / 20) \\ \text { To } \\ (29 / 08 / 20) \end{gathered}$ | $1^{\text {st }}$ | Change of variables |
|  | $2^{\text {nd }}$ | Applications of double integral to find area enclosed by plane curves, Triple integral |
|  | $3^{\text {rd }}$ | REVISION |

## MERI College of Engineering and Technology (MERI-CET)

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| $\begin{gathered} 5^{\text {th }} \\ (29 / 08 / 20) \\ \text { To } \\ (05 / 09 / 20) \end{gathered}$ | $1^{\text {st }}$ | Ordinary Differential Equations of first order: Linear and Bernoulli's equations |
| :---: | :---: | :---: |
|  | $2^{\text {nd }}$ | Exact differential equations, |
|  | $3^{\text {rd }}$ | Equations reducible to exact differential equations |
| $\begin{gathered} 6^{\mathrm{th}} \\ (05 / 09 / 20) \\ \text { To } \\ (12 / 09 / 20) \end{gathered}$ | $1{ }^{\text {st }}$ | Applications of differential equations of first order and first degree to simple electric circuits |
|  | $2^{\text {nd }}$ | Newton's law of cooling |
|  | $3^{\text {rd }}$ | Heat flow and Orthogonal trajectories |
| $\begin{gathered} 7^{\text {th }} \\ (12 / 09 / 20) \\ \text { To } \\ (19 / 09 / 20) \end{gathered}$ | $1^{\text {st }}$ | Ordinary Differential equations of second and higher order |
|  | $2^{\text {nd }}$ | Linear differential equations of second and higher order, Complete solution |
|  | $3^{\text {rd }}$ | Complete solution |
| $8^{\text {th }}$$(19 / 09 / 20)$To$(26 / 09 / 20)$ | $1^{\text {st }}$ | Complete solution, Complementary function and Particular integral |
|  | $2^{\text {nd }}$ | Method of variation of parameters to find particular integral, |
|  | $3^{\text {rd }}$ | Cauchy's and Legendre's linear |

