**Curriculum Plan (ODD SEM 2021): B. Sc. (H) Mathematics III Year (Semester V)**

**DSE-1(NUMERICAL ANALYSIS)**

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| **Teacher Profile**  **Dr. Abhishek Kr. Singh**  Department of Mathematics  Kalindi College, University of Delhi, Delhi- 110008  Mobile: +91-9015737554  **E- mail**: [abhishek@kalindi.du.ac.in](mailto:abhishek@kalindi.du.ac.in) | | **C:\Users\Abhishek\Pictures\2014-05-28 002\scan 053.jpg**  **PHOTO** | **Marks Distribution** | **Theory** | 75 Marks | | |
| **Internal Assessment** | 25 Marks | | |
|  | Assignments -10 Marks | | |
| Test - 10 Marks | | |
| Attendance - 5 Marks | | |
| **Classes Assigned** | **Lectures** | 3 per week | | |
| **Practical** | 2 per week | | |
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| **Reference** |  | **B. Bradie, A friendly introduction to numerical analysis, Pearson education, India, 2007** | | | | | |
|  | **Week** | **Topics** | | | | |  |
|  | **1st week**  20-24JULY | ALGORITHMS, CONVERGENCE. | | | | |  |
| **2nd week**  26-31 JULY | L U DECOMPOSITIONS, ITERATIVE METHODS | | | | |
|  | **3rd week**  2-7 AUG | NUMERICAL DIFFERENTIATION. | | | | |  |
| **4th week**  9-14 AUG | FORWARD DIFFERENCE. | | | | |  |
| **5th week**  16-21 AUG | BACKWARD DIFFERENCE. | | | | |  |
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|  | **6th week**  23-28 AUG | CENTRAL DIFFERENCE. | | | | |  |
|  | **7th week**  31AUG- 4 SEP | INTEGRATION. | | | | |  |
|  | **8th week**  6-11 SEP | TRAPEZOIDAL RULE. | | | | |  |
|  | **9th week**  13-18 SEP | SIMPSON’S RULE | | | | |  |
|  | **10th week**.  20-25 SEP | EULER’S RULE | | | | |  |
|  | **11th week**  27 SEP-1 0CT | RICHARDSON EXTRAPOLATION METHOD. | | | | |  |
|  | **12th week**  4-9 OCT | RUNGE-KUTTA METHOD, MODIFIED EULER METHOD. | | | | |  |
|  | **13th week**  18-23 OCT | HEUN’S METHOD. | | | | |  |
|  | **14th week**  25-30 OCT | OPTIMAL RK2 METHOD. | | | | |  |
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| 1-15TH NOV (15TH and 16TH Week)- REVISION. | | | | | |  | |