**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 MathematicsKalindi College, University of Delhi, Delhi- 110008Mobile: +91-9015737554**E- mail**: 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. |  |