

# Dayanand Science College Latur

## E-Contents (Video Lectures)

### Mathematics

Class: M. Sc. I Year (Sem-III)

Name of Paper: Ordinary Differential Equation

Sub: Mathematics

Paper No: III

SRTMUN, SPPU, MU, KUD, AMU, BAMU, NMU, SGBAU etc. Universities

Curriculums

Links of Quality Video Lectures for UG, PG: Dr. Sidheshwar Bellale

Director, Mathematics Research Centre, DSC, Latur

Lect. No.	Name of Units / Articles	Video Lecture Link
	<b>Unit-I</b>	
<b>I</b>	<b>Unit-I,II,III,IV- All</b>	<a href="https://www.youtube.com/playlist?list=PL7TANb4Sj71pwJLWD_ggSURl_83NFYUEr">https://www.youtube.com/playlist?list=PL7TANb4Sj71pwJLWD_ggSURl_83NFYUEr</a>
1	Syllabus and Pattern	<a href="https://youtu.be/825Jx7dKDoY">https://youtu.be/825Jx7dKDoY</a>
2	Introduction Linear Equations	<a href="https://youtu.be/rxgQkXoN3c4">https://youtu.be/rxgQkXoN3c4</a>
3	Methods for the Solution D.E.	<a href="https://youtu.be/mdXFHkQzuRg">https://youtu.be/mdXFHkQzuRg</a>
4	Homogeneous Differential Equation	<a href="https://youtu.be/IHwk8Hx6Y_I">https://youtu.be/IHwk8Hx6Y_I</a>
5	Linear Equation	<a href="https://youtu.be/cvSQFiYszB8">https://youtu.be/cvSQFiYszB8</a>
6	Examples On L D E	<a href="https://youtu.be/wfgCSUhJfFA">https://youtu.be/wfgCSUhJfFA</a>
7	Problems Associated Differential Eq.	<a href="https://youtu.be/EvyGyF7NtuM">https://youtu.be/EvyGyF7NtuM</a>
8	General Linear Differential Eq	<a href="https://youtu.be/mhBYyxjdJGI">https://youtu.be/mhBYyxjdJGI</a>
9	Ex. General Linear Differential Eq.	<a href="https://youtu.be/xZBe8vhvPrI">https://youtu.be/xZBe8vhvPrI</a>
10	Linear Equations with Constant Coeff	<a href="https://youtu.be/OWtk7kIU33k">https://youtu.be/OWtk7kIU33k</a>
11	Problems on nth order L.D.E.	<a href="https://youtu.be/KCDFuoVarqQ">https://youtu.be/KCDFuoVarqQ</a>
12	Problems on nth order L.D.E	<a href="https://youtu.be/PzemjCZcmVM">https://youtu.be/PzemjCZcmVM</a>
13	Initial Value Problems	<a href="https://youtu.be/t3DFIL6ESzA">https://youtu.be/t3DFIL6ESzA</a>
14	Initial Value Problems	<a href="https://youtu.be/62H6zATzKZA">https://youtu.be/62H6zATzKZA</a>
15	Linear Dependence and Independence	<a href="https://youtu.be/rNCWO7oa2n8">https://youtu.be/rNCWO7oa2n8</a>
16	Theorems on Linearly Independent Sol.	<a href="https://youtu.be/Ag08337EVro">https://youtu.be/Ag08337EVro</a>
17	Non Homogeneous Equation	<a href="https://youtu.be/9qOLtmKWOyE">https://youtu.be/9qOLtmKWOyE</a>
18	Examples Non Homogeneous Equations	<a href="https://youtu.be/79JmD5n8qx8">https://youtu.be/79JmD5n8qx8</a>
19	Examples Non Homogeneous Equations	<a href="https://youtu.be/1wBar3ofS9A">https://youtu.be/1wBar3ofS9A</a>
20	Examples Non Homogeneous Equations	<a href="https://youtu.be/G2J6-y_Yyic">https://youtu.be/G2J6-y_Yyic</a>
21	Examples Homogeneous Eq. of Order	<a href="https://youtu.be/bGKgMOiAYR0">https://youtu.be/bGKgMOiAYR0</a>
22	Examples Homogeneous Eq. of Order	<a href="https://youtu.be/Oae-iBlzL7g">https://youtu.be/Oae-iBlzL7g</a>
23	Initial value problems of order n	<a href="https://youtu.be/Z-JK10cXEOQ">https://youtu.be/Z-JK10cXEOQ</a>
24	Initial value problems of order n	<a href="https://youtu.be/W74DkOzR7Bs">https://youtu.be/W74DkOzR7Bs</a>
25	Equations with Real Coefficient	<a href="https://youtu.be/h0PmZrtxTq0">https://youtu.be/h0PmZrtxTq0</a>
26	Non-homogeneous Equation of Order	<a href="https://youtu.be/y42FYqQNCYY">https://youtu.be/y42FYqQNCYY</a>
27	Non-homogeneous Equation of Order n	<a href="https://youtu.be/9fGZEJTjSOQ">https://youtu.be/9fGZEJTjSOQ</a>
28	Non-homogeneous Equation of Order n	<a href="https://youtu.be/e6HKphxidco">https://youtu.be/e6HKphxidco</a>
29	Non-homogeneous Equation of Order n	<a href="https://youtu.be/g9Vyz1dzLEU">https://youtu.be/g9Vyz1dzLEU</a>
30	Homogeneous Equation Variable Coeff.	<a href="https://youtu.be/rdK2rdJPBMU">https://youtu.be/rdK2rdJPBMU</a>
31	Wronskian and linear independence	<a href="https://youtu.be/8uQUFLTGsCg">https://youtu.be/8uQUFLTGsCg</a>
32	Reduction of the order of H.D.E	<a href="https://youtu.be/vQuh5ouG8tw">https://youtu.be/vQuh5ouG8tw</a>

33	Examples on Homogeneous Equation	<a href="https://youtu.be/T2EqrSKpS4E">https://youtu.be/T2EqrSKpS4E</a>
34	Examples on reduction of the order	<a href="https://youtu.be/r5UFE_XhXHY">https://youtu.be/r5UFE_XhXHY</a>
35	Examples on H. D. E. Variable Coef.	<a href="https://youtu.be/KWtdDRG_OnM">https://youtu.be/KWtdDRG_OnM</a>
36	Examples on H. D. E. Variable Coefficient	<a href="https://youtu.be/73WITGgcofc">https://youtu.be/73WITGgcofc</a>
37	The Non Homogeneous Equation	<a href="https://youtu.be/KLl1YYd8bGs">https://youtu.be/KLl1YYd8bGs</a>
38	H. E. with Analytic Coefficient	<a href="https://youtu.be/O7f5SPqvSUQ">https://youtu.be/O7f5SPqvSUQ</a>
39	The Legendre Equation	<a href="https://youtu.be/lncHJpAy8rE">https://youtu.be/lncHJpAy8rE</a>
40	Linear equation regular Singular Point	<a href="https://youtu.be/9hmLNNnE0N9Q">https://youtu.be/9hmLNNnE0N9Q</a>
41	The Euler Equation	<a href="https://youtu.be/l1UMln4hoSw">https://youtu.be/l1UMln4hoSw</a>
42	Second Order Equations	<a href="https://youtu.be/qgcuSCI9Bh4">https://youtu.be/qgcuSCI9Bh4</a>
43	The Bessel Equation	<a href="https://youtu.be/nQBABtSsB0g">https://youtu.be/nQBABtSsB0g</a>
44	Existence of solution FODE	<a href="https://youtu.be/9jK2I24IkuU">https://youtu.be/9jK2I24IkuU</a>
45	Existence of solution FODE	<a href="https://youtu.be/pHeL8Cam2nw">https://youtu.be/pHeL8Cam2nw</a>
46	Examples on Separation variables	<a href="https://youtu.be/aiy0-HWH53w">https://youtu.be/aiy0-HWH53w</a>
47	Examples on Separation variables	<a href="https://youtu.be/NPa2I6hNNGA">https://youtu.be/NPa2I6hNNGA</a>
48	Exact Equation	<a href="https://youtu.be/b3jDbLfmOGI">https://youtu.be/b3jDbLfmOGI</a>
49	Theorems on Exact Equation	<a href="https://youtu.be/M8zTJBjW3jo">https://youtu.be/M8zTJBjW3jo</a>
50	Successive Differentiation	<a href="https://youtu.be/9XAUNoPQjTI">https://youtu.be/9XAUNoPQjTI</a>
51	Example Successive Differentiation	<a href="https://youtu.be/LPIWDhrlwHs">https://youtu.be/LPIWDhrlwHs</a>
52	The Lipschitz Condition	<a href="https://youtu.be/D7_0LsWI4Fc">https://youtu.be/D7_0LsWI4Fc</a>
	<b>Syllabus completed</b>	
	<b>Basics for Perfection in Mathematics</b>	
1	Basic of Differential Equation	<a href="https://www.youtube.com/playlist?list=PL7TANb4Sj71rA-8sVw-YA_Y9CLQkGvMpg">https://www.youtube.com/playlist?list=PL7TANb4Sj71rA-8sVw-YA_Y9CLQkGvMpg</a>
2	Basic of Integration	<a href="https://www.youtube.com/playlist?list=PL7TANb4Sj71rJEW9jCLJmiG0Q_t-QUhbf">https://www.youtube.com/playlist?list=PL7TANb4Sj71rJEW9jCLJmiG0Q_t-QUhbf</a>
3		
4	For All Lectures Visit	
5	Basics for Real Analysis	<a href="https://www.youtube.com/playlist?list=PL7TANb4Sj71okEsD3aX8ABnhxX5XfwXcU">https://www.youtube.com/playlist?list=PL7TANb4Sj71okEsD3aX8ABnhxX5XfwXcU</a>
6	LIVE LECTURES 8:00am-9am (Mon to Friday)	<a href="https://www.youtube.com/channel/UC25Hwz1jT_gwAJU4YEiO6Rg/live">https://www.youtube.com/channel/UC25Hwz1jT_gwAJU4YEiO6Rg/live</a>
7	For Updated Quality Video Links Register/ Visit	<a href="https://www.youtube.com/channel/UC25Hwz1jT_gwAJU4YEiO6Rg">https://www.youtube.com/channel/UC25Hwz1jT_gwAJU4YEiO6Rg</a>