



**VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
(AUTONOMOUS)  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**



**LESSON PLAN**

SUBJECT CODE & NAME : U15EE519 / Linear Integrated Circuits

YEAR / SEMESTER : III EEE A&B / V

Session No.	Topics to be Covered	Duration in minutes	Teaching Aid	Ref.Book
<b>UNIT-I INTRODUCTION OF OPERATIONAL AMPLIFIER</b>				
1	Introduction	45	BB	R-01, R-02
2	Block diagram of a typical op-amp	45	BB	R-01, R-02
3	Block diagram of a typical op-amp - cotn..	45	BB	R-01, R-02
4	Characteristics of ideal op-amp	45	BB	R-01, R-02
5	Characteristics of ideal op-amp – cotn..	45	BB	R-01, R-02
6	Characteristics of practical op amp	45	BB	R-01, R-02
7	Characteristics of practical op amp - cotn..	45	BB	R-01, R-02
8	Parameters of op-amp	45	BB	R-02
9	Practical op amp	45	BB	R-02
10	inverting and non-inverting amplifier configurations	45	BB	R-02
11	Frequency response - circuit stability	45	BB	R-02
12	Revision	45	BB	
<b>UNIT-II APPLICATIONS OF OP-AMP</b>				
1	DC amplifiers		BB	R-03
2	DC amplifiers -cotn..	45	BB	R-03
3	AC amplifiers	45	BB	R-03
4	AC amplifiers-cotn..	45	BB	R-03
5	Summing amplifier	45	BB	R-03
6	Tutorial I	45	BB	R-03
7	Difference amplifier	45	BB	R-03
8	Difference amplifier -cotn..	45	BB	R-03
9	Voltage follower	45	BB	R-03
10	Differentiator	45	BB	R-03
11	Integrator clamper -	45	BB	R-03
12	clipper – filters	45	BB	R-03
<b>UNIT – III WAVEFORM GENERATORS</b>				
1	Oscillators	45	BB	R-02
2	Oscillators-cotn..	45	BB	R-02
3	Sine wave generation	45	BB	R-02

4	Sine wave generation-cotn..	45	BB	R-02
5	Triangular wave generation	45	BB	R-02
6	Triangular wave generation-cotn..	45	BB	R-02
7	square wave generation	45	BB	R-02
8	square wave-cotn..	45	BB	R-02
9	saw tooth wave generation	45	BB	R-02
10	Schmitt trigger	45	BB	R-02
11	Window detector	45	BB	R-02
12	Revision	45	BB	
<b>UNIT – IV PHASE LOCKED LOOP</b>				
1	Analog to digital PLL	45	BB	R-02
2	Digital to analog PLL	45	BB	R-02
3	D/A PLL –cotn..	45	BB	R-02
4	Sample and Hold circuits	45	BB	R-02
5	Voltage controlled oscillator	45	BB	R-02
6	Voltage controlled oscillator-cotn..	45	BB	R-02
7	Phase locked loop	45	BB	R-02
8	Phase locked loop -cotn..	45	BB	R-02
9	Operating principles	45	BB	R-02
10	Applications of PLL	45	BB	R-02
11	Revision	45	BB	
12	Revision II	45	BB	
<b>UNIT – V SPECIAL ICs</b>				
1	IC555 Timer	45	BB	R-02, R-03
2	IC555 Timer-cotn..	45	BB	R-02, R-03
3	Monostable modes of operation	45	BB	R-02, R-03
4	Monostable modes of operation-cotn..	45	BB	R-02, R-03
5	Astable modes of operation	45	BB	R-02, R-03
6	Astable modes of operation-cotn..	45	BB	R-02, R-03
7	Voltage regulators	45	BB	R-02, R-03
8	Voltage regulators-cotn..	45	BB	R-02, R-03
9	Fixed voltage regulators	45	BB	R-02, R-03
10	Voltage regulators	45	BB	R-02, R-03
11	Adjustable voltage regulators	45	BB	R-02, R-03
12	Switching regulators	45	BB	R-02, R-03

#### REFERENCES:

1. Gayakwad R.A., 'Op-amps & Linear Integrated Circuits', Prentice Hall of India, New Delhi, 4th edition, 2009.
2. Roy Choudhury and Shail Jain, 'Linear Integrated Circuits', 4th Edition, New Age International Publishers, 2010
3. Sergio Franco, 'Design with operational amplifiers and Analog Integrated circuits', Tata McGraw Hill, 3<sup>rd</sup> Edition, 2002.
4. Sedra Smith, 'Microelectronic Circuits', Oxford University Press, 6th Edition, 2009.