Module No.	Unit No.	Topics	Hrs.
1.0		**Introduction to Radar and Radar Equation**	**08**
	1.1	Basics Radar, Radar equation, Block Diagram, Radar Frequencies	
	1.2	Detection of signal in noise, Receiver Noise and Signal-to-noise Ratio	
	1.3	Probability of detection and false alarm: Simple, complex Targets, Pulse Repetition Fr	
2.0		**MTI and Pulse Doppler Radar**	**08**
	2.1	Introduction to Doppler and MTI radar, Doppler frequency shift	
	2.2	Simple CW Doppler radar, MTI radar block diagram	
	2.3	Delay line canceler	
	2.4	Moving-target-detection	
	2.5	Pulse Doppler radar	
3.0		**Tracking Radar**	**06**
	3.1	Monopulse tracking	
	3.2	Conical scan and sequential lobbing	
	3.3	Limitation of tracking accuracy , Low angle tracking	
4.0		**Radar Transmitters and Receviers**	**06**
	4.1	Radar RF power sources: Klystron	
	4.2	Travelling wave tube	
	4.3	Magnetron	
	4.4	Radar Receiver: Superheterodyne Receiver	
5.0		**Radar Clutters and landing system**	**06**
	5.1	Types of clutter : surface clutter, sea clutter, land clutter	
	5.2	Instrument landing system	
	5.3	Ground controlled approach, Microwave landing system	
	5.4	Radar altimeter	
6.0		**General ideas on RADAR plotting**	**05**
	6.1	Radar plotting -general ideas	
	6.2	Relative plotting (passive derivations), Relative plotting (action taken by target)	
	6.3	Radar Display: Types of displays	
		Total	**39**