Module number	Topic	
1	Basic UAV components	• Frames • Motors • Rotors • Battery • Degrees of Freedom
2	UAV sensors	• Camera • RGB/Depth • LiDAR (includes basic types of LiDAR) • Ultrasonic • INS • IMS • Barometers
		• Autopilot systems
2.5	Simulation using CoppeliaSim	• Watch tutorial videos, learn to follow along. • Simulation of all the above sensors in CoppeliaSim
3	Basics of Geospatial Science	• Geoid • Ellipsoid • Difference between h, H and N • Numerical problem on the above • Geoid height vs Ellipsoid height

4	GNSS communication	• Fundamentals of GNSS- GPS
		  ○ Code phase ranging
		  ○ Carrier phase ranging
		• RTK
		• PPK
		• RTK vs PPK

xx	Applications of sensor and sensor fusion	•
xxx	Basics of UAV swarm design	• Flocking algorithms
xxx		•
xxx	Remote sensing and photogrammetry using drones	•
xxx	Legacy and policy frameworks	•
xxx	Bio-inspired robotics	•
xxx	Fixed wing aerodynamics	•
xxx	Path and trajectory planning	•