Introduction to Drone - Course Content

- Introduction to UAVs/Drones, Drone Applications, Working Principle and Design, Inertial Measurement Unit, Sensors and Calibration, PID - Implementation and Tuning, Flight controller, Remote Controller, Quadcopterdynamics
- **Hands-on project -** Precautions while assembling, Exercise based on DifferentFlight controller boards like Ardupilot APM 2.X, 3.X, hobby king KK 5.0, CC3D, Pixhawk, etc..

References

- Theory, Design, and Applications of Unmanned Aerial Vehicles- by A. R. Jha Ph.D. (Author),2016
- Handbook of Unmanned Aerial Vehicles- Editors: Valavanis, K., Vachtsevanos, George J.(Eds.), 2014
- Jane's Unmanned Aerial Vehicles and Targets -by Kenneth Munson (Editor), 2010
- Guidance of Unmanned Aerial Vehicles- by Rafael Yanushevsky (Author), 2011
- Research papers on drone applications
- Online references and tutorials like

  - https://oscarliang.com/build-a-quadcopter-beginners-tutorial-1/
  - https://blog.owenson.me/build-your-own-quadcopter-flight-controller/
  - http://www.starlino.com/imu_guide.html
  - https://www.intorobotics.com/accelerometer-gyroscope-and-imu-sensors-tutorials
  - http://droneinsider.org/the-aerodynamics-of-multirotors/
  - https://blog.owenson.me/build-your-own-quadcopter-flight-controller/
  - https://challenge.toradex.com/projects/10078-autopilot-quadcopter
  - http://andrew.gibiansky.com/blog/physics/quadcopter-dynamics/
  - http://blog.owenson.me/build-your-own-quadcopter-flight-controller/