

**PHY2401+2401L - PHYSICS II – CALCULUS BASED PHYSICS FOR THE MAJOR  
(W/LABS)**

**4+1 Semester Hours**

1. Electric field, potential, forces
2. Current, magnetic field integration over continuous charge/current distribution
3. Induction and Inductance
4. Resistance
5. Capacitance
6. Basic circuit analysis
7. Electric power
8. Energy stored fields
9. EMF
10. Electromagnetic waves
11. Gauss Law
12. Kirchhoff's Law
13. R-L-C circuits
14. Ampere's Law
15. Faraday's Law
16. Conductivity
17. Geometric optics
18. Diffraction
19. Interference
20. Polarization