Course outline
Lecture 1: Smart Grids and DG’s -- advantages and limitations.
Lecture 2: Classification of DG’s -- Principles of operation, and elect equivalent circuits.
Lecture 3: Induction generator – self and line excitation
Lecture 4: Induction generator – fault assessment
Lecture 5: Synchronous generator – reactive power control
Lecture 6: Islanded operation
Lecture 7: Utility Interconnection -- Static converters
  • Midterm examination
Lecture 8: Utility Interconnection – synchronization with the utility line
Lecture 9: Utility Interconnection – reactive power control
Lecture 10: Utility Interconnection – relay protection
Lecture 11: Utility Interconnection – quality of power assessment
Lecture 12: Utility Interconnection – fault condition analysis
Lecture 13: Utility Interconnection – single-phase generators
  • Final exam

Ref. books:

Grading policy:
Homework – 10%
Midterm exam – 30%
Final exam – 60%