

Teaching Experience

Graduate Level Courses (University of Memphis)

Spring 2024 Semester: Introduction to Smart Grid –EECE7318/8318

Spring 2023 Semester: Electrical Power Systems-EECE 6202

Fall 2022 Semester: Power System Stability/Control-EECE7310/8310

Spring 2022 Semester: Modern Grid with Renewables-EECE 6205

Spring 2021 Semester: Electrical Power Quality-EECE 6206

Fall 2020 Semester: Power System Stability/Control-EECE7310/8310

Spring 2020 Semester: Modern Grid with Renewables-EECE 6205

Spring 2019 Semester: Electrical Power Quality-EECE 6206

Fall 2018 Semester: Modern Grid with Renewables-EECE 6205

Spring 2018 Semester: i) Modern Grid with Renewables-EECE 6906, ii) Electrical Power Quality-EECE 6905

Fall 2017 Semester: Power System Stability/Control-EECE7902/8902

Spring 2017 Semester: i) Wind Energy Conversion Systems-EECE 7903/8903, ii) Electrical Power Quality-EECE 6905

Fall 2016 Semester: Introduction to Smart Grid –EECE7900/8900

Spring 2016 Semester: i) Power System Stability/Control-EECE7902/8902, ii) Electrical Power Quality-EECE 6905

Fall 2015 Semester: Electrical Power Systems-EECE 6202

Spring 2015 Semester: i) Introduction to Smart Grid –EECE7900/8900, ii) Electrical Power Quality-EECE 6905

Fall 2014 Semester: Power System Stability/Control-EECE7902/8902

Spring 2014 Semester: i) Wind Energy Conversion Systems-EECE 7903/8903, ii) Electrical Power Quality-EECE 6905

Fall 2013 Semester: Introduction to Smart Grid –EECE7900/8900

Spring 2013 Semester: i) Power System Stability/Control-EECE7902/8902, ii) Electrical Power Quality-EECE 6905

Fall 2012 Semester: Wind Energy Conversion Systems-EECE 7903/8903

Spring 2012 Semester: Electrical Power Quality-EECE 6905

Fall 2011 Semester: Wind Energy Conversion Systems-EECE 7903/8903

Undergraduate Level Courses (University of Memphis)

Fall 2024 Semester: i) Energy Conversion-EECE4201 [Including Lab Class]

Fall 2023 Semester: i) Energy Conversion-EECE4201 [Including Lab Class]

Spring 2023 Semester: Electrical Power Systems-EECE 4202

Fall 2022 Semester: i) Energy Conversion-EECE4201 [Including Lab Class]

Spring 2022 Semester: i) Modern Grid with Renewables-EECE 4205, ii) Circuit Analysis II- EECE3201 [Including Lab Class]

Fall 2021 Semester: i) Energy Conversion-EECE4201 [Including Lab Class], ii) Circuit Analysis II- EECE3201 [Including Lab Class]

Spring 2021 Semester: i) Electrical Power Quality-EECE 4206, ii) Circuit Analysis II- EECE3201 [Including Lab Class]

Fall 2020 Semester: i) Energy Conversion-EECE4201 [Including Lab Class], ii) Circuit Analysis II- EECE3201 [Including Lab Class]

Spring 2020 Semester: i) Modern Grid with Renewables-EECE 4205, ii) Circuit Analysis II- EECE3201 [Including Lab Class]

Fall 2019 Semester: i) Energy Conversion-EECE4201 [Including Lab Class], ii) Circuit Analysis II- EECE3201 [Including Lab Class]

Spring 2019 Semester: i) Electrical Power Quality-EECE 4206, ii) Circuit Analysis II- EECE3201 [Including Lab Class]

Fall 2018 Semester: i) Modern Grid with Renewables-EECE 4205, ii) Energy Conversion-EECE4201 [Including Lab Class]

Spring 2018 Semester: i) Modern Grid with Renewables-EECE 4906, ii) Electrical Power Quality-EECE 4905

Fall 2017 Semester: Energy Conversion-EECE4201 [Including Lab Class]

Spring 2017 Semester: Electrical Power Quality-EECE 4905

Fall 2016 Semester: Energy Conversion-EECE4201 [Including Lab Class]

Spring 2016 Semester: Electrical Power Quality-EECE 4905

Fall 2015 Semester: i) Energy Conversion-EECE4201 [Including Lab Class], ii) Electrical Power Systems-EECE 4202

Spring 2015 Semester: Electrical Power Quality-EECE 4905

Fall 2014 Semester: Energy Conversion-EECE4201 [Including Lab Class]

Spring 2014 Semester: Electrical Power Quality-EECE 4905

Fall 2013 Semester: Energy Conversion-EECE4201 [Including Lab Class]

Spring 2013 Semester: Electrical Power Quality-EECE 4905

Fall 2012 Semester: Energy Conversion-EECE4201 [Including Lab Class]

Spring 2012 Semester: Electrical Power Quality-EECE 4905

Before Joining the University of Memphis

2009-2011: Directed Individual Study (ELCT897), Power Systems Grounding and Transients (ELCT752), Electrical Drives (ELCT753), Signals and Systems (ELCT222) [**University of South Carolina, Columbia**]

2007: RTDS Operation Technology Engineering, EMTDC Simulation Engineering [**Changwon National University, South Korea**]

1995-2004: Electrical Machines [Including Laboratory Classes], Basic AC and DC Circuits [Including Laboratory Classes], Basic Electronics [Including Laboratory Classes], Application of Fuzzy Logic Control to Power Systems, Generalized Machine Theory [**Rajshahi University of Engineering and Technology (RUET), Bangladesh**]

Advising Graduate Students

Current:

Ph.D. students- 4; Masters students- 5

Graduated: Total 27 students

Obtained Ph.D. Degree (following 9 students)

- 1) Manoj Basnet, Dissertation title: Deep Learning-Powered Computational Intelligence for Cyber-Attacks Detection and Mitigation in 5G-Enabled Electric Vehicle Charging Station, December 2022.
- 2) Morteza Daviran Keshavarzi, Dissertation title: Development of Robust and Dynamic Control Solutions for Energy Storage Enabled Hybrid AC/DC Microgrids, August 2021.
- 3) S M Mahfuz Alam, Dissertation title: Development of Forecasting and Scheduling Methods and Data Analytics Based Controls for Smart Loads in Residential Buildings, December 2020.
- 4) Sagnika Ghosh, Dissertation title: Improvement of Power Quality of Hybrid Grid by Non-Linear Controlled Device Considering Time Delays and Cyber-Attacks, August 2018.
- 5) Ahmed Eid Abu Hussein, Dissertation title: Novel Solutions to Suppress Adverse Effects of Geomagnetically Induced Current (GIC) on Power Systems, December 2016.
- 6) Mohammad Ashraf Hossain Sadi, Dissertation title: Transient Stability Improvement of Power Transmission Grid by Controlled Fault Current Limiters Considering Cyber-Attacks, August 2016.
- 7) Gilmanur Rashid, Dissertation title: LVRT capacity enhancement of DFIG based wind farms by controller based auxiliary devices, August 2016.
- 8) Md Kamal Hossain, Dissertation title: Dynamic Performance Improvement of Grid-Connected Photovoltaic (PV) System By Nonlinear Controlled Devices, May 2016.
- 9) Md Maruf Hossain, Dissertation title: Transient Stability Improvement of DFIG Based Variable Speed Wind Turbine Generator System Using DC Resistive Fault Current Limiter, May 2016.

Obtained M.Sc. degree (following 18 students)

- 1) Md Sadiqur Rahman, Thesis title: Development of Novel Controllers to Address the Misalignment Problem of Dynamic Wireless Charging of Electric Vehicles, May 2024.
- 2) Nathan Oaks Farrar, Thesis title: Cyber Resilient Wind Turbine Generator Control System, December 2023.
- 3) Amani Shehada, Course Based MS, December 2022.
- 4) Kamana Dahal, Thesis title: Automatic Detection of Shockable Rhythms in AED From Imbalanced ECG Dataset Using EC-WCGAN, May 2022.
- 5) Naga Lakshmi Thotakura, MS Project title: Design of Novel Variable DC-Link Capacitor for Grid-connected Solar Photovoltaic (PV) System, December 2021.
- 6) Venkata Avinash Vunnam, MS Project title: Simulation Model Development and Experimental Verification of a Solar Photovoltaic System, December 2021.
- 7) Sultana Razia Akhter, Thesis title: Exploring Cyber Security Issues and Solutions for Various Components of DC Microgrid System, December 2018.
- 8) Mario Andre Hyman, Thesis title: Improved Modeling of Wind Turbines on Trains, December 2018.
- 9) Tarika Bedse, MS Project title: Improvement of Power Quality by Adaptive Neuro-Fuzzy Inference System Control Based Thyristor Switched Capacitor, May 2017.

- 10) Michael A. Moore, Thesis title: Transient Stability Improvement of A PMSG-Based Wind Generator By Series Dynamic Braking Resistor, August 2015.
- 11) Sami D. Alnajjar, Thesis title: Fault Ride Through Capability Improvement of Grid Connected Fuel Cell System By Series Dynamic Braking Resistor, May 2015.
- 12) Gilmanur Rashid, Thesis title: Fault Ride-Through Capacity Enhancement of Fixed Speed Wind Generator by a Modified Bridge-Type Fault Current Limiter, May 2014.
- 13) Md Kamal Hossain, Thesis title: Improvement of Dynamic Performance of Grid Connected PV System by Series Compensating Devices, December 2013.
- 14) Ahmed Eid Abu Hussein, Thesis title: Comparison Among Series Connected Auxiliary Devices For Fault Ride Through Capability Enhancement of Wind Generator Systems, December 2013.
- 15) Sagnika Ghosh, Thesis title: Power Quality Enhancement Through Optimal Reclosing of Circuit Breakers and Thyristor Controlled Capacitor, May 2013.
- 16) Mohammad Ashraf Hossain Sadi, Thesis title: Combined Operations of SFCL and Optimal Reclosing of Circuit Breakers For Transient Stability Enhancement of Power Systems, May 2013.
- 17) Arnab Banik, Thesis title: Voltage Stability Enhancement of Wind Generator System Using Superconducting Fault Current Limiter, May 2013.
- 18) Riya Saluja, Thesis title: Transient Stability Enhancement of Electric Power Grid by Novel Braking Resistor Models, May 2013.