

# Electrical Power Lab

## Marine Engineering Technology



TEXAS A&M  
UNIVERSITY

GALVESTON CAMPUS®



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### Lab Capabilities

This lab facility is critical in introducing Marine Engineering Technology students to the basics of electrical distribution systems. This lab facility adds infrastructure to perform experiments related to electrical machines, power electronics based motor drive systems, and the power system basics.

### Lab Facilities

- Hampden Power Electronics trainers -2, H-R-SCR-2/ 3
- Hampden Motor Generator Set, H-MGB-100-DG
- Hampden DC Load Set, RL100A
- Hampden AC-DC Power Supply, BPS100
- Power Supply Bench, Hampden, HBT
- Hampden AC Load Panels -2, RLC100
- "Victory Ship" Electricians Board
- Siemen 1200 ampere frame Circuit Breaker - 2, SPB100
- Federal Pacific 1200 ampere frame Circuit Breaker, MD51B1157
- DC Motor Starter, Eaton, HMCP
- AC Motor Starter, Cutler-Hammer, 6-1-3
- Induction Motor, Hampden, SM100
- Various Oscilloscopes and Voltmeters
- 85 MT 5 Electric motors control learning systems -4, Amatrol
- EL613 43 Prony Brakes -3, Amatrol
- J17401 Electric Motor Control System, Amatrol
- Three 85 MT5C Variable Frequency AC Drives -3, Amatrol
- J17411 AC Driver, Amatrol
- 890 FTS1 Fault Troubleshooting System, Amatrol
- 85 MT2 Basic Electrical Machines Learning System Modules -4, Amatrol
- 85 MT2 C Alternator/ Synchronous Motor Learning Systems – 3, Amatrol

### Courses Supported

- MARE 306
- MARE 489
- MARE 484

### Research Supported

For research efforts, this lab would validate proposed control algorithms and novel converter systems on practical loads such as electrical machine based drives and the utility grid. These components would be helpful in realizing complex structures, such as distribution systems and distributed energy loads.

# Texas A&M University at Galveston

## Marine Engineering Technology Department