

TMR4290 – Marine Electric Power and Propulsion Systems, Spring 2019

Accomplishments

- Performed well in the academic exam, A/A as final grade
- Reflected on course content actively in lectures and seminars
- Demonstrated well understanding of marine power system through all 6 exercises
- Mastered two curricular design projects
 - Project I: Marine Power System Calculation
 - Explored and examined the performance of a simple 3-phase AC marine power system with neutral wire, as TN-S connection
 - Studied and verified the basic laws and fundamental rules in electrical circuits
 - Constructed and experimented this power system simulation using MATLAB
 - Project II: Integration of an energy storage system to ships
 - Evaluated and inspected a small marine power system with an energy system enhanced by the load sharing technique between generators and additional energy storage system
 - Investigated and surveyed the power propulsion system and energy storage system in the current marine applications.
 - Defined and assessed the single line diagram for this system as well as power converters (DC-DC converter in this case)
 - Critiqued and compared the risk management model to satisfy the redundancy requirement
 - Designed and tested the simulation model in Simscape Electrical
- Participated in the hybrid power lab visit (as the only student shown up), actively interacted with the teaching assistant, discussed in depth with him about the safety reason for the location of outdoor hydrogen fuel cell, also discovered the application of hardware-in-the-loop testing, i.e. the function of brake to simulate the workload.
- Attended several discussion with you both personally and academically with you, once for summer intern opportunity, another one is a Skype meeting in which we discussed my future career plan, and I am very much appreciated that you gave me advice on the application to a Ph.D. program in autonomous shipping field.