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Homework #11 (group) – Tuesday, May 1 by 4:00 pm

5290 exercises (individual) – Tuesday, May 1 by 4:00 pm

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Readings for this homework assignment and upcoming lectures

- Chapter 11. Part 1 Energy System Alternatives, Weston

- Download & read lecture notes:
    - Part 15. Chemical Energy Conversion - Fuel Cells

- Review Appendix M. Solar Constants (for Northern Latitudes)

- Review Appendix N. Solar Position and Irradiation Values

- Review Appendix O. Variation of Solar Radiation with Latitude

Homework Submission

- For this assignment, the 4200-portion of the homework is to be worked as a group assignment and submitted as a group by dropping off at my office. If you use EES or Matlab for this assignment, print a copy of the code and include with your solution.

- MEEM 5290 exercise are always to be worked and submitted individually.

- Extra Credit exercises are always to be worked and submitted individually.

- **At the end of each exercise, rank your confidence in the answer from 1 to 5; 5 being very confident and 1 being 'a guess'.**

- PLEASE include the course number (MEEM4200, MEEM5290) in the subject line of any email correspondence.

Homework #11 (group) – Tuesday, May 1 by 4:00 pm

1. Weston 11.5

2. Calculate the output voltage and theoretical conversion efficiency of a hydrogen-oxygen fuel cell operating at $450\,°C$ when hydrogen is supplied at $1.5\,atm$ and air at $2.2\,atm$.

5290 exercises (individual) – Tuesday, May 1 by 4:00 pm

3. Weston 11.6