

**2018 Fall, 4582-608 (WCU Program)**  
**Electrochemical Energy Engineering, 전기화학에너지공학**

**LECTURER:** Professor Yung-Eun Sung (성영은)

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**OUTLINE**

This class deals with electrochemical principles of the electrochemical energy devices and systems such as fuel cells, batteries & solar cells, and photoelectrochemical devices.

**TEXTBOOKS**

Mathew M. Mench, *Fuel Cell Engines*, Wiley, 2008.

Robert A. Huggins, *Advanced Batteries*, Springer, 2009. (e-book in library, also in Korean)

**SCHEDULES (will be modified later)**

1. Fuel Cell: Electrochemical Principles (Mench, ch. 2)
2. Thermodynamics of fuel cell systems (Mench, ch. 3)
3. Performance Characterization of Fuel Cell Systems ((Mench, ch. 4)
4. Transport in Fuel Cell Systems ((Mench, ch. 5)
  
5. Battery: Electrochemical Principles ((Huggins, ch. 1-5)
6. Negative Electrodes in Lithium Cells ((Huggins, ch. 6-8)
7. Positive Electrodes in Lithium Systems ((Huggins, ch. 9)
8. Other Topics on Electrodes ((Huggins, ch. 12)
  
9. Photoelectrochemistry (special lecture)

**GRADING (B<sup>+</sup> & above ~ 80%, B<sup>0</sup> & below ~ 20%)**

Midterm Exam 40%, Final Exam 40%, Homeworks & Attendance 20 %

**LECTURE ROOM & TIME:** Rm #302-720, 12:30-13:45 Mon. & Wed.

**OFFICE HOUR:** Rm #302-729, 14:00-17:00 Mon. & Wed.

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