

2.996 Fundamentals of Advanced Energy Conversion Lecture Memo

Lecture number: 19

Date: April 14th, 2004

- **Brayton cycle**
- **Gas turbine combined cycle**
- **Supercritical steam cycle**
- **Coal gasification**
- **Fuel cell/gas turbine cycle**
- **CO₂ capture**
- **Nuclear power conversion: Boiling water reactor and pressurized water reactor**
- **Fission reaction**
- **Neutron number vs atomic number and binding energy per neutron**
- **Energy spectrum of fission neutrons**
- **Supercritical water reactor**
- **Gas cooled reactors**
- **Multiple parameter optimization of a CO₂ supercritical cycle to advanced nuclear reactors.**