Key Points From NEEP-423 (Professor Kulcinski)

- **Materials for Fission Reactors**

- **Metallic Fuels**
  - *Stability*
  - *IFR*

- **Enrichment**
  - *Approach*
  - *Quantitative Analysis*

- **Zr**
  - *Reason for Development*
  - *Alloying Effects*

- **Fuel Element Performance**
  - *Reason for Oxides*
  - *Effect of Stoichiometry*
  - *Temperature Profiles*
  - *Conductivity Integral*

- **Fuel Element Chemistry**
  - *Effect of Stoichiometry*
  - *Vapor Pressure Effects*

- **Fusion Materials**
  - *Differences From Fission*
  - *Key Requirements*
  - *Radiation Differences*
  - *Radioactivity*