

Hi ~

- NTU 4 yrs

Chemical Eng  
↓  
Nuclear Eng

\* Chemical E

1. mass / E bal

2. Mat Sci

3. Labs

Nuc E

- Screening  
exams

- TH

4. Bio Molecular Eng

$\text{^{nuc}}$  materials

- neutronics
- physics

5. Thermo

6. Eng Math ODEs

7. Org chem

sim

8. Fluid mech

9. Comp methods\*

10. Chem Thermodynamics

molar  
salt  
research

11. Heat & mass trF

12. unit ops - distill

13. Chem rxn eng - CSTR  
PFR

14. Process Control - PID

15. Solid Fluid - Fluid Bed

Pebble  
Bed

16. Safety - HAZOP

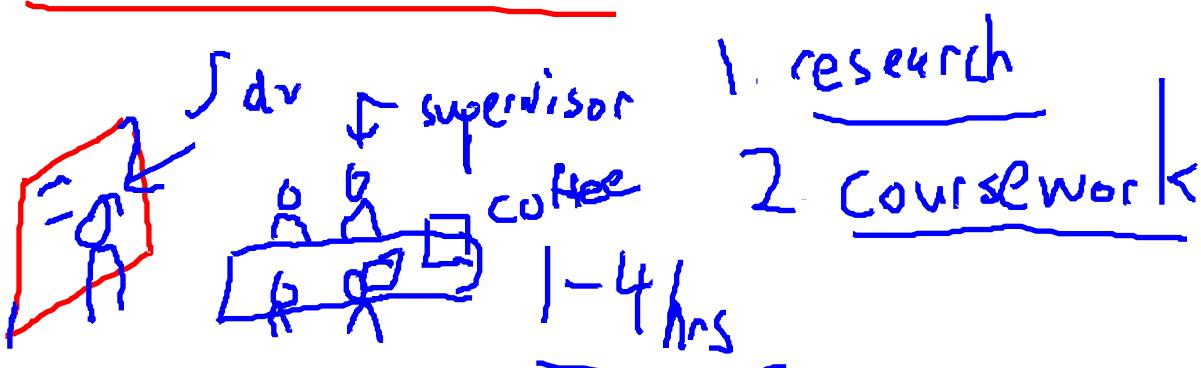
17. Internship ✓

18. Petroleum Refining ✓

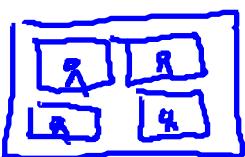
19. FYDP ✗

Risk

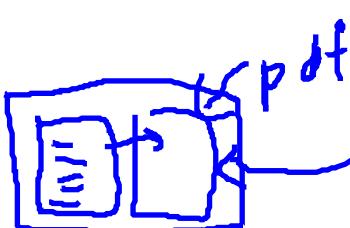
## Qualifying Exam



COVID



ZOOM



Next pt 2  
- Multigroup diffusion  
    n  
    energy eff

- feedback mechanism

fuel temperature

## Research plan

120 slides

When I started...

① try to sim reactors PDE

② learn as much as possible

↳ sim techniques

    }

③ expt + sim SD/SB

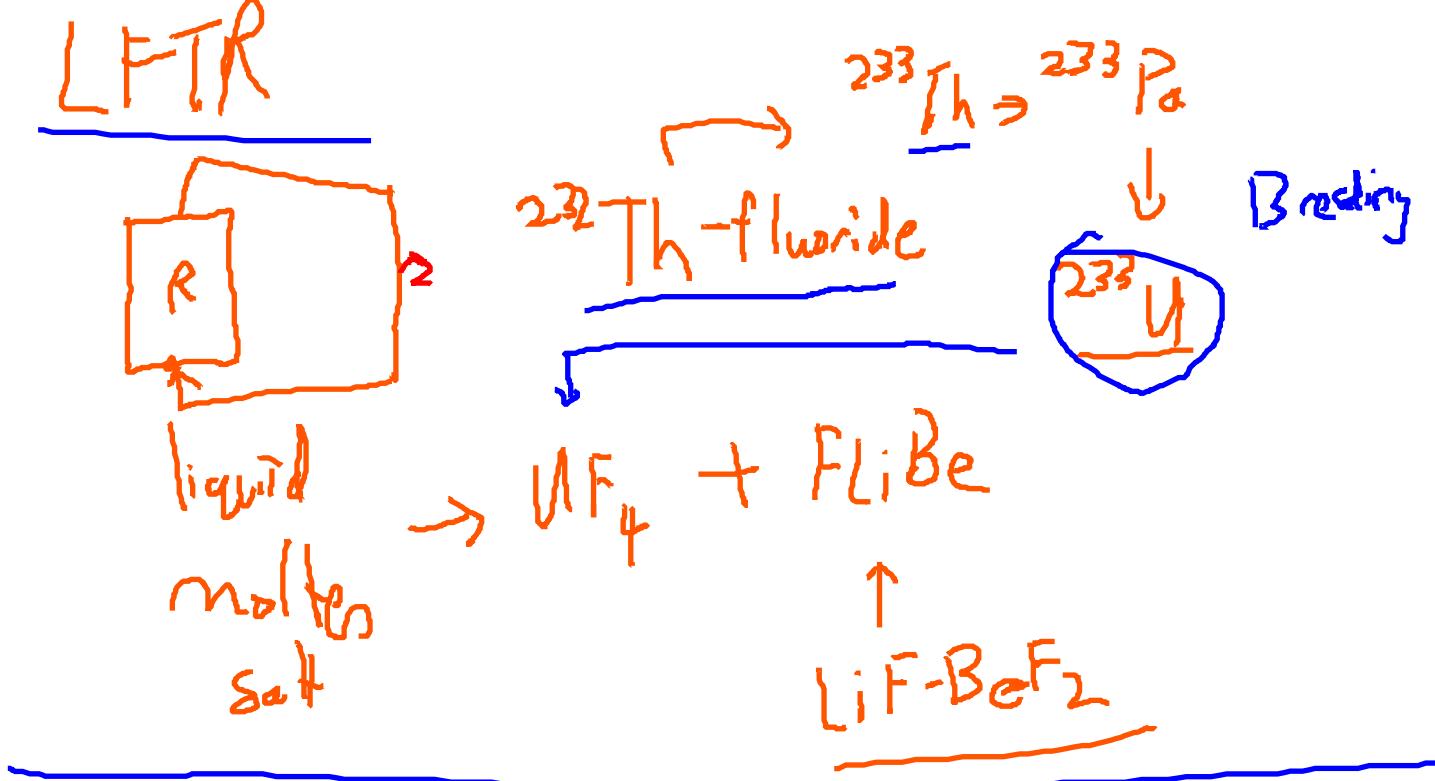
④ MSR → FHR →

CET

Prof  
Paterson

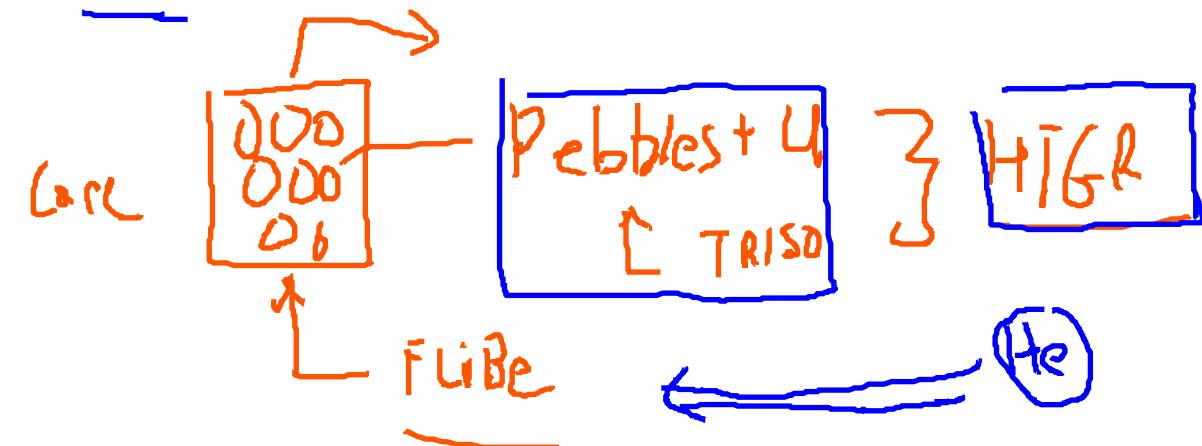
scale model

## LFR



## FHR - Solid fuel

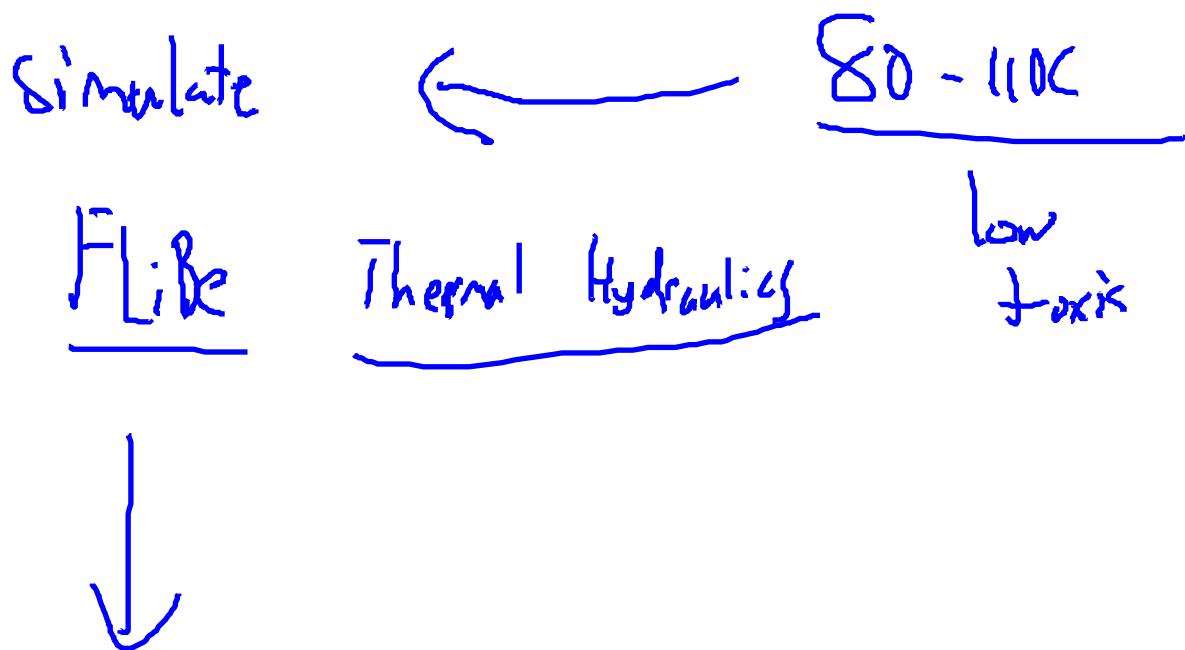
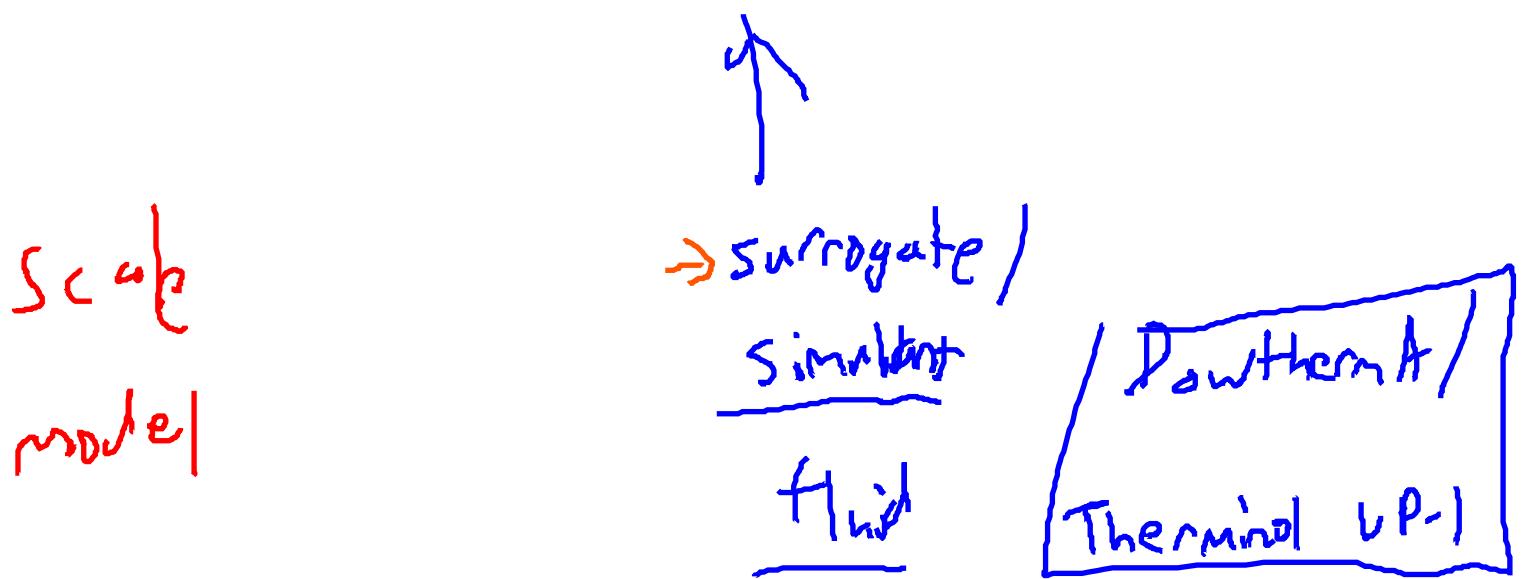
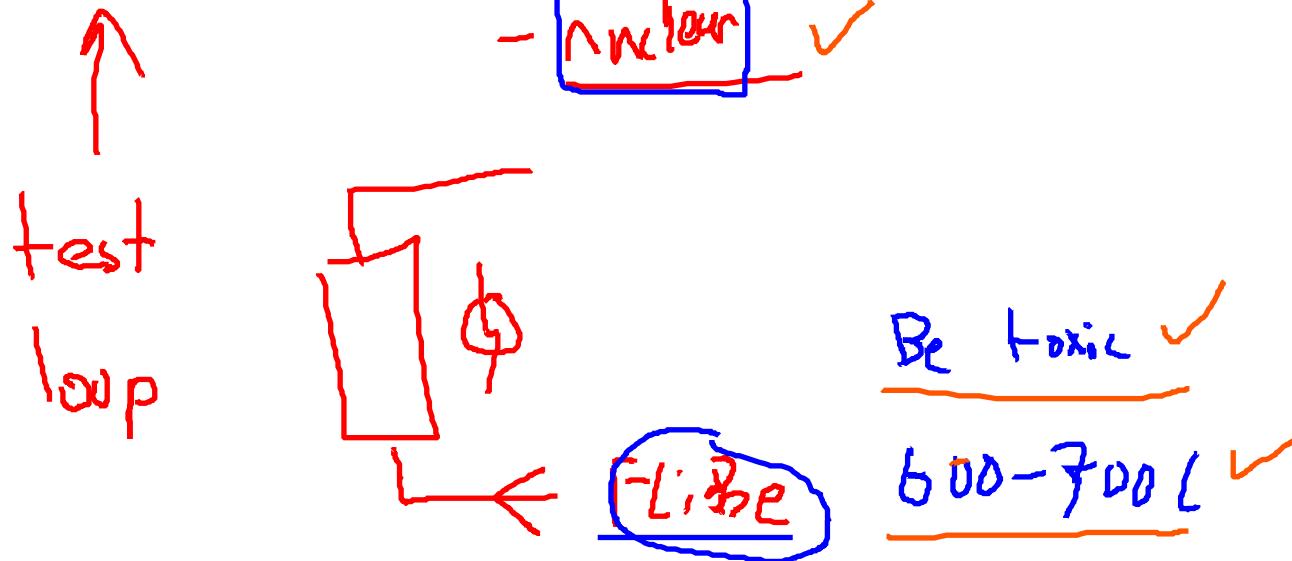
2011?



Safety  
guarantees

Test reactor

- Safety
- operational (molten salt) ✓



Compact

Integral

CIEJ

Effects

Test























































































