

**Course : 459.504A Nuclear Systems Engineering**

Credits	Department	Representative Instructor						
		Position	Name	Email				
3	Nuclear Engineering Major	Associate Professor	Cho, Hyoung Kyu	chohk@snu.ac.kr				
Attachment(Korean)		Attachment(English)						
Prerequisite Course								
Consult Time								
1. Goals	This course covers the engineering principles of nuclear reactors and the thermodynamic analyses for the design of nuclear power plants. The followings are included: system configuration of PWR, CANDU, BWR, HTGR etc., thermodynamic analysis of power conversion system, transient analysis of pressurizer and containment, thermal analysis of nuclear fuel.							
2. Texts and References								
3. Evaluation	Attendance(%)	Task(%)	Medium(%)	Final(%)	Random Evaluation(%)	Attitude(%)	Others(%)	Total(%)
	0%	40%	30%	30%	0%	0%	0%	100%
Attendance Policy :								
Remark of Others :								
4. Lecture Plan	<p>[ 1 Week ] Introduction</p> <p>[ 2 Week ] Pressurized Water Reactor : primary side</p> <p>[ 3 Week ] Pressurized Water Reactor : secondary side</p> <p>[ 4 Week ] Pressurized Water Reactor : safety system, auxiliary system</p> <p>[ 5 Week ] Thermodynamics of Nuclear Energy Systems: steady-state system analysis</p> <p>[ 6 Week ] Thermodynamics of Nuclear Energy Systems: steady-state system analysis</p> <p>[ 7 Week ] Thermodynamics of Nuclear Energy Systems: transient system analysis</p> <p>[ 8 Week ] Mid-term Exam.</p> <p>[ 9 Week ] Thermodynamics of Nuclear Energy Systems: pressurizer analysis/ containment analysis</p> <p>[ 10 Week ] Thermal Analysis of Fuel Elements</p> <p>[ 11 Week ] Thermal Analysis of Fuel Elements</p> <p>[ 12 Week ] Various types of NPPs: VHTR, SFR, PHWR</p> <p>[ 13 Week ] Various types of NPPs: GEN-IV reactors</p> <p>[ 14 Week ] Various types of NPPs: small modular reactors</p> <p>[ 15 Week ] Final Exam.</p>							

5. Guideline for Students		
6. Support Services for Students with Disabilities	For Lectures	<ul style="list-style-type: none"> <li>○ Visual Impairment: Make textbooks(digital textbook, braille textbook, enlarged textbook etc.), Allow note takers</li> <li>○ Physical Disability: Make textbooks (digital textbook), Allow note takers and assistants</li> <li>○ Hearing Impairment: Allow note takers and translators, Allow lecture recording</li> <li>○ Health Impairment: Excuse absence due to health problems, Allow note takers</li> <li>○ Learning Disability: Allow note takers</li> <li>○ Intellectual Disability / Autism Spectrum Disorder: Allow note takers and mentors</li> </ul>
	For Assignments & Evaluations	<ul style="list-style-type: none"> <li>○ Visual Impairment / Physical Disability / Hearing Impairment / Health Impairment / Learning Disability: Extend assignment deadlines, Offer alternate assignment submission and response method, Extend testing period, Offer alternate testing method, Offer different testing room</li> <li>○ Intellectual Disability / Autism Spectrum Disorder: Offer individualized assignments and alternative evaluations</li> </ul>
	Others	<p>Students who take this course can get appropriate level of support service including the support listed above depending on the students' individual characteristics and needs through consultation with professors and the Support Center for Students with Disabilities. If you have any questions concerning support service for students with disabilities you can contact Professor Cho, Hyoung Kyu(02-880-8972) or Support Center for Students with Disabilities (02-880-8787)</p>