

|                                                                                                    |                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|-------|
| Course No.                                                                                         | 414.562                                                                                                                                                                                                                                                                                                                             | Lecture No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 001    | Course Title (Subtitle) | Topics in Ocean Engineering Design                                                                                                                                                                                                                          | Credit      | 3-3-0 |       |
| Representative Instructor                                                                          | Name                                                                                                                                                                                                                                                                                                                                | Youngsub Lim (post : )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                         | Homepage                                                                                                                                                                                                                                                    |             |       |       |
|                                                                                                    | E-mail                                                                                                                                                                                                                                                                                                                              | s98thesb@snu.ac.kr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                         | Phone No.                                                                                                                                                                                                                                                   | 02-880-7325 |       |       |
|                                                                                                    | Interview Time/Place : Mon-Thr 1:00-2:00 PM                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
| Prerequisite Course                                                                                |                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
| * 1.Purpose of Course                                                                              | In this class, students will learn about thermodynamic basics, and develop their own thermodynamics model to solve basic thermodynamic equipment such as pump, turbine, valve, and separator by using the student's own in-house code. The result will be verified by comparison with commercial simulator and experimental result. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
| * 2.Materials and Reference                                                                        |                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
| * 3.Evaluation Method                                                                              | Attendance                                                                                                                                                                                                                                                                                                                          | Task                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Medium | Final                   | Random Evaluation                                                                                                                                                                                                                                           | Attitude    | Other | Total |
|                                                                                                    |                                                                                                                                                                                                                                                                                                                                     | 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0      | 50                      | 0                                                                                                                                                                                                                                                           | 10          | 0     | 100   |
|                                                                                                    | Attendance Policy : Students who are absent for over 1/3 of the class will receive a grade of 'F' or 'U' for the course. (Exceptions can be made when the cause of absence is deemed unavoidable by the course instructor.)                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
| Remark of Others :                                                                                 |                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
| * 4.Lecture Plan                                                                                   | Week 1: Thermodynamic systems<br>Week 2: 1st law<br>Week 3: Enthalpy and entropy<br>Week 4: Thermodynamic process and cycle<br>Week 5: Thermodynamic cycles<br>Week 6: EOS<br>Week 7: EOS#2<br>Week 8: Departure function                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         | Week 9: VLE and Gibbs free energy<br>Week 10: Mixture properties<br>Week 11: VLE: ideal mixture<br>Week 12: Distillation Column<br>Week 13: VLE: Fugacity model<br>Week 14: VLE: Activity coefficient model<br>Week 15: Final exam and project presentation |             |       |       |
| 5.References to Course Registration                                                                | Milo D. Koretsky, Engineering and Chemical Thermodynamics, Wiley.                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
| 6. Support Services for Students with Disabilities<br><br>※ You can modify these default contents. | For Lectures                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Visual Impairment: Make textbooks(digital textbook, braille textbook, enlarged textbook etc.), Allow note takers<br><input type="checkbox"/> Physical Disability: Make textbooks (digital textbook), Allow note takers and assistants<br><input type="checkbox"/> Hearing Impairment: Allow note takers and translators, Allow lecture recording<br><input type="checkbox"/> Health Impairment: Excuse absence due to health problems, Allow note takers<br><input type="checkbox"/> Learning Disability: Allow note takers<br><input type="checkbox"/> Intellectual Disability / Autism Spectrum Disorder: Allow note takers and mentors |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
|                                                                                                    | For Assignments & Evaluations                                                                                                                                                                                                                                                                                                       | <input type="checkbox"/> 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<br><input type="checkbox"/> Intellectual Disability / Autism Spectrum Disorder: Offer individualized assignments and alternative evaluations                                                                                                                                                                                                          |        |                         |                                                                                                                                                                                                                                                             |             |       |       |
|                                                                                                    | Others                                                                                                                                                                                                                                                                                                                              | 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 *** (02-880-****) or Support Center for Students with Disabilities (02-880-8787).                                                                                                                                                                                          |        |                         |                                                                                                                                                                                                                                                             |             |       |       |

◇ fields with \* : required fields

◇ If you don't release the syllabus, you may have some disadvantages.