| Course No.   | 458.203  |  | Lecture<br>No. | 001                         | Course Title<br>(Subtitle) | Engir                | eering Biology |                          | Credi                        | t 3       |  |
|--|--|--|----------------|-----------------------------|----------------------------|----------------------|----------------|--------------------------|------------------------------|-----------|--|
| Representative<br>Instructor   | Name Tai Hy  |  | Hyun Park      | un Park (post : Professor ) |                            |                      | e htt          | http://biotech.snu.ac.kr |                              |           |  |
|  | E-mail   |  | thpa           | thpark@snu.ac.kr            |                            |                      | D.             | 02-880-8020              |                              |           |  |
| Prerequisite<br>Course   | None   |  |                |                             |                            |                      |                |                          |                              |           |  |
| * 1.Purpose of<br>Course   | <ol> <li>Introduction to Chemical &amp; Biological Engineering</li> <li>Understanding of the Characteristics of Cells and Biomolecules</li> <li>Understanding of the Industrial Applications of Cells and Biomolecules</li> </ol>  |  |                |                             |                            |                      |                |                          |                              |           |  |
|  |  | K. Solen and J.N. Harb, "Introduction to Chemical Engineering" 5 <sup>th</sup> Ed., Wiley, Hoboken (2011)<br>H. Kreuzer and A. Massey, "Biology and Biotechnology", ASM Press, Washington, D. C. (2005). |                |                             |                            |                      |                |                          |                              |           |  |
| * 3.Evaluation<br>Method   | Attendan   |  | Task           | Medium<br>(3 times)         | Final                      | Random<br>Evaluation | Attitude       | Othe                     |                              | Total     |  |
|  |  | 5  | 10             | 40                          | 40                         | 0                    | 5              |                          | 0                            | 100       |  |
|  | Remark of Others :   |  |                |                             |                            |                      |                |                          |                              |           |  |
| * 4.Lecture<br>Plan  | Week 1: Introduction to Chem. Eng.Week 9: Cells & EnvironmentsWeek 2: Quantities & Mass BalanceWeek 10: Cells Grow and ReproduceWeek 3: Transfer & Reaction Eng.Week 11: Cells DifferentiateWeek 4: The Cell : the Basic Unit of LifeWeek 12: The Biotechnology ToolboxWeek 5: Molecular Components of CellsWeek 13: Biotechnology in the LaboratoryWeek 6: Expression of Genetic InformationsWeek 14: Health Care Appl. & Medical BiotechWeek 8: Cell MetabolismWeek 15: Environ. Sustainability and Biotech  |  |                |                             |                            |                      |                |                          |                              | l Biotech |  |
| 5.References to<br>Course<br>Registration  |  |  |                |                             |                            |                      |                |                          |                              |           |  |
| <ul> <li>6. Support<br/>Services for<br/>Students with<br/>Disabilities</li> <li>※ You can<br/>modify these<br/>default<br/>contents.</li> </ul> | <ul> <li>Visual Impairment: Make textbooks(digital textbook, braille textbook, enlarged textbook etc.),<br/>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<br>& Evaluations<br>O Visual Impairment / Physical Disability / Hearing Impairment / Health Impairment / Le<br>Disability: Extend assignment deadlines, Offer alternate assignment submission and res<br>method, Extend testing period, Offer alternate testing method, Offer different testing re<br>Intellectual Disability / Autism Spectrum Disorder: Offer individualized assignment<br>alternative evaluations   |  |                |                             |                            |                      |                |                          | and response<br>ting room    |           |  |
|  | Students who take this course can get appropriate level of support service including the support of support service including the support Others with professors and the Support Center for Students with Disabilities. If you have any questic concerning support service for students with disabilities you can contact Professor (02-880-****) or Support Center for Students with Disabilities (02-880-8787).  |  |                |                             |                            |                      |                |                          | consultation<br>ny questions |           |  |

 $\diamondsuit$  fields with \* : required fields  $\diamondsuit$  If you don't release the syllabus, you may have some disadvantages.