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| <p><b>(Course Title)</b><br/>Biology in Kyoto iUP preparatory course</p> <p><b>(Affiliated department)</b><br/>Graduate School of Agriculture</p> <p><b>(Job title)</b> Associate Professor</p> <p><b>(Name)</b> HSIANG, Tzu-Fan</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p><b>(Course offered period)</b> 2<sup>nd</sup> Semester</p> <p><b>(Numbers of weekly frame)</b> Two</p> <p><b>(Class style)</b> Lecture</p> <p><b>(Eligible students)</b> Students of Kyoto iUP Preparatory course</p> <p><b>(Day/period)</b> Monday/1 and Wednesday/5</p> |
| <p><b>(Outline and Purpose of the Course)</b></p> <p>To provide a basic knowledge of biology for admission into an undergraduate course at the School of Science, Engineering, or Agriculture.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                              |
| <p><b>(Course Goals)</b></p> <p>Kyoto iUP Biology is an intensive course designed to expose international students to higher level biological principles, concepts and skills required to solve EJU* level problems: equivalent to those of Japanese high school graduates.</p> <p>* Examination for Japanese Admission for International Students (EJU)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                              |
| <p><b>(Course Schedule and Contents)</b></p> <p>Lectures, course materials and exercises will be centered around the following themes:</p> <p><b>Cell Biology &amp; Energetics</b></p> <p>Proteins &amp; Nucleic Acids, Cell Structure &amp; Function, Animal vs Plant Cells, Cytoskeleton, Metabolism, Respiration, Photosynthesis, Alternative Carbon Fixation</p> <p><b>Genetics</b></p> <p>Cell Cycle, DNA Replication, Gene Expression &amp; Regulation (Transcription &amp; Translation), Biotechnology</p> <p><b>Reproduction</b></p> <p>Sexual Reproduction, Genes, Chromosomes, Genomes, Gene Linkage/ Crossover/ Recombination, Animal &amp; Plant Reproduction and Development</p> <p><b>Ecology/ Ecosystems</b></p> <p>Populations, Communities, Ecosystems, Biosphere, Biodiversity, Conservation</p> |                                                                                                                                                                                                                                                                              |
| <p><b>(Class requirement)</b></p> <p>Students should be enrolled in the Kyoto iUP course.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                              |
| <p><b>(Evaluation methods and policy)</b></p> <p>Your final grade will be based on the following components: Class participation: 20%, In-class quizzes and exercises: 30%, and Final exam: 50%. A final exam will be held at the end of the intensive preparatory course to evaluate student progress and understanding of the core topics.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                              |
| <p><b>(Others (office hour, etc.))</b></p> <p>Open door policy during office hours and anytime by email.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                              |
| <p><b>(Textbook)</b></p> <p>Customized open-source documents and slide presentations will be prepared and uploaded to the course Panda site prior to class.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                              |

