**Scientific Thinking and Artistic Practice > Course Description**

**Course:** Scientific Thinking and Artistic Practice

**Course No.:** 3512156081

**Credit / Course Hours:** 1.5 Credit/24 Course Hours

**Preparatory Course:** None

**Course Description:**

Aiming at raising multiple intelligences, this module is designed to develop the students with whole-brain working and system thinking capability for self-acknowledged study through discovery-based learning method. Discovery-based Learning is believed to be one of the most effective way of learning for science and engineering subjects. The seven thinking principles (1. Curiosity, 2. Demonstration, 3. Sensation, 4. Learning from mistakes, 5. Science and Art, 6. Corporality, 7. Connection) will be thoroughly discussed. Students are required to apply the seven principles all along the whole course to establish self-driven learning circle as “Observation-Practice-Obstacles-Resolving-(re)Observation”. To serve the course design purpose, botany scientific illustration is adopted as an artistic language to demonstrate students’ observation and thinking process. Five activities (1. Understand the Lights from Physics, 2. Master Lines, 3. Perspective through Psychology, 4. 3D effect on paper through Solid Geometry, 5. Mathematics in Nature) together with individual portfolio project are specially proposed to provide a cross-discipline platform which allows students to actively practice the thinking method, as well as achieving full cooperation among eyes, brain and hands. At the end of the course, the students are supposed to equip with whole-brain thinking ability and capability to apply it through all their future study and work.