TQF 3

Course Code and Course Title	English: SCGI195: Space Exploration and Astrobiology Thai: วทศน195: การสำรวจอวกาศและชีวดาราศาสตร์
Number of Credits	1 (1-0-2)
Curriculum and Course Type	International Program, Multidisciplinary Program General Education
Course Coordinator	Tatpong Tulyananda, Ph.D Address: School of Bioinnovation & Bio-based Product Intelligence, Faculty of Science, Mahidol University, Salaya email: tatpong.tul@mahidol.edu
Semester/Year of Study	No specific
Prerequisite	None
Co-requisite	None
Day/Time/Study Site Location	TBA, Faculty of Science, Mahidol University
Date of Latest Revision	1 July 2023

Course Learning Outcomes (CLOs)

After successful completion of this course, students are able to

CLO 1 Gain basic knowledge about astrobiology and space exploration

CLO 2 Aware of upcoming space exploration and technology

CLO 3 Understand Thai space education history and roadmap

CLO 4 Obtain necessary information about Thai space agency and organization

Objectives of Development / Revision

First revision

Course Description

The origin and evolution of life; possibility of evolution on other planet; application of astrobiology; space education in Thailand; fundamental of space exploration; Thai space agency; national space roadmap; technology for space exploration

Grade: O/S/U

Credit Hours

Theory (Hours)	Addition Class (Hours)	Laboratory/Field trip/ Internship (Hours)	Self-study (Hours)
15 Hours/Semester (1 Hours x 15 Weeks)	-	-	30 Hours/Semester (2 Hours x 15 Weeks)

Course Objective: At the completion of the course, students should be able to

1. Gain basic knowledge about astrobiology and space exploration
2. Aware of upcoming space exploration and technology
3. Understand Thai space education history and roadmap
4. Obtain necessary information about Thai space agency and organization

Number of Hours per Week for Individual Advice

By appointment at **SC1-308** Faculty of Science, Mahidol University, Salaya Campus

Attendance: Students are expected to attend all lectures and activities on time with all assignments completed. Make-up lecture will not be given. If you have to miss a class, let me know ahead of time. 3 absences will result in U.

Measurement and evaluation

After completion of the evaluation process each student is assigned a criterion-referenced grade (as shown in the table below). Evaluation and achievement will be justifying according to Faculty and University code, conducted by grading system of O/S/U. Student participate in class at least 90% of total hours. To pass this course, student must earn a grade of a least S.

Total Percentage of Evaluation	Below 50	51-80	81-100
Grade	U	S	O

Course Schedule

Topic	**Hour**	**Instructors**
1. Course introduction	1 hr	TT
2. Space Agriculture (Astroculture)	2 hr	TT
3. Astrobiology and space biology	2 hr	TT
4. Possibility of life on other planets	2 hr	TT
5. Progress in Thai space education Final report announcement	2 hr	TT

Topic	Hour	Instructors
Quiz		TT
6. Individual study for final report	2 hr	TT
7. Special speaker: 1	2 hr	TBA
8. Special speaker: 2 **Final report submission**	2 hr	TBA

Course coordinator: Tatpong Tulyananda, Ph.D.

School of Bioinnovation & Bio-based Product Intelligence

Faculty of Science, Mahidol University

E-mail: tatpong.tul@mahidol.edu