

Master of Science Program in Science Education (English Program)

M.Sc. (Science Education)

Philosophy:

Master of Science Program in Science Education (English Program) is a multidisciplinary program applying and integrating both science and teaching to produce graduates with the high spirit of the teachers as well as being scientists who are well equipped with knowledge of science, technology, engineering process and mathematics. Additionally, the graduates must be able to connect and integrate the knowledge in the related fields for effectively managing STEM education. It is, therefore, necessary that the graduates must understand and gain the spirituality of the teachers together with having profound knowledge of science and mathematics in addition to having the ability to communicate with students to facilitate their understanding of science and mathematics lessons as well as having the ability to render lessons in English.

Objectives:

1. To produce master degree science and mathematics teachers who are able to develop and design the learners' learning process, connect knowledge to learning activities, and inspire the learners with new ideas so that they can apply the knowledge gained in their daily lives. These teachers can teach in secondary schools, particularly the students in science and mathematics classrooms and other standard schools where English is used to render the lessons.
2. To produce teachers with the spirit of the teachers with high morals and ethics as well as profound knowledge in science and mathematics.

Qualifications of a prospective candidate:

1. A Thai national or a foreigner who holds a bachelor's degree in science or an equivalent qualification in physics, chemistry, biology or mathematics or a bachelor's degree in engineering.
2. Pass English proficiency test according to the level required by KMUTT.
3. Has other qualifications as stipulated by KMUTT's graduate study regulations and approved by the program committee or the entrance exam committee.

Professions after graduation:

1. Secondary school teachers
2. Educators
3. Scientist Educators

Curriculum

Total Program Credits

Plan 1.2 Dissertation (Thesis 12 Credits) 47 Credits

Curriculum Components

Plan 1.2 Dissertation (Thesis 12 Credits)

Major Course 25 Credits

Elective Course 4 Credits

Internship in Professional Teaching 6 Credits

Thesis 12 Credits

COURSE STRUCTURE

Plan 1.2

First Year

First Semester

Credits

SCE 6xx Major Course	4 (x-x-x)
SCE 650 Educational Philosophy and Curriculum	3 (3-0-9)
SCE 651 Moral and Ethics for Teachers	3 (3-0-9)
SCE 652 Psychology for Teachers ³	(3-0-9)
SCE 653 Research Methodology in Science Education ³	(3-0-9)
Total	16(12+x-0+x-36+x)

First Year

Second Semester

Credits

SCE 654 Learning Assessment and Quality Assurance	3 (3-0-9)
SCE 655 Learning Innovation for Schools	3 (3-0-9)
SCE 656 Practicum in Science Education	3 (3-0-9)
SCE xxx Elective Course 1	2 (2-0-6)
SCE xxx Elective Course 2	2 (2-0-6)
Total	13 (13-0-39)

Second Year

First Semester

SCE 661 Internship in Professional Teaching I

SCE 671 Thesis

Total

Credits

3 (3-0-9)

6 (0-12-24)

9 (3-12-33)

Second Year

Second Semester

SCE 662 Internship in Professional Teaching II

SCE 671 Thesis

Total

Credits

3 (3-0-9)

6 (0-12-24)

9 (3-12-33)