

*** 201117 Projects ***

Semester 1, Academic Year 2018

Students must use mathematical or scientific knowledge to create a project related to human civilization at the local, national, or global level. This project score is 30% of all scores of this course.

* Project Groups and Schedule

1. Set up a group of 4–7 members by focusing on teamwork with searching for information, discussing among team, and getting conclusion.
2. Submit the list of the group members. Monday 27 August 2018
3. Look at the projects of past students. Wednesday 29 August 2018
4. Submit topics and guidelines of the project. Thursday 13 September 2018
5. Report project progress. Monday–Friday 15–19 October 2018
6. Submit the complete project. Thursday 8 November 2018

* Types of Projects All projects must be one of the following:

1. **Report:** No longer than 10 pages (not counting cover page and references page). You must focus on ideas, theories, hypotheses and/or comparison of your ideas and other people's ideas. Your group must analyze and synthesize data from your group members. (If you copy other people's work without any thinking by your team, you will get 0 point.) For examples, please look at the following reports: (1) the article "หน้าป้อหลวงในมุมมองของนักคณิตศาสตร์" (Nam Bor Luang in the View of a Mathematician) <https://goo.gl/he4UVy> and the report "กฎหมายในมิติคณิตศาสตร์" (Mathematics in Law) <https://goo.gl/jxKsRd>.

2. **Video:** You can make 1–2 videos and each one lasts only 3–10 minutes. You can show some ideas or theories from your group members or other people. Some video examples are (1) The Precious Mural Paintings of Umong Temple and (2) Mathematics and Chiang Mai Wall Construction. If you use photos and videos from someone else, you need to show the source in your video. At the end of the video, you must say that "This video is made for the course Mathematics and Science in Civilization (201117), Chiang Mai University. Presented to Dr. Atichart Kettapun and Assistant Professor Dr. Komsanti Chokethawai"

3. **Model:** It could be a small or medium model to make people understand an idea or a theory better. Some examples are (1) 3D book about Wat Umong and (2) Pisa Tower with different leaning angles for several years.

4. **Learning Activity:** You build active and fun activities that teachers can use for teaching students at schools or universities such as activities you might see in some classes for this course. You can see some examples in Thai from <https://goo.gl/UHovWi> และ <https://goo.gl/Xych4X>

5. **Research:** This is a new study such as Using Science and Mathematics to study on a Lanna harp.

6. **Others:** They could be many things such as pop-up books, E-books, learning games, cartoons, scientific fiction and drama. However, the work must be approved by the instructors.

* Naming your title

If your title is very interesting, people will want to look at your work. Make sure that you give enough time to think about the title. Some examples are (1) Secret Math & Science Hidden at Wat Umong and (2) Miracle of Golden Ratio.

* Project Submission All work must be handed in by Thursday 8 November 2018.

1. **Submit your main work.** That might be a report, a model, a VDO or something else.
2. **Submit the following additional computer files.** (You might submit by using Cloud such as Google Drive.)
 - **VDO file(s) showing your project within 5 minutes.** All groups must show your project done via a video. (If your main work is just about video, you don't have to do this additional video.)
 - **All other computer files you have.** Those files might be about reports, videos, multimedia, and others related to your project.
 - **A file showing which work your group have done and the work you get from other people.** You must put all references clearly. Otherwise, I might conclude that you intend to copy someone's work.
 - **If your group choose to do video(s), you must submit both big and small (less than 100 MB) files.**
 - **If your group choose to do a report, you must submit the report via both original and PDF files.** (You must make a complete report in a single PDF file.)
3. **Report what each members did roughly for the project.** (You can write in a piece of paper.)

* Grading Rules (30 Points or 30% of all scores of this course.)

1. **Presentation and interest of the project 12%** (Interesting, Easy to understand and Beautiful.)
2. **Academic accuracy 10%** (Literature review, accuracy of the information, reasoning and showing reference.)
3. **Planing and Submiting work within deadlines 5%** (That also includes reporting project progress.)
4. **Personal Dedication 3%** (Dedication of each member in the group.)
 - For work submission, you must follow the rules and deadlines seriously.
 - Your group must not copy someone's work. If you use parts of someone's work, you must show the references clearly including books, documents, photos, videos, interviews and websites (with date of accessing that information). If you don't write references, you might get grade F for this course.
 - **It is better to refer to highly trusted document sources** such as books, academic journals, gurus and trusted websites. If you use information from internet, it is good to explore from many websites and keep in mind that some information is untrusted.
 - If you can create a new reasonable idea or theory, you will get the high scores.

Note: If there is any change from the information above, the instructors will let you know in our classroom.