Co-funded by the Erasmus+ Programme of the European Union

Kasetsart university

No _____/.....

*Kasetsart University*, Date 14/01/2022

# Course Syllabus

## 1 Program

Title of the study programme: Master of Science Program in Forestry

## 2 Course details

Course name: Application Programming in Forestry

Course code: 01303553

Number of credits (hours/week): 3 (5 hours/week)

Course type (tick the appropriate box): ☐ Required, ☒ Elective, ☐ Other, if other please explain:

Prerequisites courses: -

Semester, in which the course is taught: *tick the appropriate box below*

| Year 1 | | Year 2 | |
|---|---|---|---|
| **Semester 1** | **Semester 2** | **Semester 1** | **Semester 2** |
| ☐ | ☒ | ☒ | ☐ |

## 3 Responsible unit

### 3.1 Department:

Names and affiliations of lecturer(s): Dr.Chakrit Na Takuathung (department of forest engineering)

## 4 Course description

The course provides the knowledge and skills necessary to create web applications using languages like HTML, CSS and Javascript. A mobile development framework like Cordova is used for mobile applications development.

## 5 Course objectives

*At the end of the course, students are able to:*

- *Understand the principles and concepts of computer programming and programming languages.*
- *Create a mobile application intended for use in forestry.*

Knowledge: Students will learn computer programming languages including HTML, CSS and Javascript as well as a mobile development framework - Cordova. They will learn how to transform web applications into mobile applications.

Skills: Students will be able to read code, program code, build and deploy the program with HTML, CSS and Javascript languages.

Application of theories to practice: Create a mobile application in forestry.

Social knowledge and skills: Students will learn how to explain the code to the others, how to distribute the program through Google play store and teach the others how to use the program they created.

### 5.1 Learning objectives of particular modules

-

## 6 Course teaching methods

Online lecture, exercise, self-study, discussion, presentation, case study, assignment

## 7 Teaching plan

| Week | Content | Method/activity | Hours |
|---|---|---|---|
| 1 | - Which programming language is best for beginners?<br>- Web apps and mobile apps - differentiation | Lecture | 5 |
| 2 | HTML | Lecture, Exercise, Discussion | 5 |

| | | | |
|---|---|---|---|
| 3 | HTML + CSS | Lecture, Exercise, Discussion | 5 |
| 4 | Javascript: variables | Lecture, Exercise, Discussion | 5 |
| 5 | Javascript: operators | Lecture, Exercise, Discussion | 5 |
| 6 | Javascript: if/else statements | Lecture, Exercise, Discussion | 5 |
| 7 | Javascript: loops | Lecture, Exercise, Discussion | 5 |
| 8 | Javascript: array, function | Lecture, Exercise, Discussion | 5 |
| 9 | - Cordova: convert html to android<br>- Releasing an app on Google play store | Lecture, Exercise, Discussion | 5 |
| 10 | Example application | Case study, Exercise, Discussion | 5 |
| 11-14 | Creating one's own application | Exercise, Discussion, self-study | 5 |
| 15 | Project presentation | Presentation | 5 |

# 8 Material needs

## 8.1 Course equipment: -

# 9 References

## 9.1 Compulsory reading list

- https://www.javascript.com/learn
- https://www.w3schools.com
- https://cordova.apache.org
- https://developer.android.com/distribute

## 9.2 Suggested reading list

The related reading materials to be assigned during the class.

# 10 Assessment of students

## 10.1 Description of assessment

Grades will depend on students' performance on the various components described in 10.2

## 10.2 Grade distribution and student assessment

| | |
|---|---|
| Examination | 40% |
| Exercise/assignment | 20% |
| Project presentation | 30% |
| Class participation | 10% |
| Total | 100% |

**Grading scale**

| Grade | | Total score | Scale |
|---|---|---|---|
| **Symbol** | **Verbal grade** | | |
| A | Excellent | >=80 | 4.0 |
| B+ | Very good | 75-79 | 3.5 |
| B | Good | 70-74 | 3.0 |
| C+ | Fairly good | 65-69 | 2.5 |
| C | Fair | 60-64 | 2.0 |
| D+ | Poor | 55-59 | 1.5 |
| D | Very poor | 50-54 | 1.0 |
| F | Fail | <50 | 0.0 |

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