**MODULE HANDBOOK**

***CAN301***

***Mobile Computing***

## Jianjun Chen

## Autumn Semester

**2023-2024**

**SECTION A: Basic Information**

* **Brief Introduction to the Module**

This module will introduce basic wireless communication and networking principle. It will also provide guidelines, design principles and experience in developing applications for mobile devices, in particular, Android devices. You will appreciate the social and ethical issues of mobile computing including security and privacy

* **Key Module Information**

Module name: *Mobile Computing*

Module code: *CAN301*

Credit value: *5*

Semester in which the module is taught: *Semester 1 (autumn)*

Pre-requisites needed for the module: *Java Programming*

Programmes on which the module is shared: *IMS,* *ICS and DMT*

* **Delivery Schedule**

Lecture room: *See the timetable*

Lecture time: *See the timetable*

Tutorial times: *See the timetable*

* **Module Leader and Contact Details**

Name: *Jianjun Chen*

Email address: *Jianjun.Chen@xjtlu.edu.cn*

Office telephone number: 0512-81889137

Room number and office hours: *Check the module page*

Preferred means of contact: *Email and office hours*

* **Additional Teaching Staff and Contact Details**

Name: *Wanxin Li*

Email address: *Wanxin.Li@xjtlu.edu.cn*

Office telephone number: 0512- 88970290

Room number and office hours: *Check the module page*

Preferred means of contact: *Email and office hours*

**SECTION B: What you can expect from the module**

* **Educational Aims of the Module**

To provide guidelines, design principles and experience in developing applications for small, mobile devices, including an appreciation of context and location aware services.

To develop an appreciation of interaction modalities with small, mobile devices (including interface design for non-standard display surfaces) through the implementation of simple applications and use cases.

To introduce wireless communication and networking principles, that support connectivity to cellular networks, wireless internet and sensor devices.

To understand the use of transaction and e-commerce principles over such devices to support mobile business concepts.

To appreciate the social and ethical issues of mobile computing, including privacy.

* **Learning Outcomes**

A. Student should be able to identify the characteristics and limitations of mobile hardware devices including their user-interface modalities;

B. Students can develop applications that are mobile-device specific and demonstrate current practice in mobile computing contexts;

C. Students are able to analyse and evaluate the design and development of context-aware solutions for mobile devices; and

D. Students can address professional and ethical issues, in particular those relating to security and privacy of user data and user behaviour.

* **Assessment Details**

Group Project: 60%

Final Exam: 40%

* **Methods of Learning and Teaching**

This module will be focusing on teaching practical problem solving abilities in the area of mobile computing. Students will be encouraged to explore underlying design decisions of existing systems to gain a better understanding of this subject.

* **Syllabus & Teaching Plan**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week Number and/or Date** | **Lecture/Seminar/**  **Field Trip/Other** | **Topic/Theme/Title** | **Pre-reading** |
| Week 1~2 | Lecture 1 ~ 3 | Review of Java | Slides |
| Week 3~8 | Lecture 5 ~ 15 | Android Development | Slides and Official manuals |
| Week 9 | Lecture 16 | UI and Context Aware | Slides and Official manuals |
| Week 10+ | Lecture 17, 20 | Mobile Network | Textbook |
| Week 14 | Revision | Revision |  |

* **Lab Schedule**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Student Group** | **Time** | **Day** | **Venue** | **Lecturer/Instructor** |
| See timetable |  |  |  |  |

##### SECTION C: Additional Information

* **Student Feedback**

The University is keen to elicit student feedback to make improvements for each module in every session. It is the University policy that the preferred way of achieving this is by means of an Online Module Evaluation Questionnaire Survey. Students will be invited to complete the questionnaire survey for this module at the end of the semester.

**You are strongly advised to read the policies mentioned below very carefully, which will help you better perform in your academic studies. All the policies and regulations related to your academic study can be found in ‘Student Academic Services’ section under the heading “Policies and Regulations*”* on** [**E-bridge**](https://ebridge.xjtlu.edu.cn/urd/sits.urd/run/siw_lgn)**.**

* **Plagiarism, Cheating, and Fabrication of Data.**

Offences of this type can result in attendance at a University-level committee and penalties being imposed. You need to be familiar with the rules. Please see the “Academic Integrity Policy” available on e-Bridge in the ‘Student Academic Services’ section under the heading ‘Policies and Regulations’.

#### Rules of submission for assessed coursework

The University has detailed rules and procedures governing the submission of assessed coursework. You need to be familiar with them. Details can be found in the “Code of Practice for Assessment” available on e-Bridge in the ‘Student Academic Services’ section under the heading ‘Policies and Regulations’.

#### Late Submission of Assessed Coursework

The University attaches penalties to the late submission of assessed coursework. You need to be familiar with the University’s rules. Details can be found in the “Code of Practice for Assessment” available on e-Bridge in the ‘Student Academic Services’ section under the heading ‘Policies and Regulations’.

#### Mitigating Circumstances

The University is able to take into account mitigating circumstances, such as illness or personal circumstances which may have adversely affected student performance on a module. It is the student’s responsibility to keep their Academic Advisor, Programme Director, or Head of Department informed of illness and other factors affecting their progress during the year and especially during the examination period. Students who believe that their performance on an examination or assessed coursework may have been impaired by illness, or other exceptional circumstances should follow the procedures set out in the “Mitigating Circumstances Policy”, which can be found on e-Bridge in the ‘Student Academic Services’ section under the heading ‘Policies and Regulations’.