



VE449: Mobile Applications for Entrepreneurs (手机移动端

App 创业)

Course Syllabus

A. Course Description

This is a 3 credit core course for the Minor in Entrepreneurship.

Mobile apps provide one of the most prolific and popular ways to implement entrepreneurship ideas in the service industry today. This course focusses on the holistic approach to entrepreneurial service development using apps on Android or any other platform that the student group are confident of.

The course will discuss best practices in the software engineering of mobile applications and best practices of software entrepreneurs in the design and marketing of mobile applications from a service perspective. Students will engage in the hands-on practice of entrepreneurship by actually inventing, building and marketing their own mobile applications. However, this is a project course, it does **not** teach students how to program a mobile device, students are expected to learn that on their own.

This is a project based course where students develop a mobile application in consultation with a project sponsor. The course will have the support of a number of industry experts who will guide students on the specifications of the mobile application, development tools and testing of the application.

B. Course Length, Lecture Schedule & Office Hours

- Course Length: **13 weeks/ (see Section G. for detailed schedules)**
- Classroom:

- Lecture/Workshop/Group Meeting Schedule
 - Monday @ 12:10pm-1:50pm
 - Wednesday @ 12:10pm-1:50pm

- Office Hours
 - Monday @ 2pm-4pm (Appointment needed), Room411

C. References

- Steve Blank, Why the Lean Start-Up Changes Everything, Harvard Business Review, May 2013

- Pradeep Ray, Integrated Management from E-Business Perspective, Springer/International Kluwer Academic/, Plenum Publishers, ISBN: 0-306-47485-9, Jan 2003 (Chapter 4)
- Satzinger, Jackson and Bird, Systems Analysis and Design in a Changing World, Cengage Learning 2006
- Rohit Ramaswamy, Design and Management Service Processes: Keeping Customers for Life, ISBN: 0201633833, 1996
- <http://www.qfdonline.com/qfd-tutorials/house-of-quality-tutorial/>

Recommended readings to be provided at the course web site on weekly basis, students should check regularly

D. Credit & Instructors

- Prerequisite: VE281, VE370.
- Preference will be given to students enrolled in the Minor for Entrepreneurship (subject to a limit of max 30 students)
- Level: 400
- Number of Units: 3
- Instructor: Pradeep Ray and Industry Experts
 - Email: Pradeep.ray@sjtu.edu.cn
 - *Refer to communication policy and preference at Part I.*
- TA: Jerry Zhu (jerry.zyn@gmail.com)

Dr. Pradeep Ray is Teaching Professor & Director of Centre For Entrepreneurship at University of Michigan—Shanghai Jiao Tong University Joint Institute (JI). He is also an IEEE Distinguished Lecturer for the Society for Social Implications of Technology. He has taught in the UNSW Business School in Australia for nearly 17 years before joining JI. He led many projects on mHealth (healthcare using mobile applications) in various countries in Asia-Pacific.

His main academic contribution has been in the area of service management through the collaboration of multiple stakeholders, using service science and software engineering. These concepts will be useful in developing robust, dependable mobile apps. Mobile apps are the Minimum Viable Product for many entrepreneurship ideas and requires multi-disciplinary collaboration that Pradeep Ray has been practicing across the UNSW schools of business, engineering and public health over since 1999 to 2016. These concepts have been applied in various application areas, such as finance, telecommunications and healthcare.

In VE449, the Instructor will be supported by industry experts working on mobile applications and an experienced young entrepreneur Mr. Jerry Zhu who has strong business expertise in the context of both China and international markets.

E. Methods of Instruction & Communication

- Lectures
 - Instructor's lecture (first few weeks)
 - Guest lectures
 - Workshops (Group project meetings from Week 4)
- Interactive classroom discussion
- Communication policy & preference
 - Course related subject & technical question: In-person discussion preferred (during class break or office hours).
 - Personal or career related: In-person discussion preferred
 - *Class absence related: Contact the instructor*

F. Learning Objectives

Upon successful completion of the course, students will be able to

- Learn the basics of entrepreneurship including pitching a business idea
- Understanding Value Proposition with mobile app specifications
- Use of House of Quality Matrices to quantify qualitative requirements
- Designing a Minimum Viable Product (Mobile Application) as an agile development
- Validation of the design with customers

G. Session Plan

Each Session=90-minute contact, 2 sessions per week organized into a lecture and a workshop. Workshops will involve student individual or group presentations, group project meetings.

The activities of the weeks will be as follows:

• Introduction-Week 1

- Lecture 1: Overview and Syllabus, Introductory Lecture on Entrepreneurship for mobile business
- Workshop 1: Business Model, formation of groups

• Week 2

- ☐ Lecture 2: Value Proposition
- ☐ Workshop 2: kick-off meeting with sponsors

• Week 3

- Lecture 3: Mobile App Development (industry guest lecture)
- Workshop3: Mobile App Development (industry speaker)

• Week 4

- PUBLIC HOLIDAY

• Weeks 5

- ☐ Lecture 5: Agile Methodologies (Scrum)
- ☐ Workshop 5: Pitching of Value Proposition and MVP (Jerry), project sign off by sponsor

• Week 6

- ☐ Workshop 1: Individual pitching assessment (Jerry)
- ☐ Workshop2: Individual pitching assessment (Jerry)

• Week 7

- ☐ Lecture 6: Service Design using HoQ

- **Week 8**

- 📄 mHealth Case Studies
- 📄 Group Project Discussions

- **Week 9**

- 📄 Group Project Presentation (Iteration 1)
- 📄 Group Project Presentation (Iteration 1)

- **Week 10**

- 📄 Guest Lecture
- 📄 Group Project Discussions

- **Week 11**

- 📄 Group Project Presentation (Iteration 2)
- 📄 Group Project Presentation (Iteration 2)

- **Week 12**

- 📄 Guest Lecture
- 📄 Group Project Discussions

- **Week 13**

- 📄 Group Project Final Presentation
- 📄 Group Project Final Presentation

- Note: The timeline and course events are subject to change.

H. Grade Structure

- Group Score: 60 points
 - Agile App Design and Minimum viable product Development: 60%
 - Stage 1: 10% (MVP Requirements and Design, Work plan)
 - Stage 2: 20% (House of Quality Matrices)
 - Final demo: 30% (MVP and testing)
- INDIVIDUAL Score: 40points
 - Individual pitching: 20 points
 - Class Participation & discussion: 20points

Note: The grade structure is subject to change with a minor adjustment.

I. Honor Code

We will maintain a high standard on honor code and pay more attention on honor code violation. Please refer to JI's policy.

J. Additional Classroom Info

Additional information will be posted and updated on Canvas.

The syllabus will be updated on the regular basis.

