

INTRODUCTION

Lecture 1

COMPSCI 702

Security for Smart-Devices

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March 2, 2021

TEACHING STAFF

- Course Coordinator and Lecturer

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- Lecturer

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ABOUT YOU



- Name
- Current degree
- Any experience related to this course
- Your expectations from this course
- Your expectations from teaching staff (i.e., me)

CLASS REPRESENTATIVE (CR)



- Who
 - Any volunteer
- Core responsibilities
 - An important bridge between students and the staff
 - A CR gives the school feedback on different aspects of the course
- Benefit
 - At the end of the semester, a CR can request a Class Rep certificate
- For further information, visit:
 - <http://www.ausa.org.nz/support/class-reps>

WHEN AND WHERE: LECTURES (WEEK 1 TO 12)



- Recorded Zoom sessions until further notice
- Once notified, we can consider the following locations:

Day	Time	Location
Tuesday	11:00 – 12:00	ALR5/421W-301
Wednesday	11:00 – 12:00	ClockT029/105-029
Thursday	11:00 – 12:00	ClockT029/105-029

COURSE STRUCTURE



- This course focuses on securing smart devices
- It mainly covers security architectures of Android and iOS
- It is a **research-oriented** course!
- This course is divided into two main parts
 - In the first part, lectures cover ‘*somewhat*’ basic topics
 - In the second part, advance topics will be presented in seminars

COURSE STRUCTURE (2)



- First part [Week 1 to 7]
 - Introduction to course/project
 - Access control
 - Android security architecture (by both)
 - iOS security architecture (~2 weeks by Nalin)
- Second part [Week 8 to 12]
 - Individual seminars
 - Project presentations and demos
 - Guest lecture or special talk (optional)
 - Course recap and exam info

EXPECTED FROM STUDENTS



- Attend lectures and presentations
- Present a research article
- Work in a team (of 4) on a group project
 - *Development Phase*: Develop obfuscated app
 - *Challenge Phase*: De-obfuscate (i.e., reverse engineer) app developed by other groups
 - Project report
 - Project presentation
- Encouraged to do active class participation, if possible

RIGHTS AND RESPONSIBILITIES



- Academic integrity:
<http://www.auckland.ac.nz/uoa/home/about/teaching-learning/honesty>
- Inclusiveness:
<https://www.auckland.ac.nz/en/about/eo-equity-office/zero-tolerance-for-discrimination.html>
- Student learning expectations:
https://docs.google.com/document/d/1vT5_czzlj4jZ96Uds7Ytq1yAav0zS83VPz2fSYLU7Sc/edit

MY TEACHING PHILOSOPHY



- Giving feedback to you
- Sharing my knowledge and experience
- Creating an environment where I can offer you enough learning opportunities
- Inspiring you to learn and making this course intellectually stimulating
- Encouraging inclusiveness

DEADLINES



- Article selection for individual seminar
 - Friday, March 5, 2021
 - By email to me
- Team formation
 - Friday, March 5, 2021
 - By email to me CC your group members
- App and code submission
 - Friday, May 7, 2021
 - By email to me CC your group members
- Project report
 - Monday, May 24, 2020
 - By email to me CC your group members

SUPPORT DURING THIS COURSE



- Discussion for selecting an article for individual seminar
 - Thursday, March 4, 2021
- Interim feedback on development phase
 - From Tuesday, April 27 to Friday, April 30, 2021
- Interim feedback on challenge phase
 - From Monday, May 17 to Thursday, May 20, 2021

FUTURE POSSIBILITIES



- Extending report as a research article
- Project
- Dissertation
- Thesis

LEARNING OUTCOMES



- Give basic advice on securing smart devices (Themes 1-6)
- Criticise and appreciate technical literature on mobile security (Themes 1-5)
- Demonstrate technical skills to increase security of smart devices (Themes 1-6)
- Prepare and deliver an oral presentation on an advanced topic in mobile security (Themes 1,2,4,5)
- Develop novel problem solving and research-informed ideas (Themes 1-6)

ASSESSMENTS



- 10% individual seminar
 - See: <https://www.cs.auckland.ac.nz/courses/compsci702s1c/seminar>
- 30% group project
 - See: <https://www.cs.auckland.ac.nz/courses/compsci702s1c/assignments>
- 60% final exam

TO BE CONTINUED



- See the next lecture



Questions?

Thanks for your attention!