

# Wireless Network Security Course Project

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## Project Overview

In the Wireless Network Security course project, student groups will identify and investigate problems of current interest in wireless security research. Each group of students will choose a topic within the scope of the class materials, develop and propose a research hypothesis, and work toward solving the problem of interest. Students are *required to agree on a project topic and research hypothesis with the instructor before developing a project proposal*. Depending on the chosen topic, teams will develop novel techniques toward the desired goal, implement their approach in a simulation/emulation environment or in an appropriate system (e.g., mobile devices, sensor nodes, SDR kits), and evaluate the performance and security impacts of their approaches using appropriate metrics. Whenever possible, course projects should strive for novelty and possible publication.

## Project Requirements

Student teams will be formed during the first few weeks of class. Each team will choose a project topic (under the guidance of the instructor), submit a written project proposal, and present it to the class during the third week of the semester. Each team will present a progress report to the class mid-way through the semester, and a final project presentation will be made during the last week of class. In addition, each team will submit a written project report, including documentation of any hardware or software systems developed as part of the project, at the end of the semester. In certain cases, the final project report can be replaced by a conference or workshop paper, poster, or demo submission. The scope and depth of the project must be appropriate for a semester-long course project, and project components can be added, removed, or modified throughout the semester.

## Deliverables

The initial project proposal has two parts: **1)** a written proposal, not to exceed 2 pages in length, that provides an overview of the project and the expected outcomes and **2)** a brief in-class presentation on the specified day. Project teams will present an in-class progress report on the specified day, including the following **1)** an overview of the project, **2)** milestones achieved to date, **3)** roadblocks faced and how they affect the project goals, and **4)** a detailed time-line of the team's efforts; note that the progress report does not have a written component. The final project deliverable at the end of the semester has two parts: **1)** a written report, not to exceed 15 pages in length (in any reasonable format, not counting documentation), including an overview, background, related work, results, and documentation and **2)** a detailed in-class presentation, including a demo if applicable.

## Deliverable Time-Line

The following schedule of project deliverables has been tentatively set and is subject to changes.

- **Proposal:** February 2, 2012
- **Progress Report:** March 20 and 22, 2012
- **Final Presentation:** May 1 and 3, 2012
- **Written Project Report:** May 10, 2012