Practical Cyber Security
(CIS 490)

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Introduction - Part I

• This is an 1-credit course
  – on cyber security with hands-on activities

• Course period and meeting time
  – spans over 7 weeks
  – from Jan 24 to March 7
  – we meet once each week on Thursdays (1-3 pm)

• Venue
  – most classes in Room 128 (Nichols Hall)
  – some classes in Room 127 (Nichols Hall)
Introduction – Part II

• No prerequisite is required
  – familiarity to computer usage will be helpful
• Who should attend this course:
  – any student of any major is welcome
• Why you need to know about cyber security
  – cyber attacks are very common nowadays
  – knowledge is the first step of the defense
  – you (and your data) interact with the cyber space
  – you perform critical transactions (e.g. banking) online
  – your personal computer, your organization’s communication system, your country’s infrastructures are under the threat
Course Goals

• To provide an introduction to computer and information security

• To provide students some hands-on experience of the cyber security domain

• The materials will cover common attack techniques and basic tools for countermeasure
Background Information

• This is the first time this course is offered
• It has been recently developed at CIS by
  – Professor Simon Ou
  – Professor Gurdip Singh
  – Professor Eugene Vasserman
  – me (Sankardas Roy: instructor and researcher associate)
• Supported by National Science Foundation
  – part of the cyber security education initiative
• Your feedback is important to us
An Overview of the Syllabus

• Basic computer security: 1\textsuperscript{st} week
  – malware, anti-virus, firewall, etc.

• Web security: 2\textsuperscript{nd} week
  – how to securely browse the Internet, etc.

• Public Wi-Fi security: 3\textsuperscript{rd} week
  – how to avoid risks of using a hot spot, etc.

• Home Wi-Fi security: 4\textsuperscript{th} week
  – how to configure a home router with security options

• Smart phone security: 5\textsuperscript{th} week
  – threats of the usage and the countermeasures

• Privacy issues: 6\textsuperscript{th} week
  – common privacy leaks and countermeasures

• Miscellaneous security issues: 7\textsuperscript{th} week
  – phishing and other attacks, and countermeasures
Logistics

• Class attendance is required
• Grade composition
  – homework (70%)
  – class attendance and participation (30%)
• Weekly homework
  – one homework will be handed out in each class
  – due in the next class
  – you will need to have a computer to work on the homework
    – before submitting the homework, ensure that it does not have any material which may leak your privacy
• No mid-term or final exam
Disclaimer

• We will not be able to discuss all cyber security problems or solutions
  – Only a few common attacks and defense techniques will be discussed
  – Only a subset of security issues will be highlighted
• This course aims only to be your first course in computer security!!
  – we hope you will attend advanced courses later.
Course Website


• Most of the material will be posted here
  – Slides, homework, announcements, etc.

• Please regularly visit the web page

• Send me emails ([sroy@ksu.edu](mailto:sroy@ksu.edu))
  – whenever you have a question