

professional Ethics

Course Info.

Lectures: Sunday - Monday

Instructor: Dr. Helal Ahmed

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Assistant Instructor/TA: NA

Textbook:

- CEH ver 9, Certified ethical hacking version 9: study guide

Course syllabus

Lecture 1: Introduction, to Ethics and computer Ethics

Lecture 2: Ethical Hacking

Lecture 3: System Fundamentals

Lecture 4: Cryptography

Lecture 5: Ethical Hacking Phases

Lecture 6: System hacking

Lecture 7: Malware

Lecture 8: Social Engineering

Lecture 9: Webserver and applications.

Lecture 10: SQL Injection

Lecture 11: Hacking Wi-Fi and Bluetooth

Lecture 12: Mobile device security

Grading policy

Midterm	30%
Report & attendance	10%
Final	60%

What are Ethics?

Ethics are a structure of standards and practices that influence how people lead their lives. It is not strictly implemented to follow these ethics, but it is basically for the benefit of everyone that we do.

Ethics are unlike laws that legally mandate what is right or wrong. Ethics illustrate society's views about what is right and what is wrong.

Computer Ethics

Computer ethics are a set of moral standards that govern the use of computers. It is society's views about the use of computers, both hardware and software.

Privacy concerns, intellectual property rights are some of the common issues of computer ethics.

Privacy Concerns

- **Hacking** - is unlawful intrusion into a computer or a network. A hacker can intrude through the security levels of a computer system or network and can acquire unauthorized access to other computers.
- **Malware** - means malicious software which is created to impair a computer system. Common malware are viruses, spyware, worms and trojan horses. A virus can delete files from a hard drive while a spyware can collect data from a computer.
- **Data Protection** - also known as information privacy or data privacy is the process of safeguarding data which intends to influence a balance between individual privacy rights while still authorizing data to be used for business purposes.
- **Anonymity** - is a way of keeping a user's identity masked through various applications.

Intellectual Property Rights

- **Copyright** - is a form of intellectual property that gives proprietary publication, distribution and usage rights for the author. This means that whatever idea the author created cannot be employed or disseminated by anyone else without the permission of the author.
- **Plagiarism** - is an act of copying and publishing another person's work without proper citation. It's like stealing someone else's work and releasing it as your own work.
- **Cracking** - is a way of breaking into a system by getting past the security features of the system. It's a way of skipping the registration and authentication steps when installing a software.
- **Software License** - allows the use of digital material by following the license agreement. Ownership remains with the original copyright owner, users are just granted licenses to use the material based on the agreement.

Effects on Society

- **Jobs** - Some jobs have been abolished while some jobs have become simpler as computers have taken over companies and businesses. Things can now be done in just one click whereas before it takes multiple steps to perform a task. This change may be considered unethical as it limits the skills of the employees.
- There are also ethical concerns on health and safety of employees getting sick from constant sitting, staring at computer screens and typing on the keyboard or clicking on the mouse.

Effects on Society Cont.

- **Environmental Impact** - Environment has been affected by computers and the internet since so much time spent using computers increases energy usage which in turn increases the emission of greenhouse gases.
 - There are ways where we can save energy like limiting computer time and turning off the computer or putting on sleep mode when not in use. Buying energy efficient computers with Energy Star label can also help save the environment.

Effects on Society Cont.

- **Social Impact** - Computers and the internet help people stay in touch with family and friends. Social media has been very popular nowadays.
 - Computer gaming influenced society both positively and negatively. Positive effects are improved hand-eye coordination, stress relief and improved strategic thinking. Negative effects are addiction of gamers, isolation from the real world and exposure to violence.
 - Computer technology helps the government in improving services to its citizens. Advanced database can hold huge data being collected and analyzed by the government.
 - Computer technology aids businesses by automating processes, reports and analysis.