

Piedmont Technical College Course Syllabus

COURSE INFORMATION

Course Prefix/Number: IST 293

Title: IT and Data Assurance I

Responsible Division: Business, Information Technologies and Public Service

Last Day to Withdraw from this Course: For the last date to withdraw from this course, consult the current *Student Calendar*.

Course Description:

For course, credit hour, pre-requisite(s) and co-requisite(s) information, visit the Detailed Course Information page: www.ptc.edu/courses/IST293.

Textbook and Other Materials:

For textbook information and additional required and/or supplemental materials, visit the [college bookstore](http://www.ptc.edu/bookstore) (www.ptc.edu/bookstore).

Proctored Examinations:

Proctored examinations for distance learning courses taken at non-PTC campuses may require a proctoring fee for each exam taken.

COURSE POLICIES

Course policies are available online through the *Academic Catalog* and *Student Handbook*. Visit the [Course Policies page](http://www.ptc.edu/syllabus/policies) (www.ptc.edu/syllabus/policies) for a detailed list of important policies and more information.

GRADE POLICY

Detailed grading policy information can be found on the [Grading Policy webpage](http://www.ptc.edu/grading-policy) (http://www.ptc.edu/grading-policy). Final grade appeal information is available in the [Academic Catalog](http://www.ptc.edu/catalog/) (http://www.ptc.edu/catalog/).

ACCOMMODATIONS

Accommodations for ADA:

Information is available on the [Student Disability Services webpage](http://www.ptc.edu/ada) (<http://www.ptc.edu/ada>).

TITLE IX HARASSMENT AND SEXUAL ASSAULT INFORMATION

In accordance with Title IX of the Education Amendments of 1972, Piedmont Technical College does not discriminate on the basis of sex in its education programs or activities. Title IX protects students, employees, and applicants from sex discrimination in admissions and employment to include discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. More information regarding Title IX, including contact information for the Title IX coordinators, is available at [Title IX Harassment and Sexual Assault Information](https://www.ptc.edu/about/legal-disclosures/title-ix-harassment-and-sexual-assault-information) (<https://www.ptc.edu/about/legal-disclosures/title-ix-harassment-and-sexual-assault-information>).

RATIONALE

Why do I need this course?

This course explores the ethics of hacking, the general concepts and keywords used to describe a variety of attacks, and how to implement and ultimately defend against them. The second half of this course explores where on a network attacks are likely to come from and how to defend those weak points.

PROGRAM INFORMATION

For program information including required courses, program learning outcomes, gainful employment information and advisement information, refer to the Academic Program webpage. Go to [Academics](http://www.ptc.edu/academics) (<http://www.ptc.edu/academics>), select your program, and then select Credentials Offered.

COURSE STUDENT LEARNING OUTCOMES

Upon successful completion of this course and/or clinical, each student will be able to:

- Assess ethical and legal requirements of security assessment and penetration testing and determine a strategy to comply with these requirements.
- Analyze different phases of hacking and recommend the strategy to use ethical hacking for assessing security of various components of information systems.
- Compare and contrast different hacking techniques and analyze the legal implications of hacking.
- Examine different vulnerabilities, threats and attacks to information systems and recommend the countermeasures.
- Compare and contrast various network security assessments and hacking tools.
- Assess various network security techniques and tools, and implement the appropriate level of information security controls based on evidence, information, and research.

GENERAL EDUCATION COMPETENCIES

Piedmont Technical College General Education Competencies for All Graduates:

This course may address one or more of the following General Education Competencies (assessment will be stated when applicable):

Communicate effectively.

Assessment:

Students will explain how why and when to use security tools.

Apply mathematical skills appropriate to an occupation.

Assessment:

N/A

Employ effective processes for resolving problems and making decisions.

Assessment:

Students will be presented with real world scenarios and multiple options to solve security issues.

Demonstrate the basic computer skills necessary to function in a technological world.

Assessment:

Students will complete real world lab assignments using the same tools that are available in the IT world.

To validate proficiency in the general education competencies, students in some programs will be tested using Work Keys.