



ISPP Option

Information Context: People, Organizations and Society

1. **What campuses offer this option?** Not all options are available at all campuses, so be sure to [check for availability](#) at your campus.

2. **What specific knowledge and skills are the focus of this option?**

The Information, Society, and Public Policy option focuses on the human dimension of information technology. This option provides students with the skills and knowledge to understand how people influence the design, development, diffusion, use, and management of information technology. Students in this option also will learn how information technology is implicated in social change and the effects of these social changes for individuals, communities, organizations, economies, nations, and global environments.

Specific skills for studying in this option include:

- Assessing the special information needs of particular groups of users (IST 302 or IST 413).
- Understanding users, organization and society, and their influence on the development and use of information technology (IST 431).
- Exploring the economic, cultural, legal, ethical, and social issues that emerge from our increasing reliance on information and communications technologies (IST431, 432).
- Analyzing the laws and public policies in the areas of privacy, intellectual property, censorship, and telecommunications policy (IST 432).

3. **a. How do the courses in this option integrate with each other?**

The prescribed courses, IST 302 or IST 413 (spring only), IST 431, and IST 432 (fall only), expose students to a broad perspective of the user, and how the user integrates with systems, technology, and contexts, and examine the significant social and policy implications that result from the design, implementation, and use of modern information technologies.

After taking these three courses, students also will be able to discuss the major themes in information policy studies (e.g. community, privacy, access, economic participation, and security) and user studies (human-computer interaction and computer-supported cooperative work), and be able to relate these themes to the applications of particular technologies. They will be able to describe policy frameworks and issues, as well as the legal and social implications of these choices.

b. What other Penn State courses would you recommend to supplement this option?

- Support of option courses could be related to the student's area of IT application such as business, government, education, art, and healthcare.

- Support of option courses in Organizational Behavior, Economics, Political Science, Communications, Psychology, and/or Sociology could be used to expand the skills needed to analyze the impacts of emerging technologies on society.
- Students also could take additional 300- and 400-level IST courses to enhance their knowledge of either the human context or advanced technologies.

4. Students majoring in IST will be prepared to work in many different areas:

a. What are specific examples of the activities /work assignments that best illustrate this option?

The following is a representative list of work assignments from each of the three courses in this option:

- IST 302 or IST 413: Develop a user-centered design for an Internet-based medical information system.
- IST 431: Analyze the social, legal, and ethical impacts of telemedicine systems on healthcare.
- IST 432: Develop recommendations for how insurance companies should implement the recent privacy legislation governing customers' health transactions.

b. What are some examples of job titles/careers that will be available after graduation?

- IT strategic planning
- Human-computer interface design
- Systems analyst
- Information policy analyst
- Information technology consultant
- Technology industry consultant

5. What related or additional information should students focus on outside of classes?

- Learning about effective techniques for the development and design of user-centered information systems.
- Learning about the difficulties that certain classes of users have with using information technology.
- Learning about the positive and negative impacts of information technology on society.
- Learning about laws and policies that affect the use of information technology.

6. Recommended Web sites that supplement this option and the IST major:

Trade eMagazines:

- *Fortun* : <http://www.fortune.com/fortune/technology>
- *Salon*: <http://www.salon.com>
- *Wired*: <http://wired.com>
- *Technology Review*: <http://www.technologyreview.com/>

Scholarly eJournals

- *Web Journal of Current Legal Issues*: <http://webjcli.ncl.ac.uk/admin/welcome.html>
- *Informing Science*: <http://informingscience.org/>
- *IT and Society*: <http://www.standord.edu/group/siqss/itandsociety/>
- *Journal of Computer Mediated Communication*: <http://www.ascusc.org/jcmc/>
- *First Monday*: <http://www.ascusc.org/jcmc/>

- *The Electronic Journal on Information Systems in Developing Countries:* <http://www.is.cityu.edu.hk/Research/ejisd/vol3.htm>
- *Journal of Medical Internet Research:* <http://www.imir.org/>

7. **Additional comments or information that enhance the overview of this option:**

The ways that people communicate and utilize information are being changed dramatically by new information technologies. Information and the technologies that are employed to create, organize, transfer, and utilize that information in a networked environment, using such global networks as the Internet or internal networks such as Intranets, have become a key component of the global economy. This global environment is changing the way we interact, communicate, and function on the job and in our daily lives. The new technologies also raise new economic, cultural, legal, ethical, and social issues that are of grave importance to society. For these reasons, increasing attention is being paid to the human context that surrounds the information technology. We want to be sure that the technology is being used in appropriate and effective ways, and that the needs of people are being taken into account.

8. **What are typical job descriptions for IST graduates in the Information Context:**

People, Organizations, and Society option? Please note: The following is a brief list containing some of the career positions an ISPP graduate may encounter. It is not intended to serve as a comprehensive career guide, but rather to give students a sense of the general pathways to which this option may lead. Graduates from IST successfully apply their broad-based technology background in myriad professional settings. Some IST graduates also choose to continue their studies in graduate or professional schools.

- **Emerging Leaders Management Development Program:** This highly-selective management development program looks for college graduates from top schools that are ready to make a commitment to a growing and dynamic organization.

Emerging Leaders learn the ins and outs of our property-casualty business while participating in one of two career tracks: *Operations Management* or *Information Technology*. As an Emerging Leader in the *Information Technology* track, you will spend two-and-a-half to three years learning our business by rotating through our information services and systems operations departments, located in our corporate headquarters. Rotations may include database upgrades, business analysis, development and design, new application rollouts, data migration, documentation and/or project management. In addition, you'll learn about our fiscal year planning and budgeting cycle, work on special projects, participate in management meetings, receive mentoring from directors and officers, and learn how to become a successful manager.

Twice a year, all of our aspiring managers travel to our corporate headquarters for week-long leadership conferences and team-building. Emerging Leaders are given the opportunity to make a real contribution to the company's bottom line and to interact with senior executives and associates at all levels. When participants complete their program, they are placed in positions of significant responsibility within the technology-operations of our company. The Emerging Leaders work in a stable and fun environment, and are compensated for performance!

- **IT Trainee Program:**
 - Basic knowledge of applications or infrastructure design, testing and development.
 - Excellent communication skills, written and verbal.
 - Excellent problem solving and analysis skills.
 - Ability to work independently as well as in a team environment.
 - Bachelors Degree, Min GPA: 3.0.
 - Technical competencies may include, but are not limited to: Track 1: C++, Visual Basic, SQL, COBOL, UNIX, DB2, Java, HTML Track 2: HTML, WebSphere, J2EE, Network Protocols.
 - Assist in the evaluation of business processes and needs in order to formulate programming/ systems specifications and programming logic from which information systems will be developed, taking into consideration computer equipment capacity, limitations, operating time and form of desired results.
 - Research alternative solutions and recommend the most efficient and cost-effective solution for applications systems development solution.
 - Participate in systems testing and utilize data verification methods and standard tools to analyze functionality of system in light of production requirements of client management.
 - Review the results of systems tests. Make adjustments to system design prior to implementation.
 - Design, code, test, and debug applications systems using programming languages and systems architectures within operating environment of organization.
 - Assist in the evaluation of technology needs in order to formulate network, infrastructure systems specifications, and the operational support model from which the information system will be developed, taking into consideration computer equipment capacity, limitations, operating time, and form of desired results.
 - Research alternative solutions and recommend the most efficient and cost-effective solution for infrastructure systems deployment.
 - Participate in systems capacity testing and monitoring using standard tools to analyze functionality of system in light of production requirements.
 - Assess IT security risks and research effective controls for safeguarding the IT environment of the global enterprise.

- **Information Technology Team Program:** The Information Technology Team specifically focuses on:
 - Strengthening information security and critical computer-support infrastructure protection.
 - Promoting sound enterprise architectures/infrastructures.
 - Fostering mature systems acquisition, development, and operational practices.
 - Developing and building upon best practices methodologies to better ensure use of sound information investment practices.
 - Developing information technology human capital strategies.