SAGRADO
Universidad del Sagrado Corazón

SYLLABUS

TITLE:	Fundamentals of Computer Science for Communications
CODE:	INF 103
PREREQUISITE:	**N/A**
CREDITS:	3 credits | 45 contact hours (1.5 to 6 hours of community outreach and up to 6 hours online) | 1 term

DESCRIPTION

Introduction to the use of the computer for Communications students. Management, organization, and evaluation of information, impact of information technology on society, the Internet, and Web 2.0, fundamentals (history, components, use of the computer operating system), and ethical issues. Handling of pre-programmed packages (word processor, presentation program, and electronic worksheet). This course has web-based support.

Students participate in a research experience in the community on the social impact of Computer Science in Communications. As part of this activity, they will visit organizations in search of information to carry out their work. In this way, the course integrates the different theoretical aspects discussed in class. The course requires the students' active participation in the research and presentation of the results. It provides experiences for the strengthening of oral and written communication skills, and teamwork.

JUSTIFICATION

This course provides basic knowledge and skills related to the area of computers. This knowledge is increasingly necessary in the performance of a job, due to the impact that the computer has had on society in recent years.

The community outreach component of this course allows students to engage in research where they understand the impact that the computer has on different areas of human endeavor. This experience strengthens self-confidence, problem-solving, decision-making, and collaborative and teamwork skills, making the experience highly personalized, relevant, and engaging.

COMPETENCES

The course develops the following competences in students:

- **Innovation and entrepreneurship**
- **Ethical sense and social justice**
- **Communication**

OBJECTIVES

After completion of the course, students will be able to:

1. Recognize the impact of computing on society.
2. Recognize the impact of the Internet and the World Wide Web on their daily lives and society.
3. Develop skills to use Web 2.0 tools and services in their professional and personal lives.
4. Properly use different tools in the search for information that facilitate the handling, organization, and evaluation of information.
5. Apply research techniques and tools in the search for information for the construction of knowledge.
6. Differentiate the components of a computerized system.
7. Develop teamwork skills and tolerate and respect ideas and positions contrary to their own.
8. Handle information and technology appropriately and responsibly, demonstrating a sense of ethics in their professional and personal performance.
9. Develop self-learning skills.
10. Integrate theory and practice through their participation in relevant community projects.
11. Show changing attitudes towards new learning experiences.
12. Recognize the importance of expressing their ideas correctly, logically, clearly, and coherently in the area of Computer Science.
13. Employ, evaluate, and select the appropriate application program to solve a problem, according to the needs of change.

CONTENTS

I. General Concepts

A. Evolution of computer systems

1. History of electronic computers
2. Use of the computer in various areas
3. Impact of the computer on our society
4. Ethical issues regarding the use of information and technology

B. Components of the computerized system
    1. Physical equipment (hardware) and programming (software)
    2. Memory and information
    3. Interface

II. Management, Organization, and Evaluation of Information
A. Searches
B. References and citations
C. Virtual libraries
D. Plagiarism
E. Information assessment

III. The Internet and the World Wide Web
A. Computer-to-computer and network communication concepts
B. Online resources and services
    1. Email
    2. Websites
    3. Search engines
    4. Synchronous communication (chat, instant messaging)
C. Web 2.0
    1. Features: Collaborate, share, and socialize
    2. Role of the user as producer and consumer
    3. Tools
        a. Blogs
        b. Wikis
        c. Aggregators
        d. Social media
        e. Social bookmarking
        f. Collaborative productivity tools
D. Computer Ethics
    1. Privacy
    2. Freedom of expression and censorship
    3. Copyrights
    4. Crime
        a. Malware
        b. Piracy

c. Identity theft
d. Information theft

IV. Applications

A. Presentation programs

1. Definition
2. Strengths and weaknesses of the application
3. Designing a presentation
4. Designing a kiosk
5. Designing a slide (title, bullets, footers)
6. Inserting different types of images, sounds, and videos
7. Printing in different formats
8. Using the outline form
9. Add, delete, change order of slides
10. Edit text
11. Add animation effects and transitions
12. Alter sequential order of presentation

B. Word processors

1. Definition
2. Strengths and weaknesses of the app
3. Text editing: bold, underline, change type, size, and color
4. Paragraph editing: justification, word wrap, double space and single space, margin change
5. Inserting different types of images
6. Inserting footnotes, header, and footer
7. Inserting tables
8. Format the document in columns
9. Legal size document or letter
10. Page numbering
11. Tabs and indent
12. Save and print the document

C. Electronic spreadsheet

1. Definition
2. Strengths and weaknesses of the application

3. Navigating the workbook and its sheets
4. Text editing
5. Adding, eliminating, and modifying rows and columns
6. Arithmetic operations and formulas
7. Functions (Sum, Max, Min, Average, Count, Round)
8. Inserting headers and footers
9. Sort
10. Creating charts
11. Printing the sheet
12. Moving and copying data, using paste special
13. Save and print the sheet

METHODOLOGY

The following strategies from the active learning methodology are recommended:

- Lectures
- Exercises and cases discussion
- Mandatory independent laboratory
- Research project
- Cooperative learning
- Critical analysis of readings from the textbook and other sources
- Using the distance learning system to access the online component of the course
- Teamwork in the area of impact on society
- Oral and multimedia presentations (e-presentations)
- Interviews and community visits (minimum 3)
- Use of resources available on the Internet
- Incorporation of Web 2.0 tools

RESOURCES

Computer room with Macintosh or compatible microcomputers; pre-programmed packages in the area of word processing, desktop publishing, and electronic presentations.

Access to the Internet and the World Wide Web.

EVALUATION

Partial assignments (at least 3)	75%
Final research project and its presentation	25%
Total	100%

Assignments to be done on the computer will be part of the partial evaluations. A written paper or reflective journal will also be assigned as part of the research project.

LEARNING ASSESSMENT

The institutional assessment rubric is applied to the course's core activity.

BIBLIOGRAPHY

Beekman, G. (2004). *Computer Confluence* (6th ed.). Addison-Wesley.

Daley, B. (2005). *Computers Are Your Future 2005*. Prentice Hall.

Grauer, R. T., Barker, M. T. (2001). *Exploring Office XP*. Prentice Hall.

Sevillano, W., Emeric, N., & Tirado, I. (2005). *Introducción a las computadoras: Windows XP, Internet, Microsoft Word 2003, Microsoft Excel 2003, Microsoft PowerPoint 2003*. Wiley.

Shelly, C., Vermaat, M. E. (2003). *Microsoft Office 2003: Introductory Concepts and Techniques* (Enhanced ed.). International Thompson.

Shelly, C., Vermaat, M.E. (2008). *Microsoft Office 2007: Introductory Concepts and Techniques* (2nd ed.). International Thompson.

Shelly, G. B., Vermaat, M. E., Quasney, J. J., Sebok, S. L., & Freund, S. M. (2010). *Discovering computers 2011*. (Introductory ed.). Course Technology.

ELECTRONIC RESOURCES

http://scsite.com/dc2005

http://www.presentersonline.com

http://www.computerhistory.org

http://virtualmuseum.dlib.vt.edu

http://www.cbi.umn.edu

http://www.cyberstreet.com/hcs/museum/chron.htm

http://www.thocp.net/biographies/biographies.htm

http://www.digitalcentury.com

For more information resources related to the course's topics, access the library's webpage http://biblioteca.sagrado.edu/

REASONABLE ACCOMMODATION

For detailed information on the process and required documentation you should visit the corresponding office. To ensure equal conditions, in compliance with the ADA Act (1990) and the Rehabilitation Act (1973), as amended, any student in need of reasonable accommodation or special assistance must complete the process established by the Vice Presidency for Academic Affairs.

ACADEMIC INTEGRITY

This policy applies to all students enrolled at Universidad del Sagrado Corazón to take courses with or without academic credit. A lack of academic integrity is any act or omission that does not demonstrate the honesty, transparency, and responsibility that should characterize all academic activity. Any student who fails to comply with the Honesty, Fraud, and Plagiarism Policy is exposed to the following sanctions: receive a grade of zero in the evaluation and / or repetition of the assignment in the seminar, a grade of F (*) in the seminar, suspension, or expulsion as established in the Academic Integrity Policy effective in November 2022.