COURSE TITLE: Technology in Perspective

CODE NO.: TNYWO SEMESTER: Any offered.

PROGRAM: General Education - Understanding Technology.

AUTHOR: Greg White

DATE: Jan '97 PREVIOUS OUTLINE DATED: Spring '95.
Jechnotogy in Perspective

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COURSE NAME

TOTAL CREDnS 3

CODE NC

PREREQUISITE(S): General Admission Requirements into a diploma program at an Ontario College or by special permission of the professor.

L PmLOSOPHY/GOALS: This course is designed to introduce the participant to an array of the various types of technology, their impact on society and their inter-relation to one another. The student will on completion appreciate the changes that technology has brought not only in the working world but in society in general. In order to better prepare the student for changes in an educational experience and "on the job" learning various study skill techniques will be explored to promote life long learning in an efficient manner. The ethical issues surrounding the technological advances and their impacts on the working world is vital knowledge in preparing the student for future careers and career changes. This course will also allow the student the opportunity to learn, practice and demonstrate a number of the generic dll requirements as outlined in the provincial generic skill learning outcomes documents.

n. STUDENT PERFORMANCE OBJECTIVES (LEARNING OUTCOMES):

Upon successful completion of this course the student will demonstrate the ability to:

1) use a variety of study skill techniques to optimize learning

2) define the changes inherent to an information society and their possible impacts on her or his career

3) define the major technological advances in information technologies and discuss their impact on the evolution of society.

4) define in general terms the power of computers in terms of an analyzing engine, storage technologies, input and output technologies, communication technologies, operating systems and systems software.

5) define the necessary steps to create solutions with information technologies using critical thinking and problem solving skills.

6) define the role various software applications have as personal and professional productivity tools.

7) discuss the implications and issues that technologies have on our present lives and the ethical impacts the technologies of the future will affect.
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i. TOPICS TO BE COVERED:

Approximate Time Frames

1) Shidy skill techniques including scheduling, listening, notetaking, textbook reading and testing.
   Weeks 1 & 2

2) How information technologies work together, their affect on careers, changes in organizations, culture, society and knowledge base.
   Weeks 3 & 4

3) Historical impacts, how organizations work, types of information systems in organizations and what the future may hold.
   Weeks 5 & 6

4) Overview of a CPU, system unit components, microprocessor chips, storage mediums, secondary storage components, input and output devices, multimedia systems, communications and telecommunication networks and operating systems.
   Weeks 6 & 7

5) Building information systems using preliminary analysis and critical thinking, systems analysis, systems design, development and implementation.
   Weeks 8 & 10

6) Application software including word processing, spreadsheets, database management, business software's, graphics, desktop publishing, games, engineering software, artificial intelligence, communications and integrated packages.
   Weeks 10 thru 13

7) A framework for ethical decision making. Professional and corporate codes of conduct, privacy, property and system quality. Quality of life issues and threats to information systems.
   Weeks 14 & 15

These time frames will be extremely flexible dependent

IV. LEARNING ACTIVITIES/REQUIRED RESOURCES

Study skill techniques including scheduling, listening, notetaking, textbook reading and testing.

Learning Activities:

Students will listen to lectures and participate in practical exercises individually and in small groups designed to show the advantages of using study skills. They will develop skills to contact resources via communication with the "outside" world. Specific areas include counseling, placement, financial aid, L.R.C., L.A.C., student council, athletics, S.A.C. etc.

Required:

Various speakers, reference video's, college produced study skills guide, lecture notes and handouts.
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Topic/Unit - How information technologies work together, the affect on careers, changes in organizations, culture, society and knowledge base.

Limine Activities:

Listen to presentation, participate in small group discussion on impacts to students own discipline, interview vocational professor and research disciplines’ trade journals and share perceptions on career direction. Develop an inventory of what will be required for the future. Participate in discussion about changes in society and culture by information technologies.

____ Overheads, contact professors, trade magazines and journals, text chapter one

Topic/Unit - Historical impacts, how organizations work, types of information systems in organizations and what the future may hold.

Limine Activities:

Listen to presentation, develop a glossary of new terms and definitions, participate in class discussion on how major technology changes made changes to the workplace and society. Research major changes in students discipline and report participate in discussion on organizational changes brought about by technologies and develop a synopsis of future direction.

Resources:

____ Overheads, interviews with vocational contact instructors, text chapter two

Topic/Unit - Overview of a CPU, system unit components, microprocessor chips, storage mediums, secondary storage components, input and output devices, multimedia systems, communications and telecommunication networks and operating systems.

Timing Activities:

Listen to presentation, complete self-study exercise in definitions and terms, participate in small group discussion on how information technologies help us see and visualize, communicate, analyze and understand, create and control our lives. (from the hardware perspective). Participate in small group discussion on possible future trends in hardware and report on the impact that will have on society.

Resources:

Overheads, lecture notes, case studies, supplemental AV videos, text chapters three, four, five, six and seven.

Topic/Unit - Build information systems using preliminary analysis and critical thinking, systems analysis, systems design, development and implementation.
Lecture Activities:

Listen to presentation on technological, organizational and people issues involved in building informational systems, develop a flow chart to critically analyze problems, participate in small group case study problem and present solution. Participate in discussion involving nontechnological factors in building systems (organizational politics, business procedures, accepting change, motivating people, training, ergonomics, legal and regulatory controls).

Resources:

Overheads, lecture notes, text chapters eight and nine.

Topic/Unit - Application software including word processing, spreadsheets, database management, business software, graphics, desktop publishing, games, engineering software, artificial intelligence, communications and integrated packages.

Listening Activities:

Listen to a presentation on the basic characteristics of application software, the capabilities of word-processing, spreadsheet and database management software, how to determine which software is most appropriate and factors to consider prior to purchasing, students will produce and present a major paper to explain a particular software program related to their discipline. Participate in discussion on affects of software and impacts future software will have and the direction technology is involving to.

Evaluation:

Overheads, lecture notes, project outline, student presentations and accompanying notes, input and direction from major vocational instructor, text chapters ten, eleven, twelve, thirteen and fourteen.

A framework for ethical decision making. Professional and corporate codes of conduct, privacy, property and system quality, Quality of life issues and threats to informational systems.

Students will listen to a presentation on various issues arising due to technology and guidelines used to make choices, the effect information technologies may impact on privacy and personal freedoms, property rights and intellectual property, participate in discussions involving protection of information systems against natural disasters, compiler crime and human error. Participate on various case studies.
V. EVALUATION METHODS: (INCLUDES ASSIGNMENTS, ATTENDANCE REQUIREMENTS, ETC.)

A final grade will be given as a letter in accordance with the following percentage equivalent:

**grading System**

- **A+**: 95-100% Consistently Outstanding
- **A**: 85-94% Outstanding Achievement
- **B**: 75-84% Consistently Above Average Achievement
- **C**: 55-74% Satisfactory or Acceptable Achievement
- **X** = to carry over into next semester, given only for extreme circumstances.
- **R** = Repeat, did not yet meet all of the course requirements at this time.

A final grade will be derived as follows:

- Test 1 = 10%
- Test 2 (final) = 15%
- 7 mini-quizzes random throughout semester = 25%
- Technical Report and presentation = 20%
- Written Assignment(s) = 10%
- Attendance including homework ** = 20%

Total = 100%

A portion of the final grade is based on cooperation and ability. Regardless of a persons background or ability in order to work in an industrial or business environment requires the ability to work in harmony and with respect for your peers and supervisors. This attitude is measured and reflected either positively or negatively in your overall grade.

Attendance is a measure not only of physical presence at an appointed hour but also a measure of your cooperation and attitude. Attendance is expected and will therefore be penalized by 1/2% for every hour missed or late without a valid and acceptable excuse. This 1/2% will be deducted from your overall grade.
VL PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the instructor. Credit for prior learning will be given upon successful completion of the following:

- documentation from previous trainer (academic or work experience)
- successful completion with a minimum grade of 65% an exam administered by the instructor of the course
- completion of two assignments or suitable portfolio covering course content

VII. REQUIRED STUDENT RESOURCES


Other material used in this course will be issued by your instructor, this material is a portion of various texts, books and periodicals or is produced by Sault College. As we use only a small portion of many different text, we have obtained copyright approval for the distributed material.

**NOTE:** On any material you use in your written project's that requires copyright, you will be responsible for obtaining written permission.

You are expected to bring to class, your text, note book (three ring loose leaf binder) and writing materials.

VIII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY and elsewhere:

It must be noted that an extensive collection of resource materials exist are available in the school library (resource center), the public library as well as Algoma University and Shouldice library (Lake Superior State University) all of which you have access to.

**In a course such as this, periodicals, trade magazines, manufacturer literature and the INTERNET may be your best sources for up to date and current information.**

Your instructors are your best source of information and can provide you with direction of where to look for information on your particular discipline. Utilise them.
What follows is by no means an exhaustive list.

1. Made in Japan: Akio Morito and Sony, by Morito, Akio
   published by Dutton, New York

2. Canadian Occupational Health and Safety Handbook, abbr.. by
   Izum Michael published by Nash, Don Mills ref KE3365.N38

3. What they Don't Teach You at Harvard Business School, by N.
   McCormack published by Bantam Books, Toronto

4. The Sudbury Incident, by Southren, Frank published by York,

5. The Gulf Handbook, published by Trade and travel

Available in the Book Store:

6. The Meeting Will Come to Order, by Sponberg, Harold
   published by Michigan State University

7. Organizing Business Meetings, by Berezovsky, Joyce
   published" by Falken, Edmonton ISBN Q9691503-0


9. The Language of Argument, by MacDonald, Daniel published by
   Harper Collins

10. The One Minute Manager, Blanchard, Kenneth published by
    York

    Edition published by MrGraw Hill Ryerson

12. Quality Control, by Besterfield, David published by

Efficient sleeping (MAGAZINES, ARTICLES)

Canadian machinery and Metalworking
Business Week
Canadian Business Magazine
Sales and marketing Management
Byte M^azine
Numerous other computer periodicals
Technology in Perspective

COURSE NAME

And/or visual Section (FELMS, FILMSTRIPS, TRANSPARENCIES)

Available through your instructor and the A/V dept. Sault College:

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<th>call number</th>
<th>title</th>
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<tr>
<td>C2011</td>
<td>Upgrading, Retraining &amp; Changing Cobs</td>
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<tr>
<td>C671</td>
<td>Business Studies, Everybody's Business</td>
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<td>C1025</td>
<td>Business Ownership</td>
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<td>C909</td>
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<td>C82</td>
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<td>C1008</td>
<td>Emergency Management Training Videos</td>
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<td>C1056</td>
<td>Training Tomorrow's Managers Today</td>
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<td>C603</td>
<td>Managing Change</td>
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<td>C701</td>
<td>People, People, People</td>
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<td>C882</td>
<td>Project Management</td>
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<td>CI 9</td>
<td>The Human Problems of Management</td>
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<td>C1014</td>
<td>Japan: Why Does Trade Occur</td>
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IX. SPECIAL NOTES

Students with special needs (e.g., physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.