

Technology as a Useful Tool

Mechanical and Transportation Technology

Course Number: DAT9102	Contribution to Program: General Education	Normative Hours: 45
Applicable Program(s): 0550X01FWO EME Technician - Robotics	AAL: 1	Core/Elective: Core
Prepared by: Joel Smith Professor		Approval Date: 24/06/2012
Co-Requisites N/A		Approved by: Misheck Mwaba, PhD., P.Eng. Chair, Mechanical & Transportation Technology
Pre-Requisites N/A		Approved for Academic Year: 2012-2013

COURSE DESCRIPTION

Topics, such as standard computer software (word processors and spreadsheets), Internet and email basics and LAN Technology are covered. Issues, such as ethics (personal and business), problem-solving skills, time management are discussed and the benefits that computers can add to our daily lives are explored.

RELATIONSHIP TO VOCATIONAL LEARNING OUTCOMES

This is a general education course that supports learning in the following theme area: Science and Technology

T: Teach A: Assess CP: Culminating Performance

ESSENTIAL EMPLOYABILITY SKILLS

The course contributes to your program by helping you achieve the following Essential Employability Skills:

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| 1 | Communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience.(A) |
| 4 | Apply a systematic approach to solve problems.(A) |
| 5 | Use a variety of thinking skills to anticipate and solve problems.(T,A) |
| 6 | Locate, select, organize and document information using appropriate technology and information systems.(T,A) |
| 9 | Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals. (A) |
| 10 | Manage the use of time and other resources to complete projects.(T,A) |
| 11 | Take responsibility for one's own actions, decisions and consequences.(T,A) |

T: Teach A: Assess CP: Culminating Performance

COURSE LEARNING REQUIREMENTS/EMBEDDED KNOWLEDGE AND SKILLS

COURSE LEARNING REQUIREMENTS When you have earned credit for this course, you will have demonstrated the ability to:	EMBEDDED KNOWLEDGE AND SKILLS
1. Discuss issues related to the day-to-day use of computers in various settings.	<ul style="list-style-type: none"> 1 Be aware of the issues of personal or corporate privacy and security concerns associated with current technology. 1 Assess the possible loss of value (your work) due to computer viruses. 1 Explain the theoretical basis for a computer problem. 1 Learn to use "help" features (on-line or off-line). 1 Outline the theoretical, ethical, and historical evolution of a digital environment.
2. Discuss the issues involved in the ethical use of a computer in	<ul style="list-style-type: none"> 1 License agreements.

modern technology.	<ul style="list-style-type: none"> 1 Software piracy. 1 Spam. 1 On-line harassment. 1 State the rules and regulations that apply to online environments such as the World Wide Web. 1 Use the vocabulary of the Information Technology (IT) field correctly and effectively. 1 Criticise a user agreement or End User License Agreement (EULA) and GNU General Public Licenses.
3. Evaluate the use of information technology in today's workplace.	<ul style="list-style-type: none"> 1 Appreciate the role of computers in today's workplace. 1 Communicate graphically by producing documents using software applications, and interpreting given graphical documents. 1 Send, receive and organize e-mail messages. 1 Modify and enhance documents by electronic means. 1 Describe key computing concepts in non-technical terms. 1 Explain the effects of technological change on daily life. 1 Evaluate the use of computers for educational purposes.
4. Evaluate the proper use of tools available in today's world of technology.	<ul style="list-style-type: none"> 1 Evaluate the use of information technology in the workplace. 1 Use on-line resources to research technical questions. 1 Use an operating system to manage files and execute software applications. 1 Relate different forms of communication to the real world. 1 Prepare a list of important questions to ask when entering a new digital environment.
5. Work out an approach to solve a technology-related problem.	<ul style="list-style-type: none"> 1 Gather information quickly and honestly from the Internet. 1 Assess the validity of information taken from websites. 1 Assess and share information in an ethical manner. 1 Use available instruments to verify information to be used in computer reports. 1 Choose the fastest tool to complete a task. 1 Develop reasonable estimates of the time required to complete tasks that involve computers.
6. Make use of the computer (and associated resources) as a tool for solving problems and managing time.	<ul style="list-style-type: none"> 1 Function competently and quickly in various on-line environments. 1 Establish a "time budget" to complete assignments working with a computer. 1 Meet deadlines. 1 Evaluate your estimates of time required to perform tasks using on-line resources. 1 Identify trends that have emerged in society's use of computers. 1 Envision the ways in which current trends may continue to evolve in the future.

LEARNING RESOURCES

Learning resources will primarily be course notes posted to BlackBoard. The student is responsible for following the weekly schedule and CSI to ensure that they are accessing the required material. There may also be recommended Websites for additional information.

LEARNING ACTIVITIES

During this course, you are likely to experience the following learning activities:
Practice assignments based on course note information.

Posting of assignments and class materials to BlackBoard and Internet sites.
Exercises requiring the use of a computer.
Individual assignments.
Investigative research on-line.
Personal reflection exercises.
Participate in on-line group discussion boards.

EVALUATION/EARNING CREDIT

The following will provide evidence of your learning achievements:	This activity validates the following Course Learning Requirements and/or Essential Employability Skills:
2 Quizzes (On-Line) Quiz 1-----5% Quiz 2-----5% TOTAL-----10%	1 Evaluate the use of information technology in today's workplace. - [CLR 3] 1 Work out an approach to solve a technology-related problem. - [CLR 5] 1 Use a variety of thinking skills to anticipate and solve problems. - [EES 5]
7 Assignments Assignment 1-----10% Assignment 2-----10% Assignment 3-----10% Assignment 4-----10% Assignment 5-----10% Assignment 6-----10% Assignment 7-----10% TOTAL-----70%	1 Discuss the issues involved in the ethical use of a computer in modern technology. - [CLR 2] 1 Discuss issues related to the day-to-day use of computers in various settings. - [CLR 1] 1 Evaluate the use of information technology in today's workplace. - [CLR 3] 1 Work out an approach to solve a technology-related problem. - [CLR 5] 1 Communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience. - [EES 1] 1 Apply a systematic approach to solve problems. - [EES 4] 1 Locate, select, organize and document information using appropriate technology and information systems. - [EES 6] 1 Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals. - [EES 9] 1 Manage the use of time and other resources to complete projects. - [EES 10] 1 Take responsibility for one's own actions, decisions and consequences. - [EES 11]
Final Exam Final Project-----15% Final Test (On-Line)-----5% TOTAL -----20%	1 Discuss issues related to the day-to-day use of computers in various settings. - [CLR 1] 1 Evaluate the proper use of tools available in today's world of technology. - [CLR 4] 1 Make use of the computer (and associated resources) as a tool for solving problems and managing time. - [CLR 6] 1 Use a variety of thinking skills to anticipate and solve problems. - [EES 5] 1 Locate, select, organize and document information using appropriate technology and information systems. - [EES 6] 1 Manage the use of time and other resources to complete projects. - [EES 10]

COLLEGE GRADING NUMERICAL EQUIVALENT TABLE

Final Grade	Mark Equivalent	Numeric Value	Final Grade	Mark Equivalent	Numeric Value
A+	90-100%	4.0	C+	67-69%	2.3
A	85-89%	3.8	C	63-66%	2.0
A-	80-84%	3.6	C-	60-62%	1.7

B+	77-79%	3.3	D+	57-59%	1.4
B	73-76%	3.0	D	53-56%	1.2
B-	70-72%	2.7	D-	50-52%	1.0
			F	0-49%	0
			FSP	0	0

OTHER COURSE INFORMATION

Students are required to respect the confidentiality of employer, client and/or patient information, interactions, and practices that occur either on Algonquin College premises, or at an affiliated clinical/field/co-op placement site. Concerns regarding clients, patients, and/or employer practices are to be brought to the attention of the program coordinator, or designated field/clinical/co-op placement supervisor so that they may be resolved collaboratively. Such concerns are not to be raised publically either verbally, in writing, or in electronic forums. These matters are to be addressed through established program communication pathways.

PRIOR LEARNING ASSESSMENT AND RECOGNITION

Students who wish to apply for prior learning assessment and recognition (PLAR) need to demonstrate competency at a post-secondary level in all of the course learning requirements outlined above. Evidence of learning achievement for PLAR candidates includes:

- 1 Challenge Exam

RELATED INFORMATION

The following information is course-specific:

Workload Requirements

- This course is an online course, which means that all work is done on-line from your residence or College Access Center.
- On average, students should allocate three hours of work per week. This time commitment will vary, based upon the students' technical aptitude and prior learning skills.
- Students **can not** earn credit for this course unless 70% of assignments and quizzes have been completed.

Respect for Confidentiality

Students are required to respect the confidentiality of employer, client and/or patient information, interactions, and practices that occur either on Algonquin College premises, or at an affiliated clinical/field/co-op placement site. Concerns regarding clients, patients, and/or employer practices are to be brought to the attention of the program coordinator, or designated field/clinical/co-op placement supervisor so that they may be resolved collaboratively. Such concerns are not to be raised publically either verbally, in writing, or in electronic forums. These matters are to be addressed through established program communication pathways.

The following information is school/department-specific:

GENERAL CLAUSES - School of Advanced Technology

Harassment/Discrimination/Violence will not be tolerated. Any form of harassment (sexual, racial, gender or disability-related), discrimination (direct or indirect), or violence, whether towards a professor or amongst students, will not be tolerated on the college premises. Action taken will start with a formal warning and proceed to the full disciplinary actions as outlined in Algonquin College Policy - HR22.

Harassment means one or a series of vexatious comment(s) or conduct related to one or more of the prohibited grounds that is known or ought reasonably to be known to be unwelcome/ unwanted, offensive, intimidating, derogatory or hostile.

This may include, but is not limited to: gestures, remarks, jokes, taunting, innuendo, display of offensive materials, offensive graffiti, threats, verbal or physical assault, academic penalties, stalking, slurs, shunning or exclusion related to the prohibited grounds.

For further information, a copy of the official policy statement can be obtained from the Student Association.

The Use of Electronic Devices, with the sound turned on, during classes is strictly prohibited. In particular, cell phones are not to be used to communicate during a class. The use of any electronic devices during exams and mid-term tests, other than those sanctioned by the faculty in charge of the examination, is strictly prohibited.

Anyone caught using a prohibited device will be considered to have plagiarized, and will be treated as such in accordance with College Plagiarism Policy. For further details on this directive, consult the Algonquin College Policy AA32 on the use of Electronic Devices in Class and Exams.

The School of Advanced Technology's Standard Operating Procedure on Plagiarism and Academic Honesty defines plagiarism as an attempt to use or pass off as one's own idea or product, work of another without giving credit. Plagiarism has occurred in instances where a student either directly copies another person's work without acknowledgement; or, closely paraphrases the equivalent of a short paragraph or more without acknowledgement; or, borrows, without acknowledgement, any ideas in a clear and recognizable form in such a way as to present them as one's own thought, where such ideas, if they were the student's own would contribute to the merit of his or her own work.

Plagiarism is one of the most serious academic offenses a student can commit. Anyone found guilty will, on the first offense, be given a written warning and an F on the plagiarized work. If the student commits a second offense, an F will be given for the course along with a written warning. A third offense will result in suspension from the program and/or the college.

For further details on this directive, consult the Algonquin College Policy - AA20 and the School of Advanced Technology's Standard Operating Procedure on Plagiarism and Academic Dishonesty.

Respect for Confidentiality

Students are required to respect the confidentiality of employer, client and/or patient information, interactions, and practices that occur either on Algonquin College premises, or at an affiliated clinical/field/co-op placement site. Concerns regarding clients, patients, and/or employer practices are to be brought to the attention of the program coordinator, or designated field/clinical/co-op placement supervisor so that they may be resolved collaboratively. Such concerns are not to be raised publically either verbally, in writing, or in electronic forums. These matters are to be addressed through established program communication pathways

Disruptive Behaviour is any conduct, or threatened conduct, that is disruptive to the learning process or that interferes with the well-being of other members of the College community. It will not be tolerated.

Members of the College community, both students and staff, have the right to learn and work in a secure and productive environment. The College will make every effort to protect that right.

Incidents of disruptive behaviour must be reported in writing to the departmental Chair as quickly as possible. The Chair will hold hearings to review available information and determine any sanctions that will be imposed. Disciplinary hearings can result in penalties ranging from a written warning to expulsion.

For further details consult the Algonquin College Policy - SA07.

June 15, 2012

The following information is College-wide:

Email

Algonquin College provides all full-time students with an e-mail account. This is the address that will be used when the College, your professors, or your fellow students communicate important information about your program or course events. It is your responsibility to ensure that you know how to send and receive e-mail using your Algonquin account and to check it regularly.

Centre for Students with Disabilities (CSD)

If you are a student with a disability, it is strongly recommended that you identify your needs to the professor and the Centre for Students with Disabilities (CSD) by the end of the first month of the semester in order that any necessary support services can be arranged for you.

Academic Integrity* & Plagiarism*

Adherence to acceptable standards of academic honesty is an important aspect of the learning process at Algonquin College. Academic work submitted by a student is evaluated on the assumption that the work presented by the student is his or her own, unless designated otherwise. For further details consult Algonquin College Policies AA18 <http://www2.algonquincollege.com/directives/files/2012/04/AA18.pdf> and AA20 <http://www2.algonquincollege.com/directives/files/2011/08/AA20.pdf>

Student Course Feedback*

It is Algonquin College's policy to give students the opportunity to complete a course assessment survey in each course that they take which solicits their views regarding the curriculum, the professor and the facilities. For further details consult Algonquin College Policy AA25 <http://www2.algonquincollege.com/directives/files/2011/10/AA25.pdf>

Use of Electronic Devices in Class*

With the proliferation of small, personal electronic devices used for communications and data storage, Algonquin College believes there is a need to address their use during classes and examinations. During classes, the use of such devices is disruptive and disrespectful to others. During examinations, the use of such devices may facilitate cheating. For further details consult Algonquin College Policy AA32 <http://www2.algonquincollege.com/directives/files/2011/11/AA32.pdf>

Transfer of Credit

Students, it is your responsibility to retain course outlines for possible future use to support applications for transfer of credit to other educational institutions.

* College policies (previously called directives) are under review and redesign. The term *directives* is being retired. As such, the policy classification nomenclature is in transition. Students, it is your responsibility to refer to the Algonquin College Directives/Policies website for the most current information available at: (<http://www2.algonquincollege.com/directives/>)