project. Problem area chosen should be product oriented and of sufficient complexity. Normally undertaken in consultation with off-campus organizations and industry; supervised by faculty members.
Prerequisite: IDES 3301 or permission of the School.
Lectures and tutorials two hours a week, studio ten hours a week.

IDES 4301 [0.5 credit] (formerly 85.431*)
Minor Projects A
Enables students to demonstrate through a series of short projects their versatility in product design or in complementary design fields such as communication, graphic design or design experiments. Emphasis is on time management and the ability to work independently on assigned projects.
Precludes additional credit for IDES 4301.
Prerequisite: IDES 3301 or permission of the School.
Lectures and tutorials two hours a week, studio four hours a week.

IDES 4302 [0.5 credit] (formerly 85.432*)
Minor Projects B
The application of required skills and team work in a comprehensive design project. The subject matter deals with broad issues in design.
Precludes additional credit for IDES 4302.
Prerequisite: IDES 3301 or permission of the School.
Lectures and tutorials two hours a week, studio four hours a week.

IDES 4305 [0.5 credit] (formerly 85.435*)
IDES 4306 [0.5 credit] (formerly 85.436*)
Special Studies
Like the Third-year Special Industrial Design Studies, those of fourth year deal with specific projects, which may differ each year depending on the availability of specialists among the faculty of the School of Industrial Design or on particular opportunities as they present themselves.
Prerequisite: fourth-year registration or permission of the School.
Lectures and tutorials two hours a week, studio four hours a week.

IDES 4400 [0.5 credit] (formerly 85.440*)
Internship Field Report
Work experience related to industrial design. Following the internship period (12 weeks minimum), a comprehensive report describing observations and insights must be submitted by the end of the fourth week of the fall term. Graded Sat or Uns.
Tutorial hours arranged.

Information Technology (BIT, IMD, NET)

Carleton School of Information Technology Algonquin College of Applied Arts and Technology

BIT 1000 [0.5 credit]
Mathematics 1 for NET
Tailored for students in the Network Technology program, this course covers definite and indefinite integrals, differentiation and integration of the elementary functions, techniques and applications of integration.
Lectures three hours a week, tutorial and laboratory one hour a week.

BIT 1001 [0.5 credit]
Mathematics II for NET
Tailored for students in the Network Technology program, this course covers systems of linear equations, vector space of n-tuples, subspaces and bases, matrix transformations, kernel, range, matrix algebra and determinants, inner products and orthogonality, eigenvalues, diagonalization and applications.
Lectures three hours a week, tutorial and laboratory one hour a week.

BIT 1002 [0.5 credit]
Physics I
A calculus-based course covering mechanics, properties of matter, and thermodynamics. The laboratory is an essential and autonomous part of the course.
Lectures three hours a week, tutorial/laboratory three hours a week.
Prerequisites: either Ontario Grade 12 Mathematics: Advanced Functions and Introductory Calculus, or an OAC in Calculus or BIT 1100.

BIT 1003 [0.5 credit]
Physics II
Electricity and magnetism, DC and AC circuits, wave motion and light. Elements of modern physics. The laboratory is an essential and autonomous part of the course.
Lectures three hours a week, tutorial/laboratory three hours a week.
Prerequisite: BIT 1002.

BIT 1004 [0.5 credit]
Introduction to Psychology I
A survey of topics associated with psychology's role as a natural science, including neuroscience, cognition, and learning.
Lecture three hours a week.

BIT 1005 [0.5 credit]
Introduction to Psychology II
A survey of topics associated with psychology's role as a social science, including social psychology, personality and abnormal psychology.
Prerequisite: BIT 1004 or PSYC 1001.
Lecture three hours a week.

BIT 1100 [0.5 credit]
Mathematics 1 for IMD
Tailored for students in the interactive Multi-media Design program, this course covers definite and indefinite integrals, differentiation and integration of the elementary functions, techniques and applications of integration.
Lectures three hours a week, tutorial and laboratory one hour a week.

BIT 1101 [0.5 credit]
Mathematics II for IMD
Tailored for students in the interactive Multi-media Design program, this course covers systems of linear equations, vector space of n-tuples, subspaces and bases, matrix transformations, kernel, range, matrix algebra and

determinants, inner products and orthogonality, eigenvalues, diagonalization and applications.
Lectures three hours a week, tutorial and laboratory one hour a week.

BIT 2000 [0.5 credit]
Introduction to Statistics for NET
Tailored for students in the Network Technology program, this course covers data analysis, introduction to probability theory, some standard discrete and continuous distributions and their application to interval estimation and significance testing, computational aspects of statistics.
Lectures three hours a week, tutorial/laboratory one hour a week.
Prerequisite: BIT 1000

BIT 2001 [0.5 credit]
Introduction to Business
The organizational aspects of consultancies and client responsibilities within the framework of corporate management. Topics include: contracts fees, legal issues, patents, copyrights, hourly rates, hiring and employment concerns, timekeeping and invoicing, and intellectual property. The course involves preparation of proposals and visits by appropriate professionals.
Lectures three hours a week

BIT 2002 [0.5 credit]
Marketing in the IT sector
Basic problems and practices in marketing. Marketing strategies, planning, packaging, branding and promotion at the level of the individual firm; distribution channels.
Lectures three hours a week

BIT 2100 [0.5 credit]
Introduction to Statistics for IMD
Tailored for students in the interactive Multi-media Design program, this course covers data analysis, introduction to probability theory, some standard discrete and continuous distributions and their application to interval estimation and significance testing, computational aspects of statistics.
Lectures three hours a week, tutorial/laboratory one hour a week.
Prerequisite: BIT 1000.

- **Interactive Multimedia and Design Courses (IMD)**

IMD 1000 [0.5 credit]
Interactive Multimedia Design
A conceptual and historical introduction to the field of Multimedia Design, drawing on the history of art and histories of material culture. Current products, methods and media are discussed in relation to past practices and the evolution of communications and transportation technologies.
Lecture three hours a week.

IMD 1001 [0.5 credit]
Graphic Design
An overview of the field: design fundamentals, techniques and terminology, current materials, equipment and technology. Students learn the history of graphic design, the principles of design, types of layouts and mechanical and printing basics. The importance of quality and adherence to standards of care and deadlines are emphasized.
Workshop three hours a week.

IMD 1002 [0.5 credit]
Visual Dynamics
Fundamentals of composition with emphasis on realistic rendering. Students learn how to execute thumbnails and design comprehensives. Topics include illustration, type, colour, texture, proximity and unity, alignment, repetition and continuity, contrast, size relationships, balance, rhythm, negative space, cropping and view selection.
Workshop three hours a week.

IMD 1003 [0.5 credit]
Computers and Programming
Computer fundamentals and the use of applications for design. Students acquire practical skills needed to understand computing platforms, technical terminology, basic networking. Programming portion includes an introduction to HTML, VRML.
Lecture three hours a week.

IMD 1004 [0.5 credit]
Software Tools
An introduction to key 2D graphics and 3D modeling programs. Students explore both vector and raster-based images and how they are used on the web. Topics include software interfaces, tools, the Bezier drawing method, rendering, strokes and fills, creating and manipulating type, layers, and basic 3D modeling.
Workshop three hours a week.

IMD 1005 [0.5 credit]
Web Development
Under the direction of instructors, students develop four different major working web sites on an individual basis and in groups.
Workshop five hours a week.

IMD 2000 [0.5 credit]
Multimedia Data Management
This course focuses on the unique issues of backend organization of multimedia, information, and interaction products -- with a focus on database design and web-enabled databases. An introduction to data management applications such as PhP, ColdFusion, Access, MYSQL, SQLServer, Oracle and WebObjects.
Prerequisite: IMD 1003 and second year standing in IMD stream of B.I.T. program.
Lecture three hours a week.

IMD 2001 [0.5 credit]
Design and Authoring I
Using Macromedia Director students create interactive multimedia presentations suitable for publication on CD or over the web. Students will also be introduced to Lingo scripting to add complex interactivity. Topics include: advanced tools within Director, importing and controlling video and audio, importing graphics and animation.
Prerequisite: second-year standing in IMD stream of B.I.T. program.
Workshop five hours a week.

IMD 2002 [0.5 credit]
Design and Authoring II
Using Macromedia Flash students will create web-enabled interactive animations, scenes, etc. Topics include: drawing tools within Flash, animation techniques, importing sounds, graphics and video, text effects, graphic effects, adding interactivity with buttons and frame commands, variables, Action Script, creating a projector and publishing Flash movies to the web.
Prerequisite: second-year standing in IMD stream of B.I.T. program.
Workshop three hours a week.

IMD 2003 [0.5 credit]
Audio and Video
Creating and editing digital audio and video to synchronize with multimedia productions. Topics include: recording capturing and editing both video and audio files, creating titles for video, creating special effects and transitions, and compression formats.
Prerequisite: second-year standing in IMD stream of B.I.T. program.
Workshop three hours a week.

IMD 2004 [0.5 credit]
Intermediate Programming
Object-oriented programming: syntactic constructs, structured algorithms and pseudo-languages, data abstraction, classification and inheritance, typing and polymorphism, editing, compiling, linking, testing and debugging. Design and implementation of complete applications including the user interface, emphasizing number systems, documentation, methodology, program,

C++ data types and control structures.
Prerequisite: IMD 1003 and second-year standing in IMD stream of B.I.T. program.
Lecture three hours a week.

IMD 2900 [1.0 credit]
Design Studio 1
Virtual Worlds. Using 3D modeling programs and technologies that permit 3D on the web, students apply design methodologies, problem solving skills, and visual communication skills to the design of a multi-dimensional information environment. JavaScript and cgis will be used to enhance these environments.
Prerequisite: second-year standing in IMD stream of B.I.T. program.
Studio six hours a week, lecture two hours a week.

IMD 3000 [0.5 credit]
Technology and Culture
An examination of the relationship between communication technology and society. The course examines the factors that contribute to changes in the collection, storage and distribution of information and the cultural implications of these changes.
Seminar three hours a week.
Prerequisite: third-year standing in IMD stream of B.I.T. program.

IMD 3001 [0.5 credit]
Product Design Methodology
Important issues in designing successful computerized products, including design guidelines, usability testing and user-needs analysis. Experienced designers and researchers from industry participate.
Prerequisite: third-year standing in IMD stream of B.I.T. program.
Lectures three hours a week.

IMD 3002 [0.5 credit]
Computer Graphics Programming
Principles and techniques of real-time 2D and 3D graphics: raster graphics algorithms, transformations (scaling, translation, rotations) and viewing, object modeling, texture mapped rendering, illumination, ray-tracing, hidden line and surface elimination. Other topics include: camera control, collision detection, articulated figures, 3D game engine development.
Prerequisite: third-year standing in IMD stream of B.I.T. program. and IMD 2004.
Lectures three hours a week.

IMD 3004 [0.5 credit]
Design Validation
An advanced course in user-centered problem solving and usability practices. Project based exercises allow students to apply specific user testing approaches from the field of HCI (human computer interaction).
Prerequisite: third-year standing in IMD stream of B.I.T. program.
Lectures three hours a week.

IMD 3900 [1.0 credit]
Design Studio 2
Emphasis is placed on multi-disciplinary team practices to develop a comprehensive solution to a data management and communication problem. Topics include: storyboarding, instructional design, rapid prototyping, project streaming, management and marketing, technical writing and product evaluation. Projects are undertaken in cooperation with industry.
Prerequisite: third-year standing in IMD stream of B.I.T. program.
Studio six hours a week, lecture two hours a week.

IMD 3901 [1.0 credit]
Design Studio 3
Independent studio-based projects that focus on one or more special areas within the scope of multimedia, information and interaction design. Topics include computer supported collaborative work, device design and form factors, and information appliances. Students work with industry advisors, as well as studio instructor.
Prerequisite: third-year standing in IMD stream of B.I.T. program.
Studio six hours a week, lecture two hours a week.

IMD 4000 [0.5 credit]
Industrial Practice Internship
Work experience related to industrial design and/or multimedia, information and interaction design. Following the internship period (12 weeks minimum), a comprehensive report describing observations and insights must be submitted by the end of the fourth week of the fall term. Graded Satisfactory or Unsatisfactory. Tutorial hours arranged.
Prerequisite: third-year standing in IMD stream of B.I.T. program.

IMD 4001 [0.5 credit]
Senior Seminar
Opportunity for in-depth exploration of a multi-media, information or interaction design idea and/or issue. Identification of issues through a coordinated series of lectures and readings. Development of analytical and interpretative skills through seminar discussions and writing culminating in a scholarly position paper by the student.
Prerequisite: fourth-year standing in IMD stream of B.I.T. program.
Seminar three hours a week.

IMD 4900 (1.5 credit)
Design Studio 4
Course and instructional design studio emphasizing usability testing and feedback. Students demonstrate, through several short projects, their ability to identify problems, conduct qualitative testing, and incorporate the feedback into the design process to make user centered design improvements to product concepts.
Prerequisite: fourth-year standing in IMD stream of B.I.T. program.
Studio nine hours a week, lecture three hours a week

IMD 4901 (1.5 credit)
Senior IMD Project
Student-initiated design project, developed in association with a project supervisor, and external industry advisor, supported by a written report (with printed and electronic versions) and appropriate methods of two and/or three-dimensional representation. All proposals must be approved by the Program Project Committee.
Prerequisite: fourth-year standing in IMD stream of B.I.T. program.
Tutorial hours arranged.

- **Network Technology Courses (NET)**

NET 1000 [0.5 credit]
Problem Solving
Introduction to systematic methods for problem solving in the context of object oriented programming. Defining and modeling problems, designing algorithms, testing, debugging and analysis of results. Numeric methods, data presentations, data abstraction, classes, class relationships, inheritance, error handling and program style and documentation.
Lectures three hours a week, tutorial/laboratory three hours a week.

NET 1001 [0.5 credit]
Computer Technology Basics
Construction and function of PCs. Introduces technical concepts and terminology relating to system boards, system busses, input/output devices, memory, microprocessors and peripherals. Interaction of software and hardware; data storage; performance issues.
Lectures three hours a week, tutorial/laboratory one hour a week.

NET 1002 [0.5 credit]
Networking Fundamentals
Foundation knowledge for computer networks and communications. Topics include basic network design, layered communications models, IP addressing and subnets, and industry standards for networking media and protocols, with an emphasis on TCP/IP protocol suite and Ethernet environments.
Lectures three hours a week, tutorial/laboratory two hours a week.

NET 1003 [0.5 credit]
Communications Skills
Development of students' competence in written and oral communication in scientific and technical disciplines. Focus on professional documents / presentations, including process descriptions, proposals, reports, technical literature reviews and written responses to technical communications. Example: software design documents. Oral communication with emphasis on effective presentation.
Lectures three hours a week, tutorial/laboratory one hour a week.

NET 1004 [0.5 credit]
Assembly and Machine Language
Structured approach to assembly language programming. Topics include data and address registers, data and address busses, condition code register and stack pointers, machine code format, instruction sizes, operand encoding, translation of source code into machine language, and how the processor executes instructions.
Lectures three hours a week, tutorial/laboratory one hour a week.

NET 1005 [0.5 credit]
Basic Network Routing
Interconnecting Local Area Networks. Topics include different routed and routing protocols, the study of RIP and IGRP as examples of distance-vector protocols and an introduction to access control lists. Laboratory exercises cover the configuration and interconnection of routers.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 1002.

NET 2000 [0.5 credit]
Enterprise Inter-networking
Study of complex networks. Topics include switching theory, network design considerations, use of LAN switching and VLANs for improving network performance and scalability, advanced topics in routing, traffic filtering using access lists, and issues in a multi-protocol environment.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 1005 Basic Network routing.

NET 2001 [0.5 credit]
Wide Area Networking
WAN theory and design principles. The study of wide area technologies, including PPP, Frame Relay ISDN and ATM. Laboratory exercises including a group Threaded Case Study to integrate and consolidate information from previous networking courses.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 2000 (may be taken concurrently if taken in the same term).

NET 2002 [0.5 credit]
Desktop Operating Environments
Introduction to desktop operating environments. Using DOS and Windows as examples, the student will learn to use, configure and troubleshoot a typical workstation. Topics include operating system installation, file system management, system utilities, device drivers, memory management, boot process troubleshooting, and environment customizations.
Lectures three hours a week, tutorial/laboratory one hour a week.

NET 2005 [0.5 credit]
Advanced Network Routing
Routing within, and between, autonomous systems. Link state and hybrid routing protocols are studied using OSPF and EIGRP as examples, as well as BGP for Internet routing and IS-IS between autonomous systems. Other topics include classless routing, MPLS and integration of IGPs with EGPs.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 2001.

NET 2006 [0.5 credit]
Object Oriented Programming
Study of Object Oriented Programming principles, emphasizing the development of efficient and reusable systems. Topics include encapsulation, polymorphism, overloading, memory management, exception handling, and design templates and libraries.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 1000.

NET 2007 [0.5 credit]
Basics of Transmission Systems
Introduction to the physical layer of digital communication. Coverage of the transmission media (copper, fiber, cable, wireless), modulation, coding, equalization & synchronization. Examples: dial up modems, ADSL, Ethernet, T-carrier, Cable modem, SONET and wireless LAN. Factors affecting transmission error rates. Lab and field test equipment.
Lectures three hours a week, tutorial/laboratory three hours a week.
Prerequisite: BIT 1003.

NET 3000 [0.5 credit]
Database Concepts and SQL
Concepts and fundamentals of relational database systems. Students learn how to design relational databases starting from a conceptual data model, following accepted logical and physical design principles. Topics include normalisation, referential integrity, SQL DDL and SQL DML & ODBC and data extraction/filtering techniques.
Lectures three hours a week, tutorial/laboratory one hour a week.
Prerequisite: second-year standing in Networking stream of B.I.T. program.

NET 3001 [0.5 credit]
Real–time Systems
Principles of event-driven systems, review of computer organization; parallel and serial interfaces; programmable timer; I/O methods; polling and interrupts. Real-time kernels. Critical design consideration: concurrency, dead lock, synchronization. Maintaining and improving system performance. Programming exercises in low and high level languages.
Lectures three hours a week, tutorial/Laboratory two hours a week.
Prerequisite: NET 1004 and NET 2006.

NET 3002 [0.5 credit]
Remote Access Networking
This course covers remote access technologies including: modem technologies and dial-up networks, ISDN, xDSL, broadband cable access and Frame Relay. Other related topics include link fault tolerance, QoS, traffic management/ scheduling and access security/management, Network address translation (NAT) and VPNs.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 2001.

NET 3003 [0.5 credit]
Multilayer Switched Networks
Overview of campus networks. LAN internetworking. Switched vs. Routed internetworking. Hubs, LAN switches (bridges), and VLAN. Switches' learning protocols. Spanning tree protocol. Frame Relay and ATM switched networks.

IP switching & MPLS. Routing between VLANs. Multi-layer switching. Multicasting, Rich media, QoS.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 2001.

NET 3004 [0.5 credit]
Data Structures
Specification and design of abstract data types and their implementation as stacks, queues, trees, tables and graphs. Common and useful examples. Parsing and finite state machines. Analysis of algorithms, recursion, re-entrance. Special focus: abstraction, interface specification and hierarchical design using object-oriented programming.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 2006

NET 3005 [0.5 credit]
Unix / Linux Operating Systems
Introduction to Unix and Linux operating environments. Students study Unix/Linux servers, including operating system installation, administration and configuration of services such as NIS, DNS, SAMBA, sendmail, Apache web server, pppd and DHCP. Basic server security is also emphasized, including the creation of firewalls.
Lectures three hours a week, tutorial/laboratory one hour a week.
Prerequisite: NET 2002.

NET 3006 [0.5 credit]
Enterprise Network Management
The infrastructure for network management. The Internet and ISO models. SNMP, ASN.1. Structure of management information and MIB. Events and managed objects. EMS vs. NMS. NOC, remote & Web-based management tool. OAM&P Focus: operation, maintenance, performance monitoring. Introduction of traffic engineering and load balancing.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: third-year standing in Networking stream of B.I.T. program.

NET 3007 [0.5 credit]
IT Security Issues
Basics of Information Technology security. Students are introduced to the goals of IT security, common threats and countermeasures including firewalls, SSL technologies and IP Masquerading. Several operating environments will be studied as examples. This course will also include a section on computer ethics.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: third-year standing in Networking stream of B.I.T. program.

NET 3900 [0.5 credit]
NET 3901 [0.5 credit]
Networking Technology Project
This course compels students to apply sound project management and software engineering principles in the design and implementation of a Networking Technology project within a team environment. Done under faculty supervision, either internally or in collaboration with industry. Includes formal documentation and presentation.
Tutorial/laboratory two hours a week.
Prerequisite: third-year standing in Networking stream of B.I.T. program.

NET 4000 [0.5 credit]
Emerging Network Technologies
Overview of emerging network technologies with focus on IP, QoS, Optical, multimedia and Wireless themes re ecting current technology state of the art. IP: VPN, RSVP, IPv6, MPLS, GMPLS. QoS: Diffserv, VLAN, ATM. Optical: SONET, DWDM, packet over SONET. Multimedia: VoIP, video streaming. Wireless: 802.11, Bluetooth.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: fourth-year standing in Networking stream of B.I.T. program.

NET 4001 [0.5 credit]
Network Simulation
Simulation as a problem-solving tool; traffic generation; general discrete simulation procedures: event table and statistical gathering. Analyses of simulation data: point and interval estimation. Confidence intervals. Simulation exercises including traffic monitoring, congestion, load balancing, resource utilization, growth planning using OPNET simulation tool.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: BIT 2000.

NET 4002 [0.5 credit]
Client Web Programming
Fundamentals of programming for a web client, using HTML, JavaScript, Perl, and RAD tools. Topics include text formatting, use of graphics, tables and frames, style sheets, forms and CGI using Perl.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 2006.

NET 4003 [0.5 credit]
Computer Systems Architecture
History of computers; evolution of concepts; in uence of technology. Detailed analysis of design of ALUs, control units, memory systems. Microprocessor systems, pipeline and array processors. RISC, CISC, fault tolerant, and digital signal processing architectures. Packet processing-special-purpose devices: Network processors, classifiers, switch fabrics.
Lectures three hours a week, tutorial/laboratory one hour a week.
Prerequisite: third-year standing Networking Stream of B.I.T. program and NET 1004.

NET 4004 [0.5 credit]
Software Engineering
Introduction to all phases of software lifecycle: requirement analysis, function specification, software design, design documentation, coding, unit testing, system integration, product verification, quality assurance and control. Project management aspects. Software reuse. Source code control (configuration management).
Lectures three hours a week, tutorial/laboratory one hour a week.
Prerequisite: third-year standing in Networking stream of B.I.T. program.

NET 4005 [0.5 credit]
Server Web Programming
Fundamentals and practice of programming for the World Wide Web at the server side using Javascript, Perl, CGI and RAD tools. Topics include server architecture, distributed databases, security servers, progressive image and video transmission, use of graphics, tables and frames.
Lectures three hours a week, tutorial/laboratory one hour a week.
Prerequisite: NET 2006 and NET 3000.

NET 4006 [0.5 credit]
Network Operation and Testing
Network Management and diagnostic tools. Troubleshooting TCP/IP, LAN switches, VLANs, routing and switching, Frame Relay, ISDN, EIGRP, OSPF and BGP.
Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: NET 2005, 3002 and 3003.

NET 4007 [0.5 credit]
Multimedia Applications
Audio and video compression. H.261, JPEG, MPEG and DVI. Accessing audio and video from a web server. Real Time Streaming Protocol (RTSP). Multimedia operating systems. Multimedia database. Network support for multimedia applications. Multimedia synchronization.

Lectures three hours a week, tutorial/laboratory two hours a week.
Prerequisite: fourth-year standing in Networking stream of B.I.T. program.

NET 4900 [0.5 credit]
Network Design Project
This fourth year course further provides students with the opportunity to apply concepts and knowledge gained in previous courses towards the design and implementation of a major Networking related project. Working in teams or as individuals under the direction of faculty members, students undertake projects either internally or in collaboration with industry.
Tutorial/laboratory two hours a week.
Prerequisite: fourth-year standing in Networking stream of B.I.T. program.

Integrated Science (ISCS)

Integrated Science Institute
Faculty of Science

ISCS 3909 [0.5 credit] (formerly 64.399)
Independent Study
The student integrates aspects of both the science and the non-science areas of study in a project supervised by a faculty member. Prior to or immediately upon registration, the student should consult with the IS Chair for topic approval and course regulations.
Precludes additional credit for ISCI 3909.
Prerequisites or co-requisite: at least 0.5 credits at the 3000-level or better and permission of the IS Chair.

ISCS 4908 [1.0 credit] (formerly 64.498)
Honours Project
Under the supervision of a faculty adviser, the student carries out a research project in the IS areas of study. Prior to or immediately upon registration, the student should consult with the IS Chair for topic approval and course regulations.
Precludes additional credit for ISCI 4908.
Prerequisite: permission of the IS Chair.