

# INFORMATION TECHNOLOGY (INFO)

This is a list of the Information Technology (INFO) courses available at Kwantlen.

## **INFO 3110 CR-3**

### **Professional Communications in Information Technology**

Students will address the activities and techniques for developing proposals, specifications, narratives, reports, memoranda, executive summaries and other documentations commonly used in information technology. Students will present written and oral communication assignments based on the standard Information Systems Development Lifecycle: Investigation, Analysis, Design, Development, Testing and Implementation.

*Prerequisites: Completion of 60 credits of 1100-level or higher courses*

*Transferable (refer to transfer guide)*

## **INFO 3120 CR-3**

### **Web Programming with Java**

Students will learn the syntax, resources and utilities package of Java related to web applications. Students will also examine web design principles, apply their knowledge to construct web components, including Java Server Pages (JSP), Servlets and JavaBeans for both Internet and Intranet environments, and implement dynamic web applications using a Java web server and a relational database management system.

*Prerequisites: 30 credits of 1100-level or higher courses, or permission of the instructor*

## **INFO 3130 CR-3**

### **Discrete Mathematics**

This course provides students with a theoretical foundation in computation and computability. Students will learn principles, concepts and applications of discrete mathematics. Topics include: set theory, logic, formal reasoning, induction, counting, relations, functions, mapping, formal languages, automata theory and graph theory.

*Transferable (refer to transfer guide)*

## **INFO 3140 CR-3**

### **Advanced Data Communications Systems**

Students will learn and develop practical experience with the design, development and implementation of local-area networks (LAN), virtual local-area networks (VLAN) and wide-area networks (WAN). Students will also gain hands-on experience on installation and configuration of LAN switches and routers with different routing protocols, network layer protocols and data link layer protocols. Upon successful completion of this course, students will have a thorough understanding and hands-on experience in installing, troubleshooting, fine tuning, and administering computer network for small to medium size business.

*Prerequisites: 30 credits of 1100-level or higher courses, or permission of the instructor*

## **INFO 3210 CR-3**

### **Distributed Systems**

Students will learn principles, techniques and strategies used in design and implementation of distributed applications and system solutions that are robust, scalable, and secure. The course focuses on modeling distributed systems and building distributed objects using .NET framework. Students will be required to develop a distributed business solution using C# and .NET Remoting.

## **INFO 3220 CR-3**

### **Multimedia Systems**

Students will acquire knowledge of multimedia systems architecture, digital audio and video representation and the format of multimedia storage and image processing. They will learn the application of multimedia information systems including multimedia authoring, multimedia conferencing, multimedia groupware, high definition television and desktop integrated computing.

## **INFO 3230 CR-3**

### **Advanced Object-Oriented Application Development**

Students will learn to use object-oriented methodology to analyze, design and implement real-world software applications. Students will learn the best practices for iterative software development recommended by the Unified Process (UP). Student will learn the advanced features of the Unified Modeling Language (UML) in modeling distributed software applications. Students also will learn the concepts of software design patterns and how these patterns can be used to create flexible and extensible software.

## **INFO 3240 CR-3**

### **Enterprise Resource Planning Systems**

Students will learn the concepts in Enterprise Resource Planning (ERP). They will learn the basis of how integrated information systems such as ERP systems can help companies to optimize business processes. Students also will learn business process modeling, process improvement and ERP implementation. They will explore the role of ERP in electronic commerce. Students will gain hands-on experience through working on an ERP system.

## **INFO 3250 CR-3**

### **Content Management and Information Architecture**

Students will learn the concepts of content management and information architecture. They will learn the major components of a typical content management system (CMS) and its underlying information architecture that support information needs of enterprises. They will learn the criteria to evaluate and select a CMS. Student also will learn to design content access structures and to apply structured authoring techniques in content composition using Extensible Markup Language (XML) and Darwin Information Typing Architecture (DITA).

**INFO 3270 CR-3****Special Topics in Information Technology**

Students will learn and investigate development of contemporary topics within the information technology discipline and the fundamental concepts underlying them. They will focus on special topics of current interest which are not covered in other existing courses offered by the department, and topics vary from term to term.

NOTE: Students may only use the course once towards the program requirement.

*Prerequisites: 15 credits in CISY or entry with the permission of the Dean*

*Transferable (refer to transfer guide)*

**INFO 4210 CR-3****Human Factors and Computer Interface Design**

Students will study procedures for analyzing human-computer interaction (HCI) and will translate this information into design criteria. They will learn to ensure that computer interface design specifications meet end-user requirements for perceptual and cognitive factors; learnability; recall, recognition and retention; speed and accuracy of performance; cultural factors; and job satisfaction. They will identify task and system requirements and perform usability testing methodologies for both desktop and small screen interfaces.

**Note:** Students may earn credits for only one of PSYC 4920 or INFO 4210 as they are identical courses

*Prerequisites: PSYC 2385 OR 15 credits CISY (CISY 1113 recommended)*

**INFO 4220 CR-3****Server Operating System Technologies**

Students will learn principles, techniques and strategies used in planning, installing, testing, and administering a server operating system. Students will gain practical hands-on experience on the installation and configuration of a server operating system. The courses covers creating and managing users using Active Directory, installing and configuring DHCP, DNS, Printer Server, IIS Web Server, and a Virtual Private Network (VPN). Students are required to plan, design, and install an application server using real-world scenarios. Upon successful completion of this course, students will have an understanding and hands-on experience in installing, trouble shooting, fine tuning, and administering a server operating system.

**INFO 4230 CR-3****Information Technology Project Management**

Students will learn advanced topics in Information Technology (IT) project management. They will examine various issues relating to the development and implementation of complex information systems. Students will also explore the use of new technologies in IT project management and will extensively use a project management software application to complete assignments, case studies and the term project.

**INFO 4310 CR-3****Entrepreneurial Development in Information Technology**

Students will gain an understanding of entrepreneurship fundamentals in the information technology sector, including business planning, financing and venture capital, operations, human resources, marketing and personal selling.

**INFO 4320 CR-3****Software Quality Assurance**

Students will learn the essential features involved developing timely, cost-effective and high quality software products that meet the user's requirements. They will examine the effective deployment of quality assurance procedures throughout the entire software development process. Other topics covered in this course will include: the concepts of Total Quality Management (TQM), development of quality assurance plans, implementation of verification and validation functions, selection of tools to support quality assurance, application of software metrics to measure quality, and the International Standards Organization (ISO) certification process.

**INFO 4330 CR-3****Data Warehousing and Data Mining**

Students will examine the problems caused by having too much information and the methods, processes and tools for extracting useful information from multidimensional databases and data marts stored on different system platforms. They will also acquire the techniques for defining, selecting, implementing and evaluating data warehousing and data mining solutions for businesses.

**INFO 4340 CR-3****Integration Project**

Students will apply their prior learning to an integration project which may be the critical analysis of a selected area in information technology, or the development of an innovative solution to a significant problem in information technology. They may also implement information technology applications in a subject area such as art, business, marketing, accounting, economics, human relations, natural science, social science, health science and technology. All projects preferably must be from an existing government organization or agency, private or non-private industry.

*Prerequisites: 4th year standing (has completed 90 credits, any under graduate course).*

**INFO 4350 CR-3****Wireless Technologies and Programming**

Students will learn the concepts and principles of wireless technologies, wireless devices, wireless signals, wireless networks and wireless access technologies. They will learn wireless programming techniques and will develop wireless applications using technologies that include Wireless Markup Language (WML), WMLScript, Java and Microsoft .NET based wireless application development environments.

**INFO 4360 CR-3****Information System Security**

Students will learn the principles, policies, and procedures required for a successful implementation of information system security infrastructure. They will design and develop secure information systems through hardware, software and administrative measures.

**INFO 4370 CR-3****Security of Wireless Systems**

Students will learn about wireless security technologies such as advanced user authentication, robust encryption, and intrusion prevention. They also will learn concepts of wireless discovery, wireless attack identification and monitoring, and wireless security policies and solutions. Students will be required to conduct research and work on a project to solve real-world wireless system security problems in a simulated environment.

**INFO 4380 CR-3****Wireless Sensor Networks**

Students will learn the concepts of wireless sensor networks and their applications. They will learn the fundamentals of ZigBee wireless networking, ZigBee protocol layers, transceiver requirements, battery life analysis, as well as examples of ZigBee networks and devices. They will conduct research and develop an application using products from the industry.

*Prerequisites: INFO 4350*