ICT-U CAMEROON, P.O. Box 526 Yaounde, Cameroon

Schools and Programs

DETAILED ICT-U PROGRAMS AND CORRESPONDING CREDIT HOURS

Important note on English as a Second Language (ESL) and International Computer Driving License (ICDL):

English as a Second Language (ESL): The courses detailed in this document are all taught in English. However, students with French or Spanish as their first language will be offered the opportunity to go through a one-semester intensive English as a Second Language (ESL) program to prepare the students for our ICT University courses. This one semester program DOES NOT count towards the student's degree. The details of the ESL program follow the explanation of the ICDL.

International Computer Driving License (ICDL):

The ICDL demonstrates a student's ability to use a computer and its most popular computer applications. Candidates have to pass tests in the following seven modules as the first three (3) credit hour course at ICT-U. The ICDL program is for anyone who wishes to become fully competent in the use of a computer and common applications. Each ICDL module provides a practical program of up-to-date skills and knowledge areas which are validated by a test.

For students to achieve a solid base of skills and knowledge, therefore attaining a minimum level of digital literacy, it is recommended that candidates complete and attain certification in a minimum of four ICDL modules. Students are required to take training on each module prior to taking the test. Each module is tested separately with each test lasting no longer than 45 minutes. For a recommended level of ICT competence to be achieved, a certification of a minimum of seven ICDL modules is appropriate. In order to achieve the ICDL certification, individuals must pass a test for each of the seven modules.

ALL ICT-U students MUST take this course which counts for three (3) credit hours towards their degree. This course will be open to members of the public who just wish to do this as their part of their professional development, without engaging in any of ICT-U's degree programs.

Module 1 - Concepts of ICT
Module 2 - Using the Computer and Managing Files
Module 3 - Word Processing
Module 4 - Spreadsheets
Module 5 - Using Databases
Module 6 - Presentation
Module 7 - Web Browsing and Communication
Module 8 - 2D Computer Aided Design
Module 9 - Image Editing
Module 10 - Web Editing
Module 11 - Health Information Systems Usage
Module 12 - IT Security
Module 13 - Project Planning

English as a Second Language (ESL) Detailed Program: Organized in five modules

English as a Second Language Module 1

Conversation Skills Are Developed

• Reading and writing are important skills, but we begin the ESL program with emphasis on listening and speaking. The main focus of the program is developing one's ability to use English in everyday personal and workplace situations.

The student will receive a student assignment booklet and CD which are designed to help you learn to speak English. The student needs to follow the directions in the student assignment booklet to understand how and when to use each component of the program.

English as a Second Language Module 2

Literacy in the Workplace

The student will learn the essentials of basic English necessary to survive on the job.

• Completing simple forms and asking for directions

• Identifying places at work

• Following simple instructions for using common machines at work

• Greeting customers, taking their orders and offering assistance

• Understanding good work habits

• Working with money, both at work and at home

• Following safety rules at work

• Reading help wanted ads, and completing a job application

English as a Second Language Module 3

Everyday English

The student will learn the essentials of basic English necessary to survive in any English speaking country

• Introducing and completing an identification form

• Reading maps, following directions and using a payphone

• Calendars, times and dates, store hour signs, and the weather

• The supermarket, reading price tags and expiration dates

• Shopping for clothes, comparison shopping, and writing checks

• Buying or renting a home, asking for simple repairs

• Making doctors' appointments, listening to doctors' instructions

• Reading help wanted ads, completing job applications

• Using public transportation and reading traffic signs

English as a Second Language Module 4

Basic Skills in Reading

The student readings include a variety of sources such as popular literature, classical literature, articles, reviews, and workplace-related materials.

• Fiction - includes many different examples from novels and short stories

• Nonfiction - biographies, autobiographies, essays, magazine articles, reviews

• Poetry and Drama - popular, social, and classical aspects of each are covered

• Prose and Visual Information - brochures and ads, calendars and schedules, forms and documents, manuals and handbooks, drawings and diagrams, charts and graphs

English as a Second Language Module 5

Basic Skills in Writing

Writing is a form of expression and communication. When the student writes well, others can understand what they are saying. The student will learn to use the writing process to their advantage.

• Essay and Creative Writing - the writing process, narrative writing, descriptive writing, expository writing, persuasive writing

• Workplace and Personal Writing - letter writing, job search writing, workplace writing, explanatory writing, report writing

• Grammar Guide - mechanics, usage, sentence structure

• Writing Handbook - models, editing, checklist, proofreading

ACADEMIC MAJOR 3: TELECOMMUNICATION (MS)

Master of Science in Telecommunication (MS)

Program Overview:

The Master of Science (MS) in Telecommunication incorporates knowledge of engineering, computer science, legal aspects of networking and telecommunication and managerial skills. This program is two years for full time students taking classes in the Spring, Summer and Fall semesters. Students will be allowed to complete the program above two years but cannot exceed three years. They are required to complete at least 36 credit hours prior to graduation. These courses are intended to provide knowledge and critical skills essential for success in the rapidly growing field. Students in this program are expected to develop the following skills upon graduation:

- Develop a sound knowledge of the basic networking technologies, services and skills
- The ability to identify and compare networking and telecommunication services and products, and
- The ability to manage composite telecommunication projects.

The course load will consist of the following:

- Completion of Coursework

  - ICT Research Seminars (3 hours)
  - Courses in Area of Concentration (21hours)
  - Quantitative and Quantitative Research Methods/Statistics (6 hours)
  - Internship (3 hours)
  - Thesis (3hrs)

- Submission/Publication of two peer reviewed journal and two conference articles (facilitated through one-to-one mentoring of ICT-U faculty members)

Courses for the Master of Science degree program and their description are as follows:

Green Information Technology (3hrs)

This course permits students to reduce the energy use, waste, and other environmental impacts of IT systems while decreasing life cycle costs, thus improving competitive advantage. Students are taught how to measure computer power usage, minimize power usage, obtain sustainable hardware, design green data centers, configure computers to minimize power, recycle computer equipment, use virtualization to reduce the number of servers,

and other green technologies. Students also acquire skills on how to make green IT an integral part of organizational culture and planning, to promote long-term sustainable information technology. The course is executed through a combination of online lectures, labs, field trips, assignments, case studies, and a term project.

Information Structures (3hrs)

Course content: This course examines the concepts of object-oriented approach to software design and development using the Java programming language. It includes a detailed discussion of programming concepts starting with the fundamentals of data types, classes, control structures methods, applets, arrays and strings, and proceeding to advanced topics such as inheritance and polymorphism, interfaces, creating user interfaces, streams and exceptions. Upon completion of this course the students will be able to apply software engineering criteria to design and implement Java applications that are secure, robust, and scalable.

Computer Graphics (3hrs)

Course content: This course is primarily the study of design of graphic algorithms. At the end of the course students are expected to be able to write programs to model transform and display 3-dimensional objects on a 2-dimensional display.

Quantitative Methods for Information Systems (3hrs)

Course content: The first part of this course lays down the mathematical foundation for the study of Probability Theory and Statistics, functions, combinatorial mathematics, linear systems of equations; differentiation and integration fundamentals are covered. The second part of the course focuses on the study of discrete and continuous distributions, correlation and linear regression.

Software Development with C++ and Java Programming for Mathematical Finance (3hrs)

Course content: This course focuses on object-oriented programming using C++ Some of the topics covered are: function overloading, build in type, constructors, destructors, operations functions development of modular, software maintenance, etc.

Database Management (3hrs)

Course content: This course looks at a theoretical but modern presentation of database topics. Some of these topics range from Data and Object modeling, to development of web-based data applications, relational databases, manipulating relational databases, achieving performance and reliability with database systems and physical characteristics among others

Other courses that might also be offered in the Masters of Science program are:

- Web development (3hrs)
- Computer Language Theory (3hrs)
- Enterprise Java (3hrs)
- Systems Programming Using UNIX (3hrs)
- Business Structure and Strategy in the Telecommunication Industry (3hrs)
- Mobile Application Development (3hrs)
- Network Performance and Management (3hrs)
- Designing and Implementing a Data Warehouse (3hrs)
- Rich Internet Application Development (3hrs)
- Advanced Game Graphics (3hrs)
- Real-Time Multimedia Simulation (3hrs)
- Artificial Intelligence for Video Games (3hrs)
- Web Services (3hrs)
- Cloud Computing (3hrs)
- Directed Study (3hrs)
- Thesis in Computer Science (3hrs)

Concentration in Business Intelligent and Database Management

- Quantitative Methods for Information Systems (3hrs)
- Business Data Communication and Networks (3hrs)
- Database Design and Implementation for Business (3hrs)
- Information Systems Analysis and Design (3hrs)
- MET CS 782 IT Strategy and Management (3hrs)

Concentration on Digital Forensics

- Computer Networks (3hrs)
- Business Data Communication and Networks (3hrs)
- Digital Forensics and Investigations (3hrs)
- Data Mining and Business Intelligence (3hrs)
- Network Forensics (3hrs)
- Digital Forensics (3hrs)

Concentration on IT Project Management

- Quantitative Methods for Information Systems (3hrs)
- Information Technology Project Management (3hrs)
- Distributed Software Development and Management (3hrs)
- Software Quality Management (3hrs)
- IT Strategy and Management (3hrs)
- Enterprise Architecture (3hrs)

Concentration on Security

- Biometrics (3hrs)
- Database Security (3hrs)
- IT Security Policies and Procedures (3hrs)
- Network Security (3hrs)
- Digital Forensics and Investigations (3hrs)
- Enterprise Information Security (3hrs)
- Network Forensics (3hrs)
- Advanced Digital Forensics (3hrs)
- Cryptography (3hrs)

Concentration on Software Engineering:

- Software Design and Patterns (3hrs)
- Software Engineering (3hrs)
- Software Quality Management (3hrs)
- Agile and Advanced Software Engineering Methods (3hrs)