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
II. DEGREE PROGRAM: SPECIALIZATION DIPLOMAS AND PROFESSIONAL CERTIFICATION (POST GRADUATE PROGRAMS)

ACADEMIC MAJOR 1: DIPLOMA IN TELEMEDICINE

Program Overview

The Diploma course in telemedicine is a one academic year (two semester) course that enables the participant to understand the concept, the scope and the need for telemedicine especially in resource poor settings. The course will enable participants to develop skills for practicing developing, using and deploying electronic medical record systems and practice telemedicine on day-to-day activities of clinical services in the context of resource limited settings. The course will also enlighten allied healthcare clinicians, government health care representatives, policy makers, managers, technologists and others towards the characteristics, potential and building blocks of telemedicine systems. This course promises to facilitate budding clinicians with the knowledge and skills needed in using technology to support healthcare delivery in resource poor settings. It will also enable them to develop as forward looking and tech-savvy clinicians. At the end of the course, students will:

1. Gain Knowledge on current E-health Technologies and Telemedicine.
2. Gain hands-on experience on using Electronic Medical Records (EMR) application;
3. Gain Knowledge on implementing a free EMR application.

This course will help enhance the rate and extent of Telemedicine adoption in resource limited settings. Interested entities/organizations will be provided options to launch Telemedicine and E-Health technologies in their organization.

The course is not limited to healthcare professionals; we welcome participation from not only technical background but also those who have a general familiarity with or an interest in the field. The training will be accessible to individuals and organizations interested in telemedicine regardless of existing telecommunication infrastructures and socioeconomic status. However, the course requires a good command of English and basic skills required in using computer, internet and email. Upon graduation, participants are expected to complete eight units; seven of which are core units and one elective core unit.
Course Units Contents

1. INTRODUCTION & OVERVIEW OF TELEMEDICINE COURSE

Objective: This unit will expose the participant to the topics that will be covered in this course. Besides enabling the participant to understand the scope of the course, the unit will also help the participant to map the targeted learning.

2. INTRODUCTION TO TELECOMMUNICATIONS, COMPUTER NETWORKING TECHNOLOGIES & HEALTHCARE PRACTICE

Objective: Upon completion of this unit, participants will be able to understand the principles and roles of telecommunications, computers and networking including healthcare practice in care process re-engineering. The participant will also learn techniques involved in searching medical and technical journals.

Topics:

I. Telecommunications

- What is telecommunications?
- Elements of telecommunications systems
- Modalities of telecommunications systems
- Telecommunications Standards
- Global Telecommunications Industry

II. Computer Networking Technologies

- History and Elements of a computer
- Types of computers
- Applied web browser for healthcare practice
- What is networking?
- Types of topologies
- Global scenario of Computers and Networking Industry
III. Healthcare Practice

- Healthcare Status, Delivery Systems & Issues in Developing Countries
- Healthcare Status, Delivery Systems & Issues in Developed Countries
- Healthcare Practice Regulatory agencies
- Future of Healthcare (Challenges and Future Trends and Opportunities)
- Policies and Economics in Healthcare

3. ICT APPLICATIONS IN HEALTHCARE

Objective: This unit will introduce the applications of ICT in healthcare. The participant will learn about variety of roles that ICT is playing in the domain of healthcare.

Topics:
- History of ICT in Medicine
- Information Systems in Healthcare
- Healthcare Management Information Systems
- Overview of Medical Informatics
- Overview of e-Health applications
- Global Healthcare ICT Industry

4. INTRODUCTION TO TELEMEDICINE

Objective: This unit aims to lay a strong foundation of telemedicine. Upon completion of this unit, the participant will be able to have a clear understanding of the concepts of Telemedicine, including basic terminologies, and technologies, services, impact and challenges of telemedicine.

Topics:
- What is telemedicine?
- Definitions of telemedicine
- History of telemedicine
- Organs and Forms of telemedicine
- Evolution of telemedicine
• Impact of telemedicine on healthcare delivery
• Issues in telemedicine
• Type of digital information (audio, video, still images, text and data)

5. TELEMEDICINE SYSTEMS

Objective: This unit will enable the participant to understand the generic architecture of telemedicine systems. Constituents of each sub-system of telemedicine will be covered in this unit.

Topics:
• Telemedicine as a system
• Critical sub-systems of telemedicine
• Regulatory sub-systems
• Optional sub-systems of telemedicine
• Mobile applications of telemedicine

6. CLINICAL AND TECHNICAL ASPECTS OF TELEMEDICINE

Objective: The participant will learn about applications of telemedicine and will also get a clear idea about two important perspectives of telemedicine.

Topics:
• Applications of telemedicine
• Perspectives of clinicians
• Telemedicine and diagnostic imaging
• Telemedicine and monitoring of physiological parameters
• Telemedicine and surgery

7. DATA AND INFORMATION STANDARDS IN TELEMEDICINE

Objective: This unit will provide an insight into the universal standards relevant to telemedicine.

Topics:
• Role of standards in Healthcare
• Health Level Seven (HL7)
• Digital Imaging and Communication in Medicine (DICOM)
• Logical Observation Identifiers Names and Codes (LOINC); Systematized Nomenclature of Medicine-Clinical Terms (SNOMED)
• Adoption of Information Systems Standards in Healthcare
• Ethical and legal aspects of telemedicine: confidentiality, and the law, patient rights and consent, access to medical Records, reimbursements.
• Values to the Patient, Clinician, and Health Care Organization training, cost, administration, Challenges to Successful Implementation

8. TELEMEDICINE IMPLEMENTATION

Objective: The participant will be exposed to real world telemedicine implementations in diverse settings. This unit will help the participant to be clear about the practical aspect of the concepts learnt in preceding units.

Topics:
• Telemedicine networks in developed countries
• Telemedicine networks in developing countries
• Mobile telemedicine (mHealth) applications
• Integration of Telemedicine with other IT applications in healthcare
• Challenges to successful implementations
• Telemedicine case study to identify the healthcare professional roles and understanding of the implications of training, cost and administration involvement.

9. ETHICAL AND LEGAL ASPECTS OF TELEMEDICINE

Objective: The participant will learn about licensure, accreditation, confidentiality of medical data, malpractice liability, and reimbursement. The participant will also get an insight into the roles of various actors in telemedicine and will gain understanding of the implications of training, cost and administration involvement.

Topics:
• Confidentiality of medical data
• Challenges being faced by telemedicine
Roles of clinicians and paramedical personnel
Ethical and legal aspects of telemedicine
Implications of trainings and cost

10. ADOPTION OF TELEMEDICINE

Objectives: This unit will provide a clear understanding of the present status of adoption of telemedicine in healthcare set ups. It will also facilitate participants understanding about the factors those influence adoption of telemedicine.

Topics:
- Concepts: Innovation, Adoption, Diffusion, Integration
- Factors influencing Adoption of Telemedicine
- Diffusion of IT Innovations in Healthcare
- Adoption & Diffusion of Telemedicine in resourceful and resource limited settings

Seminar

30 minutes presentation by each participant: topics to be assigned by the Course Coordinator and Instructors.

Teaching Modalities

The course will be serviced via distance learning by using following teaching modalities:

1. PowerPoint lectures - The key material is easily accessed via the Internet;
2. Interactive discussion - Students engage in discussion on important issues. ICT-U faculty moderator helps keep the discussion on track;
3. Reading assignments – participants are required to read landmark publications on Telemedicine. In addition, participants are provided and/or directed to other key Documents, reports, and papers on telemedicine;
4. Homework/quizzes - Each of the units is accompanied by a multiple-choice self-assessment that aims to have the participant apply the knowledge from the unit;
5. One classroom-based tutorial is conducted at the end of the Course, will be an intensive one-day in-person session that will bring course participants and ICT-U and local course faculty together to review the course materials, give presentation of course projects and
share professional and working experience in telemedicine as well as conducting exams;

6. A Course Project/Seminar requires students to describe the application of a telemedicine intervention in their own setting based on the knowledge and principles acquired in the course.