

Diploma of Website Development

Programme code: ICT50615

Program Description

The BHCK Diploma of Website Development provides the skills and knowledge for a graduate to design, build and manage websites as an independent web developer or as part of a team. On completion of the program the student will be able to design and implement a web page user interface, create dynamic web pages, design and implement relational databases for use with a web site, design and implement client and server programs to create a dynamic website using both modular and object oriented programming languages and be able to plan and implement a web site project.

Career Pathway

Students with a Diploma in Website Development are able to continue toward a Bachelors Degree in IT

Diploma Components

The 63 credits of the Diploma are composed of:

- 18 credits of General Education courses
- 3 credits of Core DAAD courses
- 42 credits of Specialist courses

General Education Courses – All BHCK Mainstream students take these courses

Course Code	Course Title	Credits
STA100	Elementary Statistics	3
MAT100	Basic Math	3
ENG110	Critical Reading and Writing 1	3
ENG210	Critical Reading and Writing 2	3
IT111	Business Technology	3
ARB110	Arabic Language	3
ARB110-F(N)	Arabic (As a second Language)	
Total		18

All DAAD students take this course

Course Code	Course Title	Credits
PMG201	Project Management	3
Total		3

Specialist Courses – Only Web Development Students take these courses

Course Code	Course Title	Credits
WDV101	Web Development Foundation	3
ENV101	IT Environment	3
PRG101	Programming (C++)	3
WDV102	Introduction to Web Design	3
PRG 102	Programming (Java)	3
ECM101	E-Commerce	3
DBS101	Introduction to Database	3
WDV201	Web Design Implementation	3
PRG201	Server-Side Scripting using PHP	3
DBS201	Relational Database Design	3
WDV202	Database Driven Web Applications	3
WEB201	New Web Technologies	3
DBS202	Databases Modeling	3
SDV202	System Development - Implementation	3
Total		42

Total Credits for Diploma of Website Development

63

Course:	STA100 Elementary Statistics
B.H.I. Codes:	N/A
This course introduces modern methods of descriptive and inferential statistics. The topics include descriptive statistics, probability, probability distributions, confidence intervals, hypothesis testing, linear regression, and correlation.	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	MAT100 Basic Math
B.H.I. Codes:	N/A
This is an intermediate-level course building on the mathematics material covered in the Foundation Program. The subject matter encompasses areas of utmost importance for a college student in any discipline, and gives the students a strong foundation of those concepts, particularly as regards practical skills and problem-solving strategies. Topics include: Percents, ratios, statistics, algebra, and others.	
Prerequisites:	MS030 Foundation or direct entry to Diploma qualification study
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	ENG110 Critical Reading and Writing 1
B.H.I. Codes:	N/A
In Mainstream, students are required to read and comprehend extensive, detailed written texts and write reports, summaries, and other academic papers. This course helps them to succeed in their mainstream courses by improving their skills in reading and writing. It builds on the skills that they studied and practiced in previous levels.	
Prerequisites:	ENG030 Foundation or direct entry to Diploma qualification study
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	ENG210 Critical Reading and Writing 2
B.H.I. Codes:	N/A
<p>This course is a continuation of Critical Reading and Writing 1, reinforcing the skills students learned in the previous semester. Critical Reading and Writing 2 helps students to succeed in their mainstream courses by improving their skills in reading and writing. In the course, students focus on comprehending and analyzing readings similar to those in their mainstream courses. They learn research skills and practice writing reports, summaries, responses and other academic papers that are comparable to the writings in their mainstream courses.</p>	
Prerequisites:	ENG110 Critical Reading and Writing 1
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	IT111 Business Technology
B.H.I. Codes:	ICAICT205A Design basic organisational documents using computing packages
<p>This is an intermediate-level course building on the information technology material covered in the Foundation I.T. course. The subject matter encompasses four relatively discrete office productivity programs (word processing, spreadsheets, electronic presentations, and databases), with a strong emphasis on real-world application. The functions and usage of the software are taught through a hands-on approach whereby the students learn to utilize the software by performing multiple tasks as encountered in the workplace or other professional environments.</p>	
Prerequisites:	CS030 Foundation or direct entry to Diploma qualification study
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	ARB110 Arabic Language
B.H.I. Codes:	N/A
<p>This course is designed for students whose first language is Arabic. It focuses on the Arabic language as spoken from earliest times to the present. It includes Arabic philology, Classical Arabic, Modern Standard Arabic, and Arabic dialects. The multiplicity of the Arabic language, as well as the coexistence of colloquial and modern Arabic, is addressed in this course. The course intends to alert students to the wealth and intricacies involved in learning the Arabic language and its many cultures. The course emphasizes all four skills (reading, writing, listening and speaking). Vocabulary and grammar are expanded. It is taught in Arabic.</p>	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	ARB110-F(N) Arabic (As a Second Language)
B.H.I. Codes:	N/A
<p>This course is designed for students whose first language is not Arabic. It introduces students to the Arabic alphabet and script of modern written Arabic. It develops the students' knowledge in the four skill areas of reading, writing, listening and speaking. With a modern approach, it uses popular media and themes relating to contemporary experience. It is taught in Arabic.</p> <p>Note: As the number of students who are eligible for this course is small and will fluctuate each semester, this course will not necessarily be offered every semester. It will be offered when there is sufficient demand due to student numbers.</p>	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	PMG201 Project Management
B.H.I. Codes:	ICAPMG401A Support small scale IT projects ICAICT515A Verify client business requirements ICAPMG501A Manage IT projects
<p>This course develops a foundation of concepts and solutions that supports the planning, scheduling, controlling, resource allocation, and performance measurement activities required for successful completion of an IT project.</p>	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	64 hrs

Course:	WDV101 Web Development Foundation
B.H.I. Codes:	ICAWEB429A Create a markup language document to specification ICAWEB420A Write content for web pages
<p>The students are given the knowledge, experience and hands - on experience with HTML 5 and XHTML needed to build and develop successful Web sites. Continuously, students develop their ability in the different parts of creating a Web site; namely, design its content, accessibility, workflow, functionality, and its visual appeal. Most hands on exercises train students to develop or create and save a markup language document to a given set of specifications using a text editor rather than an authoring tool.</p> <p>A well-rounded balance of hard skills (HTML 5, CSS) and soft skills (Web Design, Web site promotion strategies) presents everything beginning Web developers need to know in order to build and promote successful Web sites.</p>	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	ENV101 IT Environment
B.H.I. Codes:	BSBOHS509A Ensure a safe workplace ICAICT207A Integrate commercial computing packages ICAICT418A Contribute to copyright, ethics and privacy in an IT environment
This course is concerned with the identification, assessment and control of conditions in the work environment that are harmful to the health and safety of people in all occupations and introduces students to the ethical, legal, and policy issues raised by designing, developing, and using information technology as well as examines the use of information technology tools and techniques in today's global business environment.	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	PRG101 Programming (C++)
B.H.I. Codes:	ICAPRG406A Apply introductory object-oriented language skills
Programming in C++ provides an overview of programming concepts, design and an introduction to coding using the C++ language. The course has a focus on creating working computer programs in C++. The course will address fundamental concepts of analysis, design, and testing and code development. It includes flowcharts, Boolean logic, control flow, data types and structures, variables, arrays, functions, pointers and introduces classes.	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	WDV102 Introduction to Web Design
B.H.I. Codes:	ICAWEB411A Produce basic client-side script for dynamic web pages ICAWEB504A Build a document using eXtensible markup language
An introductory course that investigates the business and technology of websites. Students study design issues such as navigation, usability, site architecture, search engine optimization, and Web 3.0 techniques. Students explore basic Web creation techniques, such as HTML, JavaScript, and Cascading Style Sheets (CSS). They learn how to interface with IT professionals to specify complex requirements. They create and publish their own sites to demonstrate their understanding of these issues.	
Prerequisites:	WDV101
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	64 hrs

Course:	PRG102 Programming (Java)
B.H.I. Codes:	ICAPRG418A Apply intermediate programming skills in another language
<p>This is intermediate level course will re-enforce and extend the student's knowledge of Object Oriented Programming using the Java Programming Language. The course builds on the knowledge and skills learnt in PRG101 Programming (C++). The topics include designing and using user-defined aggregate data structures, using and manipulating 1-D and 2-D arrays of these user defined data types, sorting arrays, searching arrays using a binary technique, file handling using random access algorithms, use debugging tools and tracing to debug code, documentation of code, designing and testing of student designed and built application.</p>	
Prerequisites:	PRG101
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	ECM101 E-Commerce
B.H.I. Codes:	None
<p>This course introduces students to plan, design, and evaluate web sites, how to launch an e-business from scratch, what technology is needed for developing e-commerce, how to market products, what ethical and legal factors to consider, and how to ensure security and integrity of data through various methods and technologies. Additionally students will gain exposure to the managerial and organizational implications of e-commerce and the relationships that must be maintained between a business and the technology drivers of e-commerce.</p>	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	DBS101 Introduction to Database
B.H.I. Codes:	ICADBS403A Create basic databases
<p>This is an introductory level course to the theory and design of databases and the use of Database Management Systems. Even though this is an introductory course it assumes the student knows the basic terminology used with databases as covered in the Business Technology course. The topics include analysing the requirements for a database, documenting the requirements, designing the database using Entity-Relationship diagrams, the SQL Language, implementing the designed database in a DBMS using appropriate tools, creating and doing tests on the new database.</p>	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	WDV201 Web Design Implementation
B.H.I. Codes:	ICAWEB506A Develop complex cascading style sheets ICAWEB505A Develop complex web page layouts
<p>This course is designed to teach students all the components to design, implement, and manage both static and dynamic websites. It describes the performance outcomes, skills and knowledge required to design and create a web page layout to an advanced level. It will also include complex cascading style sheets (CSS) that are attached to a mark-up language document. Students will use Adobe Dreamweaver to create, format, update, debug, and manage their individual web pages and websites. The course will begin with Adobe Dreamweaver on how to develop a Web site. Instruction will include: text; graphics; links; and tables. Students will then learn how to draw objects; create animations; and create special effects. The instructor will give step-by-step instructions, as well as in-depth explanation of these applications. The student will learn how to: work with objects; import; select and modify graphics.</p>	
Prerequisites:	WDV102
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	64 hrs

Course:	PRG201 Server-Side Scripting using PHP
B.H.I. Codes:	ICAWEB502A Create dynamic web pages ICAWEB503A Create web-based programs ICAWEB415A Produce server-side script for dynamic web pages
<p>This course is designed to teach students server side scripting using PHP and MySQL to develop dynamic web sites. Topics will include conditionals, functions, form processing, arrays, and loops. Students create a dynamic web site by developing database tables in MySQL, connecting to them using PHP and adding content to web pages.</p>	
Prerequisites:	PRG102, DBS101
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	80 hrs

Course:	DBS201 Relational Database Design
B.H.I. Codes:	ICADBS412A Build a database
<p>This is an intermediate course that will expand your knowledge and skills in Database Management and Programming by practically implementing a relational database application from a specification using the SQL language, MySQL and MS Access as a front-end interface. It assumes the knowledge and skills obtained in DBS101 Introduction to Databases. The topics include reviewing the database design including data structures, queries, reports, access and security and the user interface, prototyping the design, importing data from existing systems, testing the prototype, implement the database, client approval and acceptance of the new database.</p>	
Prerequisites:	DBS101
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	64 hrs

Course:	WDV202 Database Driven Web Applications
B.H.I. Codes:	ICADBS504A Integrate database with a website ICAWEB501A Build a dynamic website ICAWEB508A Develop website information architecture
<p>This course introduces the students to the more advanced techniques required to build complex, modern database driven applications. Based on previous knowledge of Web design principles, XHTML and CSS, this course covers the client-side and server-side processing that enables database interactions in dynamic intranet and Internet applications. Related topics include in web application security, deployment, and maintenance are also taught. All these concepts are applied in a group project that implements a fully functional database driven Internet application.</p>	
Prerequisites:	WDV201, PRG201
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	80 hrs

Course:	WEB201 New Web Technologies
B.H.I. Codes:	ICAWEB516A Research and apply emerging web technology trends
<p>This course will explore, discuss, and research emerging technologies in the web arena. Emphasis is placed on exposure to up-and-coming technologies relating to the web, providing hands-on experience, and discussion of practical implications of these emerging fields.</p>	
Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	64 hrs

Course:	DBS202 Databases Modeling
B.H.I. Codes:	ICADBS502A Design a database
<p>This is an advanced course that builds on and requires the knowledge and skills learnt in the previous two database courses. At the end of the course the student will be able analyse and design a multi-relation database to the needs of a client. The topics include determining the requirements of the database with the client, develop and document the logical data model, design and document data structures including DBMS constraints and validation rules, design a complex user-interface, queries and reports, design the security systems needed for the database, identify, develop and document backup and recovery requirements and procedures.</p>	
Prerequisites:	DBS201
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	SDV202 System Development-Implementation
B.H.I. Codes:	ICAPRG512A Prepare for the build phase of an IT system ICAPRG513A Coordinate the build phase of an IT system ICASAS503A Perform systems tests
<p>This course prepares the student so they are able to implement a new IT system. Topics include the preparation of the development environment for the build phase and actual coding of the IT system; the day-to-day management of tasks associated with making sure that the software product is developed according to the design specifications and project plan; methods used to ensure that the properties of the entire system are tested and proved adequate before handover to the client or user for final acceptance testing.</p>	
Prerequisites:	PMG201
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	64 hrs