Diploma of Website Development

Program Description

The BHCK Diploma of Website Development provides the skills and knowledge for a graduate to design, build and manage databases and websites as an independent IT 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. Databases, system operations, security management and programming are covered in depth within this programme of study within Website Development.

Career Pathway

Students with a Diploma in Website Development are able to continue toward a Bachelor Degree in IT or related field or an entry level position as a web developer in industry.

Diploma Components

The 63 credits of the Diploma are composed of:

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

General Education Courses – All BHCK Mainstream students take these courses

Course Code	Course Title	Credits
ARB110	Arabic Language	3
ARB110-F(N)	Arabic (As a second Language)	
CRW110	Critical Reading and Writing 1	3
CRW210	Critical Reading and Writing 2	3
IT111	Business Technology	3
MAT100	Basic Math	3
STA100	Elementary Statistics	3
Total		**18**

All SDAA 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
DBS102	Data Structures and Algorithms	3
DBS201	Programming & Data Structures	3
DBS202	Data Communications	3
WSO102	Systems Operation	3
ICS101	Introduction to Computer Systems & Ethics	3
PRG101	Data Abstraction and Object-Oriented Programming	3
PRG102	Language Programming	3
PRG201	Server-Side Scripting using PHP	3
SIS202	System Information & Security	3
ICP101	Introduction to Computer Programming	3
WDV102	Databases	3
WDV201	Web Information Systems	3
WDV202	Database Driven Web Applications	3
WEB202	New Web Technologies	3
Total		**42**
Total Credits for Diploma of Website Development		**63**

Course:	**ARB110 Arabic**
B.H.I. Codes:	N/A
This course is designed to serve and assist students in their future Business and Design careers. It is designed to equip students with the needed knowledge and skills to successfully send official hardcopy and e-correspondence, present to an audience of Arabic speakers, and reading, writing, and comprehension of business related documents.	
Prerequisites: Co-requisites:	None 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
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. 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.	
Prerequisites: Co-requisites:	None None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	**CRW110 Critical Reading and Writing 1**
B.H.I. Codes:	N/A
This course will guide students on how to organize information, engage in problem solving both academically and personally, and evaluate and communicate ideas clearly. CRW110 encourages reflective thinking and will help students better prepare for the academic demands of their Mainstream courses as well as the professional demands of their career after college.	
Prerequisites:	ENG030 Foundation or direct entry to Diploma qualification study

Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	**CRW210 Critical Reading and Writing 2**
B.H.I. Codes:	N/A

Students continue to develop their critical thinking abilities in reading and apply them to the writing process through conducting research and producing a short paper. This course will require students to select and highly organize information; perform both academic and personal problem solving; demonstrate good time, resource, and self-management; and evaluate and communicate ideas clearly. Resources integrate both reading and writing in a thought-provoking manner. CRW210 requires reflective thinking and will help students better prepare for the academic rigors of Mainstream courses and the professional demands of their career after college.

Prerequisites: Co-requisites:	CRW110 Critical Reading and Writing 1 None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	**IT111 Business Technology**
B.H.I. Codes:	ICTICT205 Design basic organisational documents using computing packages

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.

Prerequisites: Co-requisites:	CS030 Foundation or direct entry to Diploma qualification study 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: Percentages, ratios, statistics, algebra, and others.

Prerequisites:	MS030 Foundation or direct entry to Diploma qualification study with a pass in the Mathematics Entrance test
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs.

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: Co-requisites:	MAT100 None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	PMG201 Project Management
B.H.I. Codes:	ICTPMG401 Support small scale IT projects ICTICT515 Verify client business requirements ICTPMG501 Manage IT projects
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.	
Prerequisites: Co-requisites:	None None
Course Load:	3 credit hours per week
Duration:	48 hrs.

Course:	DBS102 Data Structures and Algorithms
B.H.I. Codes:	ICTDBS403 Create basic databases
This course covers essential data structures and algorithms, teaching students about arrays, stacks, queues, linked lists, trees, graphs, sorting, and searching. The focus is on using these structures to solve complex problems efficiently, with practical applications and algorithm analysis.	
Prerequisites: Co-requisites:	PRG101 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**DBS201 Programming & Data Structures**
B.H.I. Codes:	ICTDBS415 Build a database
Combining advanced programming techniques with data structure utilization, this course challenges students to solve more complex computing problems. Through theoretical instruction and practical coding exercises, students will learn to optimize and scale their software solutions.	
Prerequisites: Co-requisites:	DBS102 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**DBS202 Data Communications**
B.H.I. Codes:	ICTDBS502 Design a database
This course provides an in-depth look at data transmission technologies and network protocols. Students will learn about the design and implementation of communication systems, focusing on ensuring data integrity and security in networked environments.	
Prerequisites: Co-requisites:	DBS201 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**WSO102 Systems Operation**
B.H.I. Codes:	None
This course explores the configuration, management, and maintenance of computer systems. Students will learn about operating system fundamentals, virtualization, system security, and troubleshooting techniques, with practical tasks to solidify their understanding of system administration in modern environments.	
Prerequisites: Co-requisites:	ICS101 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**ICS101 Introduction to Computer Systems & Ethics**
B.H.I. Codes:	BSBWHS501 Ensure a safe workplace ICTICT207 Integrate commercial computing packages ICTICT418 Contribute to copyright, ethics and privacy in an ICT environment
Students in this course explore the architecture of computer systems and data representation, coupled with a study of the operating systems' role. The ethical considerations in computing, such as privacy, intellectual property rights, and societal impacts of technology, are also examined in depth.	
Prerequisites: Co-requisites	None None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**PRG101 Data Abstraction and Object-Oriented Programming**
B.H.I. Codes:	ICTPRG430 Apply introductory object-oriented language skills
This course provides an in-depth understanding of object-oriented programming (OOP) principles including classes, objects, inheritance, and polymorphism, along with data abstraction methods to manage software complexity. Students will develop skills to design and implement OOP-based software applications.	
Prerequisites: Co-requisites:	None ICP101
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**PRG102 Language Programming**
B.H.I. Codes:	ICTPRG418 Apply intermediate programming skills in another language
Focused on enhancing programming skills, this course delves into the use of multiple programming languages, emphasizing the unique syntax, semantics, and best practices associated with each. Students will tackle practical programming exercises to refine their coding proficiency.	
Prerequisites: Co-requisites:	ICP101 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**PRG201 Server-Side Scripting using PHP**
B.H.I. Codes:	ICAWEB502 Create dynamic web pages ICAWEB503 Create web-based programs ICTWEB430 Produce server-side script for dynamic web pages
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.	
Prerequisites: Co-requisites:	PRG102 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**SIS202 System Information & Security**
B.H.I. Codes:	ICAPRG512 Prepare for the build phase of an IT system ICAPRG513 Coordinate the build phase of an IT system ICTSAS503 Perform systems tests
Covering the essentials of information systems security, this course introduces students to network security, encryption techniques, security protocols, and risk management. The course emphasizes the development of skills necessary to evaluate and enhance the security of information systems.	
Prerequisites: Co-requisites:	WSO102 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**ICP101 Introduction to Computer Programming**
B.H.I. Codes:	ICTWEB429 Create a markup language document to specification
This course is structured to introduce students to fundamental programming concepts. It covers topics such as algorithm development, data types, control structures, basic functions, and an introduction to debugging and testing. Students will engage in hands-on programming tasks to apply theoretical knowledge in practical scenarios.	
Prerequisites: Co-requisites:	None PRG101
Course Load:	3 credit hours per week

Duration:	48 hrs

Course:	**WDV102 Databases**
B.H.I. Codes:	ICTWEB411 Produce basic client-side script for dynamic web pages ICTWEB504 Build a document using eXtensible markup language
This course offers comprehensive insights into database design and management using relational database principles. It includes detailed sessions on SQL, data normalization, and the effective use of database management systems in creating and maintaining extensive databases.	
Prerequisites: Co-requisites:	ICS101 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**WDV201 Web Information Systems**
B.H.I. Codes:	ICTWEB506 Develop complex cascading style sheets ICTWEB505 Develop complex web page layouts
Students will study web architecture and application development in this course, focusing on client-server models, web development technologies, web security, and the management of dynamic websites. The curriculum includes practical projects to develop and deploy web applications using contemporary frameworks and tools.	
Prerequisites: Co-requisites:	WDV102 None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**WDV202 Database Driven Web Applications**
B.H.I. Codes:	ICTDBS504 Integrate database with a website ICTWEB501 Build a dynamic website ICTWEB508 Develop website information architecture

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.

Prerequisites:	WDV201, PRG201
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs

Course:	**WEB202 New Web Technologies**
B.H.I. Codes:	ICTWEB516 Research and apply emerging web technology trends

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.

Prerequisites:	None
Co-requisites:	None
Course Load:	3 credit hours per week
Duration:	48 hrs