COMSATS University Islamabad

Registrar Secretariat, Academic Unit (PS)

★★★★★

No. CUI-Reg/Notif-1843/23/1933   August 24, 2023

NOTIFICATION

Academic Council in its 37th Special meeting held on August 22, 2023, on the recommendations of 35th Special meeting of Board of Faculty of Business Administration and 44th Special meeting of Board of Studies in Department of Management Sciences, approved following Scheme of Studies of Bachelor of Science in Business Data Analytics, effective from Fall 2023 as per HEC Undergraduate Education Policy, 2023:

Nomenclature: **Bachelor of Science in Business Data Analytics**

Minimum Duration:	04 Years	Minimum Semesters:	08	Minimum Credit Hours required:	135

Course Work:

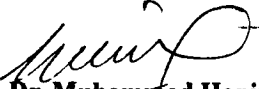| Sr. No	Course Work	Min No. of Courses	Min No. of Credit Hours
a)	General Education Courses	12	30
b)	Majors:		
	1. Major Discipline Courses	20	60
	2. Major Specialization Courses	8	24
c)	Interdisciplinary Courses	4	12
d)	Internship	1	3
e)	Capstone Project	1	6
	Total No. of Courses of the Program	**46**	
	Total Credit Hours of the Program		**135**
f)	List of Minor(s) offered by the Department		

Note: Policies and procedures notified vide No. CUI-Reg/Notif-1787/23/1877 relating to Undergraduate Degree Programs approved by the Competent Authority and amended from time to time shall be applicable.

Dr. Muhammad Hanif
Deputy Registrar

Distribution:
1. All Directors, CUI
2. All Deans, CUI
3. Incharge Islamabad Campus, CUI
4. Controller of Examinations, CUI
5. All Chairpersons, CUI
6. All HoDs/Incharge of Academics/Examinations Sections, CUI Campuses
7. Internal distributions, Registrar Office, CUI

CC:
1. PS to Rector CUI
2. PS to Registrar CUI

1. General Education Courses:

i. Arts and Humanities (any one course from the following list)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM123	Fundamentals of Philosophy	2(2, 0)	
2.	ARC190	Art Appreciation	2(2, 0)	
3.	CSC210	Professional Practices	2(2, 0)	

ii. Natural Sciences (any one course from the following list)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	BIO100	Fundamentals of Biology	3(2, 1)	
2.	ENV120	Environmental Chemistry	3(2, 1)	
3.	PHY124	Applied Physics	3(2, 1)	
4.	ERS203	Environmental Geology	3(2, 1)	
5.	FSN246	Contemporary Nutrition	3(2, 1)	

iii. Social Sciences (any one course from the following list)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM122	Fundamentals of Psychology	2(2, 0)	
2.	HUM130	Fundamentals of Sociology	2(2, 0)	
3.	HUM131	Anthropology	2(2, 0)	
4.	HUM209	Fundamentals of Political Science	2(2, 0)	
5.	HUM222	Fundamentals of International Relations	2(2, 0)	

iv. Functional English (any one course from the following list)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM100	English Comprehension and Composition	3(3,0)	
2.	HUM104	Functional English	3(3,0)	

v. Expository Writing (any one course from the following list)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM102	Report Writing Skills	3(3, 0)	
2.	HUM120	Expository Writing	3(3, 0)	

vi. Quantitative Reasoning (any two courses from the following list)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	MTH103	Exploring Quantitative Skills	3(3, 0)	
2.	MTH114	Tools for Quantitative Reasoning	3(3, 0)	MTH103
3.	MGT172	Mathematics for Business Analytics	3(3, 0)	
4.	MGT272	Advanced Mathematics for Business Analytics	3(3, 0)	MGT172

Note: (For students with no math background a non-credit course of Exploring Quantitative Skills (MTH103) will be offered that will have to be cleared in the first year of studies i.e. first two semesters with one chance of repeating the course in case of failure).

vii. **Islamic Studies/Ethics** (Mandatory course. HUM116 Ethics is only for Non-Muslim Students)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM112	Islamic Studies	2(2, 0)	
2.	HUM116	Ethics	2(2,0)	

viii. **Ideology and Constitution of Pakistan** (Mandatory course)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM113	Ideology and Constitution of Pakistan	2(2, 0)	

ix. **Application of Information and Communication Technologies** (Mandatory course)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	CSC101	Applications of Information and Communication Technologies	3(2, 1)	

x. **Entrepreneurship** (Mandatory course)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	MGT250	Introduction to Entrepreneurship	2(2, 0)	

xi. **Civics and Community Engagement** (Mandatory course)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM208	Civics and Community Engagement	2(2, 0)	

2. List of Major Discipline Courses:

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	MGT101	Introduction to Management	3(3,0)	
2.	MGT132	Principles of Accounting	3(3,0)	
3.	MGT173	Programming Language for Business Analytics	3(2,1)	
4.	MGT174	Business Data Analysis	3(2,1)	MGT173
5.	ACC201	Cost and Management Accounting	3(3,0)	MGT132
6.	MGT232	Business Finance	3(3,0)	
7.	MGT240	Statistics for Business Analytics	3(3,0)	
8.	MGT241	Econometrics for Business Analytics	3(3,0)	MGT240
9.	MGT244	Business Application Using Machine Learning	3(2,1)	MGT173
10.	MGT301	Research Tools and Techniques	3(3,0)	

11.	MGT311	Marketing Management in Digital Era	3(3,0)	
12.	MGT330	Financial Management	3(3,0)	MGT232
13.	MGT350	Human Resource Management	3(3,0)	
14.	MGT385	Data & Dashboards	3(2,1)	MGT173
15.	MGT387	Databases for Business	3(2,1)	MGT171
16.	MGT388	Deep Learning for Business	3(2,1)	MGT173
17.	MGT389	NLP for Business	3(2,1)	MGT173
18.	MGT461	Project Management	3(3,0)	
19.	MGT488	Advanced Deep Learning for Business	3(2,1)	MGT388
20.	MGT470	Strategic Management	3(3,0)	

3. List of Major Specialization Courses:

i. **Financial Technology Specialization Elective Courses:** (any four courses from Finance Elective Courses and any four courses from Financial Technology Elective Courses to complete the Single Major requirements of the Bachelor of Science in Business Data Analytics Degree Program).

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
	Finance Elective Courses			
1.	FIN450	Investment and Portfolio Management	3(3, 0)	MGT330
2.	FIN460	Corporate Finance	3(3, 0)	MGT330
3.	FIN471	Islamic Banking and Finance	3(3, 0)	MGT330
4.	FIN472	Derivatives and Financial Risk Management	3(3, 0)	MGT330
5.	FIN474	Advanced Financial Markets and Institutions	3(3, 0)	MGT330
6.	FIN475	Marketing of Financial Services	3(3, 0)	MGT330
7.	FIN476	International Finance	3(3, 0)	MGT330
8.	FIN477	Credit Management	3(3, 0)	
9.	FIN478	Seminar in Finance	3(3, 0)	MGT330
10.	FIN480	Behavioral Finance	3(3, 0)	MGT330
11.	FIN481	Advanced Financial Management	3(3, 0)	MGT330
12.	FIN482	International Financial Institutions	3(3, 0)	MGT330
13.	FIN484	Real Estate Finance	3(3, 0)	MGT330
	Financial Technology Elective Courses			
1.	FIN485	Technology in Finance	3(3, 0)	
2.	FIN486	Payment Technology	3(2, 1)	MGT244
3.	FIN487	Artificial Intelligence for Banking	3(2, 1)	MGT244
4.	FIN488	Technological Applications in Entrepreneurial Finance	3(2, 1)	MGT173

ii. **Marketing Analytics Specialization Elective Courses** (any four courses from Marketing Elective Courses and any four courses from Marketing Analytics Elective Courses to complete the Single Major requirements of the Bachelor of Science in Business Data Analytics Degree Program).

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
Marketing Elective Courses				
1.	MKT471	Consumer Behavior	3(3, 0)	MGT311
2.	MKT472	International Marketing	3(3, 0)	MGT311
3.	MKT473	Cyber Marketing	3(3, 0)	MGT311
4.	MKT474	New Product Development	3(3, 0)	MGT311
5.	MKT475	Integrated Marketing Communications	3(3, 0)	MGT311
6.	MKT476	Brand Management	3(3, 0)	MGT311
7.	MKT477	Service Marketing	3(3, 0)	MGT311
8.	MKT478	Industrial Marketing	3(3, 0)	MGT311
9.	MKT479	Marketing Research	3(3, 0)	MGT311
10.	MKT480	Strategic Marketing	3(3, 0)	MGT311
11.	MKT481	Advertising and Event Management	3(3, 0)	MGT311
12.	MKT482	Sales Force Management	3(3, 0)	MGT311
13.	MKT483	Marketing of IT and Telecom Products	3(3, 0)	MGT311
14.	MKT484	Customer Relation Management	3(3, 0)	MGT311
15.	MKT485	Agriculture Marketing	3(3, 0)	MGT311
16.	MKT486	Seminar in Marketing	3(3, 0)	MGT311
17.	MKT487	Sales Strategy and Implementation	3(3, 0)	MGT311
18.	MKT488	Digital and Social Media Marketing	3(3, 0)	MGT311
Marketing Analytics Elective Courses				
1.	MKT489	Marketing Analytics	3(3, 0)	
2.	MKT490	Social Media Analytics	3(2, 1)	MGT244
3.	MKT491	Data Science for Product Managers	3(2, 1)	MGT244
4.	MKT492	Customer Analytics	3(2, 1)	MGT244

iii. **Human Resource Analytics Specialization Elective Courses** (any four courses from Human Resource Management Elective Courses and any four courses from Human Resource Analytics Elective Courses to complete the Single Major requirements of the Bachelor of Science in Business Data Analytics Degree Program).

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
Human Resource Management Elective Courses				
1.	HRM471	Workforce Diversity	3(3, 0)	MGT350
2.	HRM472	Human Resource Technology	3(3, 0)	MGT350
3.	HRM473	Leadership and Team Management	3(3, 0)	MGT350
4.	HRM474	Crisis and Conflict Management	3(3, 0)	MGT350
5.	HRM475	Human Resource Development	3(3, 0)	MGT350
6.	HRM476	Compensation Management	3(3, 0)	MGT350
7.	HRM477	Human Resource Information Management	3(3, 0)	MGT350
8.	HRM478	Organizational Development and Change Management	3(3, 0)	MGT350
9.	HRM479	Performance and Career Management	3(3, 0)	MGT350
10.	HRM480	International Human Resource Management	3(3, 0)	MGT350

11.	HRM481	Strategic Human Resource Management	3(3, 0)	MGT350
12.	HRM482	Employee Relation Management	3(3, 0)	MGT350
13.	HRM483	Seminar in Human Resource Management	3(3, 0)	MGT350
Human Resource Analytics Elective Courses				
1.	HRM484	Foundation for HR Analytics	3(3, 0)	
2.	HRM485	HR Analytics I	3(2, 1)	MGT244
3.	HRM486	HR Analytics II	3(2, 1)	MGT244
4.	HRM487	Strategic Talent Analytics	3(2, 1)	MGT244

4. List of Interdisciplinary/Allied Courses: (all three courses from the following list)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	MGT243	E-Business	3(2,1)	-
2.	LAW300	Corporate Law	3(3,0)	
3.	ECO400	Business Economics	3(3,0)	
4.		*Language Electives as Interdisciplinary Course**		

5. List of Language Electives as Interdisciplinary Course: (any one course from the Language Electives as Interdisciplinary/Allied Course)

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	HUM430	French	3(3,0)	
2.	HUM431	German	3(3,0)	
3.	HUM432	Arabic	3(3,0)	
4.	HUM433	Persian	3(3,0)	
5.	HUM434	Chinese	3(3,0)	
6.	HUM435	Japanese	3(3,0)	

6. Internship

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	MGT397	Internship	3(0, 3)	

MGT397 Internship of six to eight weeks after 4th semester (preferably during summer break) and will be graded by a faculty member in collaboration with the supervisor in the field.

7. Capstone Project

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	MGT497	Final Year Project	6(0, 6)	

MGT497 Final Year Project will be offered in last year of the degree.

Note:

1. Students enrolled in the **Bachelor of Science in Business Data Analytics** program have the flexibility to choose to pursue one or two additional minors or even opt for a second major as per the scenarios stated below. These minors and majors can be selected from any category of courses recognized as minors or majors by other programs offered at their respective CUI campus. This choice must adhere to the established rules and regulations of the University.

a) **Scenario 1 - Single Major (130 credits):**
   This scenario centers on a single major, demanding a minimum of 130 credits for completion. This breakdown includes 30 credits for General Education, a minimum of 82 for the major, 12 for interdisciplinary studies, and 3 each for Field Experience and the Capstone Project.

b) **Scenario 2 - Single Major with Minor (142 credits):**
   In this case, a single major is accompanied by a minor, requiring a minimum of 142 credits in total. The components encompass 30 credits for General Education, a minimum of 82 for the major, 12 for interdisciplinary studies, and 3 each for Field Experience and the Capstone Project. Additionally, a 12-credit minor complements the major, fostering broader skills.

c) **Scenario 3 - Single Major with Two Minors (154 credits):**
   Here, a single major is augmented by two minors, totaling a minimum of 154 credits. The distribution consists of 30 credits for General Education, 82 for the major, 12 for interdisciplinary studies, 3 each for Field Experience and the Capstone Project, and two minors with 12 credits each.

d) **Scenario 4 - Double Major (192 credits):**
   This scenario involves pursuing two majors, necessitating a minimum of 192 credits. The components comprise 30 credits for General Education, 72 for each major, 12 for interdisciplinary studies, 12 for Field Experience, and 3 for the Capstone Project.

2. The official nomenclature for the Associate Degree program is **'Associate Degree in Business Data Analytics (AD BDA)** entails a requisite commitment of no less than two years, spanning four semesters, and encompassing a minimum of 60 credit hours. Within this structure, 30 credit hours are designated to the domain of General Education from the courses as listed under **General Education Courses above,** while an equal allocation of 30 credit hours pertains to the specialized field of **Business Data Analytics** chosen from the courses listed under the **Major Discipline Courses.** The condition precedent for the satisfactory culmination of this program is the attainment of a minimum Cumulative Grade Point Average (CGPA) of 2.00. Subject to permission from respective accreditation council, if applicable.

3. The study of the Holy Quran and teachings of Sirat un-Nabi (P.B.U.H) courses will constitute a mandatory component of the curriculum for all undergraduate degree programs. These courses will be conducted using a hybrid mode of instruction across the CUI System. Upon successful completion of each course, students will receive a certificate endorsed by the Head of Department (HoD).

8. List of Minor(s) offered by the Department:

i. Business Data Analytics

Sr#	Course Code	Course Title	Credit Hours	Pre-requisite(s)
1.	MGT173	Programming Language for Business Analytics	3(2,1)	
2.	MGT174	Business Data Analysis	3(2,1)	MGT173
3.	MGT244	Business Application Using Machine Learning	3(2,1)	MGT173
4.	MGT385	Data & Dashboards	3(2,1)	MGT173
5.	MGT388	Deep Learning for Business	3(2,1)	MGT173
6.	MGT389	NLP for Business	3(2,1)	MGT173