



الجامعة الألمانية الأردنية  
German Jordanian University

# **German Jordanian University**

**School of Business**

**Department of Management Sciences**

**Bachelor of Science in Business Intelligence  
and Data Analytics**

**Dual Study Track**

**Study Plan 2023**

## **I. Program Objectives**

Business Intelligence and Data Analytics (BIDA)-Dual Study Track program emphasizes the application of management technologies and tools in the short term, and the ability to discover, acquire, and adapt new knowledge and skills in the long term, such that our graduates are capable of:

1. Enable easy access to data and models to provide business managers with the ability to conduct analysis.
2. Improve business operations and performance, make future predictions, and adapt strategies to fit observed trends.
3. Identify the competitive opportunities and features of organizations that use intelligent business systems.
4. Understand and apply the strategic and operational benefits of business models and technology applications.
5. Enable graduates to understand the impact of IT technologies in a business that enables them to pursue rewarding professional careers, graduate studies, and lifelong learning.

## II. Learning Outcomes

Business Intelligence and Data Analytics – Dual Study Track' graduates with an understanding of fundamental Business Intelligence and Data Analytics concepts, methodologies, and applications as demonstrated by:

1. Recognize the basic concepts related to BIDA.
2. Build and reinforce BI capabilities through the alignment of technological solutions with suitable applications for business.
3. Build practical skills to use data analytics technologies in business.
4. Enable learners to recognize, understand and apply the language, theory, and models of the field of business analytics.
5. Foster the ability to critically analyze, synthesize and solve complex unstructured business problems.
6. Encourage an aptitude for business improvement, innovation, and entrepreneurial action.
7. Create viable solutions to decision making problems.
8. Demonstrate knowledge and systematic understanding of essential facts, concepts, principles and theories relating to business intelligence.
9. Demonstrate knowledge and critical understanding of the impact of new technologies on business processes, working practices, commerce, and society.
10. Synthesize and apply learned knowledge and developed understanding in the analysis and modeling of business problems (for the purposes of for example, comprehension, communication, prediction, and the understanding of trade-offs).
11. Demonstrate the ability to deploy effectively the tools used for the design of business systems solutions in a commercial and professional context.
12. Demonstrate ability to conduct research into relevant business Intelligence and management issues through research design, data collection, analysis, synthesis, and reporting.

## Course Delivery Methods

Courses are in one of the following three methods:

- **Face-to-Face (F2F) Method**

Courses that are taught through face-to-face learning are delivered at the university campus.

- **Blended (BLD) Method**

Courses in which teaching consists of face-to-face learning and asynchronous E-learning. The face-to-face learning takes place at the university campus. Asynchronous E-learning takes place through activities, tasks, educational duties, and assignments through the virtual E-learning platforms (Moodle and MyGJU) without direct meetings with course instructors.

- **Online (OL) Method**

Courses in which teaching consists of synchronous and asynchronous E-learning. Synchronous E-learning takes place through interactive virtual meetings between instructors and students directly through the virtual E-learning platform (e.g: MS Teams). Asynchronous E-learning takes place through activities, tasks, educational duties, and assignments through the virtual E-learning platforms (Moodle and MyGJU) without direct meetings with course instructors.

## III. Admission Requirements

To apply for admission, the following minimum requirements must be met:

- Minimum of 75% in the secondary School Certificate (Tawjihi).
- A high motivation is needed to fulfill the needs and demands at the university and the company as well.
- Only first year students can join the Dual Study track.
- Good English skills are highly recommended.
- Once students commit to Dual Studies, they must join the program until the end of their studies.
- Students must register for all pre-requisites named by the Academic Coordinator.

## Placement Tests

Applicants must sit for placement tests in the Arabic Language, the English Language, and Mathematics to determine whether the applicant may be required to take remedial courses in the mentioned subjects. Depending on or the applicant scores in the placement tests, some of the following 3-credit-hour remedial courses are required:

Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
ARB0099	Elementary Arabic	3	3	3	-	OL	Placement test
ENGL0098	Elementary English	3	3	3	-	F2F	Placement test
ENGL0099	Intermediate English	3	3	3	-	F2F	ENGL0098
MATH0099	Pre-Math	3	3	3	-	OL	Placement test
<b>Total</b>		<b>12</b>	<b>12</b>	<b>12</b>			

- Remedial courses are to be completed and passed within the first year of enrollment.
- Passing grade of remedial courses is 60%.
- ECTS (B.Sc.): is the European Credit Transfer System, and Accumulation System, One ECTS is equivalent to 30 actual workloads hours.

## IV. Degree Requirements

The requirements to obtain a B.Sc. degree in Business Intelligence and Data Analytics – Dual Study Track are the following:

- Out of the Program requirement, 12 credit hours are to be taken at a partner university in Germany.
- Out of the Program requirement, 12 credit hours (20 weeks) of practical internship are to be taken at one of the German Companies.
- Students must complete 36 weeks (12 weeks per summer) of practical training in approved industries in Jordan.

## V. Framework for B.Sc. Degree (145 Credit hours)

Classification		Credit Hours			ECTS		
		Compulsory	Elective	Total	Compulsory	Elective	Total
University Requirements	Compulsory	21	-	21	25	0	25
	Dual Study	6	-	6	12	0	12
School Requirements		24	0	24	40	0	40
Program Requirements		82	12	94	145	18	163
<b>Total</b>		<b>133</b>	<b>12</b>	<b>145</b>	<b>222</b>	<b>18</b>	<b>240</b>

Course Delivery Method	Credit Hours	Percentage
Online Courses	15	10%
Blended Courses	48	33%
Face-to-Face Courses	82	57%
<b>Total</b>	<b>145</b>	<b>100%</b>

## 1. University Requirements: (27 credit hours)

### 1.1. Compulsory: (21 credit hours)

Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
ARB100	Arabic	3	3	3	-	OL	ARB0099
ENGL1001	Upper-Intermediate English	3	3	3	-	F2F	ENGL0098
ENGL1002	Advanced English	3	3	3	-	F2F	ENGL1001
GERL101B1	German I B1-Track	3	6	9	-	F2F	-
GERL102B1	German II	3	6	9	-	F2F	GERL101B1
GERL102B2							
MILS100	Military Science	3	2	3	-	OL	-
NE101	National Education	3	2	3	-	OL	-
NEE101	National Education in English						
<b>Total</b>		<b>21</b>	<b>25</b>	<b>33</b>	<b>-</b>		

### 1.2. Dual Study: (6 credit hours)

Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
DS101	Dual Study Practical I	3	3	480 Hrs		F2F	Departmental Approval
DS201	Dual Study Practical II	3	3	480 Hrs		F2F	DS101 ARB0099 ENGL0099
DS301	Dual Study Practical III	0	6	480 Hrs		F2F	DS201
<b>Total</b>		<b>6</b>	<b>12</b>				

## 2. School Requirements: (24 credit hours)

Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
					Lect.	Prac.		
GERL201B1	German III	B1-Track	3	4	6	-	F2F	GERL102B1 or GERL102B2
GERL201B2		B2-Track						GERL102B2
GERL202B1	German IV	B1-Track	3	6	9	-	F2F	GERL201B1 or GERL201B2
GERL202B2		B2-Track						GERL201B2
ACC1001	Principles of Accounting I		3	4.5	3	-	F2F	-
ACC2501	Fundamentals of Finance		3	5	3	-	BLD	ACC100 ARB0099 ENGL0099
LOGS1001	Introduction to Logistics		3	4.5	3	-	F2F	-
MGT1001	Principles of Management		3	5	3	-	BLD	-
MGT1202	Business Statistics		3	4.5	3	-	F2F	-
MGT2103	Research Methods for Business		3	6.5	2	1	BLD	MGT1202 ARB0099 ENGL0099
<b>Total</b>			<b>24</b>	<b>40</b>	<b>32</b>	<b>1</b>		

### 3. Program Requirements (94 credit hours)

#### 3.1. Program Requirements (Compulsory): (82 credit hours)

Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
					Lect.	Prac.		
GERL301B1	German V	B1-Track	3	6	9	-	F2F	GERL202B1 or GERL202B2
GERL301B2		B2-Track						
GERL302B1	German VI	B1-Track	3	6	6	-	F2F	GERL301B1 or GERL301B2
GERL302B2		B2-Track						
BIDA1101	Fundamentals of Business Intelligence (BI)		3	4.5	3	-	BLD	-
BIDA1301-DS	Fundamentals of Business Databases		3	4.5	2	2	BLD	BIDA1101
BIDA1400	Introduction to E-business		3	4.5	3	-	BLD	MGT 101 CS115
BIDA2300	Cyber Security Business Applications		3	4.5	2	2	BLD	BIDA1400 ARB0099 ENGL0099
BIDA2700-DS	Communications Skills in Business		3	4.5	3	-	F2F	BIDA1101 ARB0099 ENGL0099
BIDA3500	E-Commerce Management		3	4.5	3	-	F2F	BIDA1400
BIDA3502	Customer Relationship Policies Management.		3	4.5	2	2	BLD	BIDA1101 BIDA1400
BIDA3101	Data Mining for Business		3	4.5	2	2	BLD	BIDA1101 BIDA1301-DS
BIDA3300	Data Analysis and Presentation		3	4.5	2	2	BLD	BIDA1400 MGT12002
BIDA3301-DS	Spreadsheets Management and Design for BI		3	5	2	2	BLD	BIDA1400
BIDA3200	Big Data and Data Warehousing		3	4.5	2	2	BLD	BIDA1301-DS
BIDA3501	E-Supply Chain Management		3	4.5	2	2	F2F	BIDA1400 LOGS1001
BIDA4100	Artificial Intelligence and Machine Learning for Business		3	5	2	2	BLD	BIDA1400
BIDA4200	Business Data and Analytics Management		3	5	2	2	BLD	BIDA1301-DS
BIDA4500	Business strategies and ERP		3	5	2	2	BLD	BIDA3502
BIDA3900	Bachelor's Thesis		3	8.5	0	3	OL	MGT2103 80 CHs
BIDA4999	International Internship		12	30	0	20 WKS	F2F	BSC001
CS115	Computing Fundamentals for Business & Logistics		3	3	2	-	F2F	-
CS1150	Computing Fundamentals for Business & Logistics Lab		1	3	-	3	F2F	CS115 <sup>Co</sup>
MGT1201	Mathematics for Business		3	4.5	3	-	F2F	-
MGT1206	Fundamentals of Microeconomics		3	4.5	3	-	F2F	-
MGT3103	Knowledge Management		3	5	3	-	BLD	BIDA1400

MGT3303	Decision Support Systems	3	5	2	2	BLD	BIDA1400
<b>Total</b>		<b>82</b>	<b>145</b>	<b>62</b>			

### 3.2. Program Requirements (Electives<sup>b</sup>): (12 Credit Hours)

A minimum of 12 credit hours of coursework are required. This list is open for modifications based on school council decisions.

Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
BIDA4901	Business Elective I	1	1.5	3	-	F2F	BSC001
BIDA4902	Business Elective II	2	3.0	3	-	F2F	BSC001
BIDA4903	Business Elective III	3	4.5	3	-	F2F	BSC001
BIDA4904	Business Elective IV	3	4.5	3	-	F2F	BSC001
BIDA4905	Business Elective V	3	4.5	3	-	F2F	BSC001
BIDA4906	Business Elective VI	3	4.5	3	-	F2F	BSC001
BIDA4907	Special Topics in BIDA I	1	1.5	3	-	F2F	BSC001
BIDA4908	Special Topics in BIDA II	2	3.0	3	-	F2F	BSC001
BIDA4909	Special Topics in BIDA III	3	4.5	3	-	F2F	BSC001
BIDA4005	Tools and Applications in Business Information Systems	3	4.5	3	-	F2F	BSC001
BIDA4006	Digital Business	3	4.5	3	-	F2F	BSC001
BIDA4007	Data Science	3	3	3	-	F2F	BSC001
BIDA4008	Business Applications in Python	3	4.5	3	-	F2F	BSC001
MGT4102	Corporate Strategies and Policies	3	4.5	3	-	F2F	BSC001
MGT4104	International Business and Globalization	3	4.5	3	-	F2F	BSC001
MGT4106	Organizational Development & Change	3	4.5	3	-	F2F	BSC001
MGT4108	Quality Management	3	4.5	3	-	F2F	BSC001
LOGS4303	Logistics Enterprise Resource Planning Modules	3	4.5	3	-	F2F	BSC001
LOGS4406	Humanitarian Logistics	3	4.5	3	-	F2F	BSC001
ACC43005	Accounting Ethics and Corporate Governance	3	4.5	3	-	F2F	BSC001
ACC45005	Islamic Finance and Accounting	3	4.5	3	-	F2F	BSC001
<b>Total</b>		<b>12</b>	<b>18</b>	<b>12</b>	<b>-</b>		

b: All elective courses are taken at a partner university in Germany.

## Study Plan<sup>c</sup> Guide for a B.Sc. Degree in (Business Intelligence and Data Analytics)

First Year							
First Semester							
Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
ARB100	Arabic	3	3	3	-	OL	ARB0099
GERL101B1	German I B1-Track	3	6	9	-	F2F	-
MGT1001	Principles of Management	3	5	3	-	BLD	-
BIDA1101	Fundamentals of Business Intelligence (BI)	3	4.5	3	-	BLD	-
MGT1202	Business Statistics	3	4.5	3	-	F2F	-
<b>Total</b>		<b>15</b>	<b>23</b>	<b>21</b>	<b>-</b>		

First Year							
Second Semester							
Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
GERL102B1	German II	3	6	9	-	F2F	GERL101B1
GERL102B2							
MGT1206	Fundamentals of Microeconomics	3	4.5	3	-	F2F	-
CS115	Computing Fundamentals for Business & Logistics	3	3	3	-	F2F	-
LOGS1001	Introduction to Logistics	3	4.5	3	-	F2F	-
NE101	National Education	3	2	3	-	OL	-
CS1150	Computing Fundamentals for Business & Logistics Lab	1	3	3	-	F2F	CS115 <sup>Co</sup>
<b>Total</b>		<b>16</b>	<b>23</b>	<b>24</b>	<b>-</b>		

First Year							
Summer Semester							
Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
DS101	Dual Study Practical I	3	3	-	480 Hrs	F2F	Dept. Approval
BIDA1301-DS	Fundamentals of Business Database	3	4.5	2	1	BLD	BIDA1101
<b>Total</b>		<b>6</b>	<b>7.5</b>				

<sup>c</sup> The study plan guide does not take into account possible remedial courses

Second Year								
First Semester								
Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites
					Lect.	Prac.		
ENGL1001	Upper-Intermediate English		3	3	3	-	F2F	ENGL0098
GERL201B1	German III	B1-Track	3	4	6	-	F2F	GERL102B1 or GERL102B2
GERL201B2		B2-Track						GERL102B2
ACC1001	Principles of Accounting I		3	4.5	3	-	F2F	-
BIDA1400	Introduction to E-business		3	4.5	3	-	BLD	BIDA1101 CS115
MGT1201	Mathematics for Business		3	4.5	3	-	F2F	-
BIDA3502	Customer Relationship Policies Management		3	4.5	2	1	BLD	MGT 130 BIDA1400
<b>Total</b>			<b>18</b>	<b>25</b>	<b>20</b>	<b>1</b>		

Second Year								
Second Semester								
Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
					Lect.	Prac.		
GERL202B1	German IV	B1-Track	3	6	9	-	F2F	GERL201B1 or GERL201B2
GERL202B2		B2-Track						GERL201B2
BIDA3101	Data Mining for Business		3	4.5	3	-	BLD	BIDA1101 BIDA1301-DS
BIDA2300	Cyber Security Business Applications		3	4.5	3	-	BLD	BIDA1400 ARB0099 ENGL0099
ACC2501	Fundamentals of Finance		3	5	3	-	BLD	ACC1001 ARB0099 ENGL0099
BIDA3300	Data Analysis and Presentation		3	4.5	3	-	BLD	BIDA1400 MGT1202
MGT2103	Research Methods for Business		3	6.5	3	-	BLD	MGT1202 ARB0099 ENGL0099
<b>Total</b>			<b>18</b>	<b>31</b>	<b>24</b>	<b>-</b>		

Second Year								
Summer Semester								
Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
					Lect.	Prac.		
DS201	Dual Study Practical II		3	3	-	480 Hrs	F2F	DS101 ARB0099 ENGL0099
BIDA2700-DS	Communications Skills in Business		3	4.5	3	-	F2F	BIDA1101 ARB0099 ENGL0099
<b>Total</b>			<b>6</b>	<b>7.5</b>	<b>3</b>			

Third Year								
First Semester								
Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
					Lect.	Prac.		
GERL301B1	German V	B1-Track	3	6	9	-	F2F	GERL202B1 or GERL202B2
GERL301B2		B2-Track						GERL202B2
BIDA3500	E-Commerce Management		3	4.5	3	-	F2F	BIDA1400
MGT3103	Knowledge Management		3	5	3	-	F2F	BIDA1400
MILS100	Military Sciences		3	2	3	-	OL	-
MGT3303	Decision Support Systems		3	5	3	-	BLD	BIDA1400
ENGL1002	Advanced English		3	3	3	-	F2F	ENGL1001
<b>Total</b>			<b>18</b>	<b>25.5</b>	<b>24</b>	<b>-</b>		

Third Year								
Second Semester								
Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
					Lect.	Prac.		
GERL302B1	German VI	B1-Track	3	6	6	-	F2F	GERL301B1 or GERL301B2
GERL302B2		B2-Track						GERL301B2
BIDA3200	Big Data and Data Warehousing		3	4.5	3	-	BLD	BIDA1301-DS
BIDA3501	E-Supply Chain Management		3	4.5	3	-	BLD	BIDA1400 LOGS1001
BIDA4100	Artificial Intelligence and Machine Learning for Business		3	5	3	-	BLD	BIDA1400
BIDA4200	Business Data and Analytics Management		3	5	3	-	BLD	CS115
BIDA4500	Business strategies and ERP		3	5	3	-	BLD	BIDA1400
<b>Total</b>			<b>18</b>	<b>30</b>	<b>21</b>	<b>-</b>		

Third Year								
Summer Semester								
Course ID	Course Name		Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
					Lect.	Prac.		
DS301	Dual Study Practical III		0	6	-	480 Hrs	F2F	DS201
BIDA3301-DS	Spreadsheets Management and Design for BI		3	5	3	-	BLD	BIDA1400
<b>Total</b>			<b>3</b>	<b>11</b>	<b>3</b>			

Bachelor's thesis BIDA3900 (8.5 ECTS) can be taken either before or during the German year.

Fourth Year							
First Semester							
Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
BIDA4903	Business Elective III	3	4.5	3	-	F2F	BSC001
BIDA4904	Business Elective IV	3	4.5	3	-	F2F	BSC001
BIDA4905	Business Elective V	3	4.5	3	-	F2F	BSC001
BIDA4906	Business Elective VI	3	4.5	3	-	F2F	BSC001
<b>Total</b>		<b>12</b>	<b>18</b>	<b>12</b>			

Fourth Year							
Second Semester							
Course ID	Course Name	Credit Hours	ECTS	Contact Hours		Type	Prerequisites / Corequisites
				Lect.	Prac.		
BIDA4999	International Internship <sup>d</sup>	12	30	0	20 Wks	F2F	BSC001
<b>Total</b>		<b>12</b>	<b>30</b>				

<sup>d</sup> Courses attended and/or passed during International Internship are not transferable

**German year prerequisites** (Passing five out of the five following courses)

:

- BIDA2700-DS, Communications Skills in Business
- BIDA3300, Data Analysis and Presentation
- BIDA3301-DS, Spreadsheets Management and Design for BI
- BIDA3200, Big Data and Data Warehousing
- BIDA3501, E-Supply Chain Management
- BIDA4100, Artificial Intelligence and Machine Learning for Business
- BIDA4200, Business Data and Analytics Management

<sup>d</sup> Courses attended and/or passed during International Internship are not transferable

## VI. Compulsory Courses Offered by Management Sciences Department.

<b>MGT1001: Principles of Management</b>	<b>3 Cr Hr (3,0)</b>	<b>ECTS (5)</b>
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This course is envisioned to give students a general overview of the subject of management/business administration and provide them with the knowledge that will help them to understand the basic concepts and theories of Management. This course provides students with an introduction to the various philosophies, roles, and functions of management. In addition, it will cover on going changes in business that have a direct effect on the role of management. Ultimately, this course is intended to expose students to the theories, approaches and principles that are important for successfully managing organizations and people, along with the basic functions of management, namely, Planning, Organizing, Leading, and controlling. Practical examples, field trips and case studies are among the techniques used in delivering this course

*Prerequisites:*

<b>MGT1201: Mathematics for Business</b>	<b>3 Cr Hr (3,0)</b>	<b>ECTS (4.5)</b>
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The aim of this course is to provide students with fundamentals of mathematics as a tool necessary for analyzing business situations. This course covers basic algebra and arithmetic (algebraic expressions and their simplification, linear, quadratic, irrational equations, inequalities, simultaneous equations). In addition, this course enables students to move to a variety of other subjects as Statistics, Micro and Macro Economics, Financial Accounting courses smoothly.

*Prerequisites:*

<b>MGT1202: Business Statistics</b>	<b>3 Cr Hr (3,0)</b>	<b>ECTS (4.5)</b>
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This is a course in the basic statistical concepts and methods common in business and economics applications. The course introduces the students to statistical methods of collection, analysis, and presentation of quantitative data. Emphasis will be on the use of both descriptive and inferential statistical techniques within the workplace. Topics covered include descriptive statistics, probability, discrete and continuous distributions, confidence intervals, hypothesis testing, regressions, and sampling. Acquired knowledge should help students to deal with applications from all functional areas of business.

*Prerequisites:*

<b>BIDA1101: Fundamentals of Business Intelligence (BI)</b>	<b>3 Cr Hr (3,0)</b>	<b>ECTS (4.5)</b>
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This course is concerned with the theory and use of analytics skills to the area of business intelligence (BI). Focus is placed on the components of BI project lifecycle such as project planning, BI tool selection, data modelling. The course includes an applied aspect that enables the student to understand and deduce the nature of the relationship between artificial intelligence and business intelligence and activate it to serve business solutions. This course is designed for business students to learn BI practices and analysis without a detailed focus on statistical analysis and computer programming

*Prerequisites:*

<b>BIDA1301-DS: Fundamentals of Business Databases</b>	<b>3 Cr Hr (2,2)</b>	<b>ECTS (4.5)</b>
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This is a foundational course aims to introduce **business student** to the concepts, techniques, and technologies relevant for creating and managing business databases used in management information systems, which are used to preserve and manage input data associated with each other in relationships in tables consisting of records and fields. Through this course, students will be exposed to the fundamental knowledge of business databases, which are foundational for many advanced courses. Students will be given tasks and assignments to help them acquire the ability to create and manage business databases. In particular, topics include an introduction to techniques and technologies for the storage and management of data, fundamentals of relational modeling and SQL, object-oriented modeling, the database development lifecycle and the role of the Database Administrator (DBA). The course includes a substantial

practical component using a suitable Database Management System (DBMS).

*Prerequisites:*

**BIDA1400: Introduction to E-business** **3 Cr Hr (3,0)** **ECTS (4.5)**

This course introduces the fundamentals and infrastructure of e-Business to familiarize students with related new technology development. It also discusses the value of IT and information systems (IS) Systems to organizations, the basic types of IS and how they are really used, and the major management trends that affect IT deployment and management. It further discusses how e-Business differs from traditional business in terms of business processes and activities, and how we can set business strategies with e-Business. How to implement e-Business in the current business environment. It also covers ethical and social issues in IS. This course is designed for business students to learn IS and e-business technologies, practices and analysis, in a management perspective. i.e. without focus on technical IT details.

*Prerequisites:* MGT1001

**MGT2103: Research Methods for Business** **3 Cr Hr (2,2)** **ECTS (.5)**

The primary purpose of this course is to provide a comprehensive introduction of research and to prepare students to critically read research. The course is introductory in the sense that the emphasis is on exposure to a variety of research methods and methodologies, rather than developing expertise in any one particular method. Besides, it is designed to acquaint students with a range of research methods available and the criteria for choosing among them. More specifically, Research Methodology educates students about types of scientific quantitative and qualitative methods and its applications to research process in business discipline

Prerequisite, ENGL0099

**BIDA2300: Cyber Security Business Applications** **3 Cr Hr (2,2)** **ECTS (4.5)**

This course is designed for business students with no security experience or background, covering basic terminology and concepts. This course introduces students to cryptography, security management, wireless networking, and organizational policy. Topics include an overview of information security frameworks; network infrastructure security; security and cryptography; information security policy; and defense in depth. This course includes a substantial practical component

prerequisite: BIDA1400, ENGL0099

**BIDA2700-DS: Communications Skills in Business** **3Cr Hr (3,0)** **ECTS (4.5)**

Application of business communication principles through creation of effective business documents and oral presentations. Includes study and application of team communication and use of technology to facilitate the communication process. Students will gain knowledge of various essential concepts such as communication barriers, case study, analysis and practice in writing a variety of messages used to communicate in business and industry

prerequisite: MGT1001, ENGL0099

**MGT3103: Knowledge Management** **3 Cr Hr (3,0)** **ECTS (4.5)**

The Knowledge Management (KM) course introduces basic perspectives, concepts and frameworks on knowledge creation, capture, store, sharing, transfer and internalization in modern organization. The main aim of the course is to enable students to acquire a critical understanding of knowledge as a resource and driver of organization inimitable strategic capabilities leading to competitive advantage and economic growth. This course addresses different aspect of KM: knowledge taxonomies, intellectual capital & assets evaluation, knowledge economy, KM Tools, KM Systems, knowledge driven value creation, cross-cultural issues in KM, organizational learning and learning organization. In discussing these issues, the students acquire deeper understanding of KM; develop their analytical skills for diagnostic of organization intellectual ability as well as managerial skills for knowledge-based strategy implementation.

prerequisite: BIDA1400

**BIDA3500: E-Commerce Management** **3 Cr Hr (3,0)** **ECTS (4.5)**

To provide the learner with real-world information allowing them to attain a comprehensive level of understanding of the use of information and communication technologies for conducting and supporting business activities in the developing Information Society. Learners will acquire skills which would allow them to better function in the digital business environment and make better use of electronic tools such as the Internet. The course should give a clear understanding of the strategic impacts of use of electronic tools and their effects on the way business and business activities are conducted today.

prerequisite: BIDA1400

**MGT3303: Decision Support System (DSS)** **3 Cr Hr (2,2)** **ECTS (4.5)**

This course provides an overview of current trends in DSS. Understand the need for computerized support of managerial decision making, its frameworks, conceptual foundations and methodologies. Understand how management uses advance computer technologies in DSS. Recognize different types of DSS related methodologies and concepts used in the workplace such as Automated Decision Systems, Expert Systems, Simulation, Business Intelligence (BI), Data Mining, Big Data Analytics, Data Visualization, Visual Analytics, etc. Learn Management support systems and other techniques such as Problem-solving Search Methods, modelling, Business Performance Management (BPM), Performance Measurement System, etc. This course includes a substantial practical component where students are trained to gain skills using a suitable application software, such as MS Excel, as DSS tool.

prerequisite: BIDA1400

**BIDA3502: Customer Relationship Policies Management** **3 Cr Hr (2,2)** **ECTS (4.5)**

This course is designed to provide students with concepts and theories of customer relationship management (CRM) and its application in marketing, sales, and service. Students will understand that effective CRM strategies and policies help companies align business process with customer centric strategies using people, technology, and knowledge. Moreover, students will learn how companies strive to use CRM to optimize the identification, acquisition, growth and retention of desired customers to gain competitive advantage and maximize profit. Emphasis is given on both conceptual knowledge and hands-on learning using a leading CRM software. Case studies and possibly real business cases will also be given to enhance the understanding of CRM and to provide students with concepts and theories of the applications of BI in customer relationship management (CRM) and how to translate these applications in marketing, sales, and service

prerequisite: BIDA 1101, BIDA1400

**BIDA3101: Data Mining for Business** **3 Cr Hr (2,2)** **ECTS (4.5)**

This course is designed to help business students study and understand algorithms and computational paradigms that allow computers to find patterns and regularities in databases, perform prediction and forecasting, and generally improve their performance through interaction with data. It is currently regarded as the key element of a more general process called Knowledge Discovery in Database that deals with extracting useful knowledge and patterns from raw data. The knowledge discovery process includes data selection, cleaning, coding, using different statistical and machine learning techniques, and visualization of the generated structures. The course will cover all these issues and will illustrate the whole process by examples. Special emphasis will be given to the Machine Learning methods as they provide the real knowledge discovery tools. Important related technologies, as data warehousing and on-line analytical processing (OLAP) will be also discussed. The students will use recent Data Mining software.

prerequisite: BIDA1101, BIDA1301-DS

**BIDA3300: Data Analysis and Presentation** **3 Cr Hr (2,2)** **ECTS (4.5)**

This course is designed to help business students to understand and apply the statistical tools most commonly used to process, analyze, and visualize data. Students will learn and understand topics such as describing data, statistical inference, 1 and 2 sample tests of means and proportions, simple linear regression, multiple regression, logistic regression, analysis of variance, and regression diagnostics. These topics are explored and applied by students using statistical packages (e.g., SPSS, SmartPLS, etc.), with a focus on understanding how to use and interpret output from this software as well as how to visualize results. In each topic area, the methodology, including underlying assumptions and the mechanics of how it all works along with appropriate interpretation of the results, are discussed. Concepts are presented in context of real-world examples.

Prerequisites: BIDA1400, MGT1202

**BIDA3301-DS: Spreadsheets Management and Design for BI** **3 Cr Hr (2,2)** **ECTS (4.5)**

This course focuses on designing BI Data Models to display in either an interactive Power BI report or in an interactive Excel dashboard. This advanced Microsoft Excel/fundamental Power BI or equivalent course will take students through a data journey from importing, cleansing and merging large amounts of data to analyzing the data to presenting strategic data in a Power BI or equivalent dashboard. This is a practical course designed to provide flexibility and to empower students to choose how their want to present your business insights to help management make informed decisions.

*Prerequisites:* BIDA1400

**BIDA3200: Big Data and Data Warehousing** **3 Cr Hr (2,2)** **ECTS (4.5)**

The course aims to strengthen business students' skills in data technologies ranging from database and data warehousing to Big Data. Students will be able to study and gain an in-depth understanding of data warehousing which include concepts and analytical foundations as well as data warehousing development. The course introduces also the foundation of Big data management based on Apache Hadoop platform and provides students with a broad introduction to Big Data technologies. This will involve hands-on sessions, designed for data analysts, business intelligence specialists, developers, administrators or anyone who has a desire to learn how to process and manage massive and complex data to infer knowledge from data. Topics on Big Data include Technologies and Techniques such as Hadoop HDFS, MapReduce, Spark, Sqoop, Hive, Pig.

*Prerequisites:* BIDA1301-DS

**BIDA3501: E-Supply Chain Management** **3 Cr Hr (2,2)** **ECTS (4.5)**

In this course, students will learn to strategically think about integrated supply-chain, procurement, and service management strategies for organizations that rely, at least partially, on Internet and information technology to transact with suppliers and end consumers. To accomplish this objective, fundamentals from business areas of supply chain management and information management will serve to establish the course's theoretical underpinnings. Along with this foundation, applied concepts, and practical insights, students will develop the knowledge and necessary skills to plan, organize, operate, and control a variety of processes, resources, services, and relationships in supply chains via the Internet and information technology. Lectures, case-study reports and discussions, analytical investigations constitute the methods through which course content will be delivered.

*Prerequisites:* BIDA1400, LOGS1001

**BIDA4100: Artificial Intelligence and Machine Learning for Business** **3 Cr Hr (2,2)** **ECTS (4.5)**

This course is designed to help business students to explore Machine Learning (ML) and Artificial Intelligence (AI). Through an algorithmic approach, the students are given a practical understanding of the methods being taught, in particular through making their own implementations of some of the methods. The course covers supervised classification based on e.g., artificial neural networks (deep learning), as well as unsupervised learning (clustering), optimization (evolutionary algorithms and other search methods) and reinforcement learning, in addition to design of experiments and evaluation

*Prerequisites:* BIDA1400

**BIDA4200: Business Data and Analytics Management** **3 Cr Hr (2,2)** **ECTS (4.5)**

The purpose of this course is to improve business students' analytical skills by covering the techniques and applications of data-driven decision making. Students will be equipped with the basic computing and programming skills necessary to solve business analytic problems. Students will have the ability to apply these skills to real-world business issues

*Prerequisites:* CS115

**BIDA4500: Business strategies and ERP** **3 Cr Hr (2,2)** **ECTS (4.5)**

In this course, students will learn to strategically think about Enterprise Resource Planning (ERP) software systems and their role within an organization. It introduces key concepts of integrated information systems and explains why such systems are valuable to businesses. It also shows how organizations use these systems to run their operations more efficiently and effectively. The course will examine typical ERP modules, such as materials management (MM), financials, projects, and human resource management (HRM). In addition to the lecture, students will be guided through several hands-on activities of various business processes in selected software products. The course will also provide a discussion on various business cases in which ERP concepts can be applied. An overview of Business Intelligence (BI) and analytics in the ERP context will also be addressed

*Prerequisites:* BIDA1400

**BIDA4900: Bachelor's Thesis** **3 Cr Hr (0,8)** **ECTS (8.5)**

The Bachelor's thesis is carried out in the form of a research project within the department. The students put the competencies learned during the program into practice. The Bachelor's thesis is used to assess the student's initiative and their ability to plan, report and present a project. Students work independently on a bachelor's thesis under the guidance of a supervisor. They are responsible for finding a project and a supervisor.

*Prerequisites:* MGT2103, Dept. Approval

**BIDA4999: International Internship** **12 Cr Hr (0,40)** **ECTS (30)**

Training at a German/International approved company for 20 weeks. The training must cover any topic or multiple areas of the respective field of study. The training must be approved by the Office of Industrial Links (OIL) at GJU and the respective Exchange Coordinator

*Prerequisites:* DS301, Dept. Approval

## VII. Elective Course Offered by Management Sciences Department.

**MGT4102: Corporate Strategies & Policies** **Cr Hr (3.0)** **ECTS (4.5)**

Why are some firms more successful than others? This is the fundamental question of strategy. This module analyzes the sources of competitive success among firms and develops knowledge and skills necessary to effectively analyze and formulate strategy, be it as a manager, a management consultant, or an investment banker. We will tackle the complexity of analyzing the business enterprise in this era of globalization and changing firm boundaries and of assessing strategy under increasing uncertainty.

*prerequisite:* BSC001

**MGT4104: International Business and Globalization** **Cr Hr (3.0)** **ECTS (4.5)**

This module will introduce students to the International Business Environments: political, legal, economic, institutional, and socio-cultural. As the global economy becomes closely integrated, the need to understand its driving forces as well as its impacts on the domestic economy becomes critical. To help students prepare for this challenge, areas such as global manufacturing and managing value-adding chains, export and import strategies, international delivery modes, export financing issues, foreign direct investments and strategic alliances will be examined.

*prerequisite:* BSC001

**MGT4106: Organizational Development and Change** **Cr Hr (3.0)** **ECTS (4.5)**

Organization Development (OD) is the process of planning and implementing interventions to create interpersonal, group, intergroup, or organization-wide change. This module presents the theoretical foundations of organization development as an applied behavioral science. Students will also be introduced to many types of interpersonal, intra-group, intergroup, and organizational interventions that are used to effect comprehensive and lasting changes.

*prerequisite:* BSC001

**MGT4108: Quality Management****Cr Hr (3.0)****ECTS (4.5)**

Total Quality Management (TQM) help the students to learn to view quality from a variety of functional perspectives, gain a better understanding of the problems associated with improving quality, also quality tools utilized in service and international/environments. This module focuses on the essence, principles, and practices of total quality management (TQM). Some of the ideas and topics that are covered are: process improvement; process orientation; service quality; human resources; customer satisfaction programs; quality function deployment; process control and capability; role of inspection; economics of quality; productivity measurement; learning and organizational performance measures; and teachings of Deming, Juran, and Crosby.

*prerequisite: BSC001,*

**BIDA4901: Business Elective I****1 Cr Hr (1,0)****2 ECTS**

The module is part of the international experience of the students in Germany and reflects the German dimension of the German Jordanian Universities. Specific contents vary depending on the specific module selected and upon the host university's module handbook and academic policies. The module aims at equipping the students with intercultural, linguistic, and academic competencies in management and related fields. It further prepares the students to understand and interact in the academic and professional environment in Germany.

*prerequisite: BSC001*

**BIDA4902: Business Elective II****2 Cr Hr (2,0)****3 ECTS**

The module is part of the international experience of the students in Germany and reflects the German dimension of the German Jordanian Universities. Specific contents vary depending on the specific module selected and upon the host university's module handbook and academic policies. The module aims at equipping the students with intercultural, linguistic, and academic competencies in management and related fields. It further prepares the students to understand and interact in the academic and professional environment in Germany.

*prerequisite: BSC001*

**BIDA4903: Business Elective III****3 Cr Hr (3,0)****4.5 ECTS**

The module is part of the international experience of the students in Germany and reflects the German dimension of the German Jordanian Universities. Specific contents vary depending on the specific module selected and upon the host university's module handbook and academic policies. The module aims at equipping the students with intercultural, linguistic, and academic competencies in management and related fields. It further prepares the students to understand and interact in the academic and professional environment in Germany.

*prerequisite: BSC001*

**BIDA4904: Business Elective IV****3 Cr Hr (3,0)****4.5 ECTS**

The module is part of the international experience of the students in Germany and reflects the German dimension of the German Jordanian Universities. Specific contents vary depending on the specific module selected and upon the host university's module handbook and academic policies. The module aims at equipping the students with intercultural, linguistic, and academic competencies in management and related fields. It further prepares the students to understand and interact in the academic and professional environment in Germany.

*prerequisite: BSC001*

**BIDA4905: Business Elective V****3 Cr Hr (3,0)****4.5 ECTS**

The module is part of the international experience of the students in Germany and reflects the German dimension of the German Jordanian Universities. Specific contents vary depending on the specific module selected and upon the host university's module handbook and academic policies. The module aims at equipping the students with intercultural, linguistic, and academic competencies in management and related fields. It further prepares the students to understand and interact in the academic and professional environment in Germany.

*prerequisite: BSC001*

**BIDA4906: Business Elective VI****3 Cr Hr (3,0)****4.5 ECTS**

The module is part of the international experience of the students in Germany and reflects the German dimension of the German Jordanian Universities. Specific contents vary depending on the specific module selected and upon the host university's module handbook and academic policies. The module aims at equipping the students with intercultural, linguistic, and academic competencies in management and related fields. It further prepares the students to understand and interact in the academic and professional environment in Germany.

*prerequisite: BSC001*

**BIDA4907: Special Topics in BIDA I****Cr Hr (1.0)****ECTS (1.5)**

This module is a dynamic module tailored to special and hot issues in management that are of interest to students and academics. It may be offered when demand warrants for students who completed their German Year (GY). After an insight into management issues, specific aspects of contemporary management will be treated in depth. This module discusses important issues and roles of management in the current and future business and economy. The topics covered may include management, corporate governance, marketing in an actual environment (environment, digitalization, innovative methods). After completing the module, the students are expected to understand the topics, analyze the implications of business and economic changes to accounting and vice versa; and give opinion and make decisions related to the issues.

*prerequisite: BSC001*

**BIDA4908: Special Topics in BIDA II****2 Cr Hr (2.0)****3 ECTS**

This is a dynamic course tailored to special and hot issues in management that are of interest to students and academics. It may be offered when demand warrants for students who completed their GY. After an insight in management issues, specific aspects of contemporary management will be treated in depth. This module discusses important issues and roles of management in the current and future business and economy. The topics covered may include management, corporate governance, marketing in an actual environment (environment, digitalization, innovative methods). After completing the module, the students are expected to understand the topics, analyze the implications of business and economic changes to accounting and vice versa; and give opinion and make decisions related to the issues.

*prerequisite: BSC001*

**BIDA4909: Special Topics in BIDA III****3Cr Hr (3.0)****4.5 ECTS**

This is a dynamic course tailored to special and hot issues in management that are of interest to students and academics. It may be offered when demand warrants for students who completed their GY. After an insight in management issues, specific aspects of contemporary management will be treated in depth. This module discusses important issues and roles of management in the current and future business and economy. The topics covered may include management, corporate governance, marketing in an actual environment (environment, digitalization, innovative methods). After completing the module, the students are expected to understand the topics, analyze the implications of business and economic changes to accounting and vice versa; and give opinion and make decisions related to the issues.

*prerequisite: BSC001*

**BIDA4005: Tools and Applications in Business Information Systems****Cr Hr (3.0)****ECTS (4.5)**

This advanced course focuses on the critical tools and applications pivotal to Business Information Systems (BIS), designed for fourth-year students aiming to master the technological competencies essential in the digital business environment. The course explores a broad spectrum of information system tools and their applications, including databases, enterprise resource planning (ERP), customer relationship management (CRM), and business intelligence (BI) systems. Students will learn through hands-on training with real-world software and platforms to understand how technology can be leveraged to enhance business processes, decision-making, and strategic planning. The curriculum also covers topics such as data analysis, information system design, and the integration of emerging technologies like artificial intelligence and blockchain in business systems.

*prerequisite: BSC001*

**BIDA4006: Digital Business****Cr Hr (3.0)****ECTS (4.5)**

Digital Business is a cutting-edge course designed to explore the transformative impact of digital technology on business practices, models, and strategies. The course focuses on the integration of digital technologies into business operations and the development of digital business models that drive innovation and competitive advantage. Students will examine various digital tools and platforms, including e-commerce, social media, mobile applications, and cloud computing, and their role in creating new business opportunities. Key topics such as digital marketing, cybersecurity, data analytics, and the regulatory environment will be covered to provide a comprehensive understanding of the digital business landscape.

prerequisite: BSC001

**BIDA4007: Data Science****Cr Hr (3.0)****ECTS (4.5)**

Data Science is a comprehensive course designed to provide students with in-depth knowledge and skills in the field of data analysis and statistical modeling. This course explores the concepts and tools necessary for extracting meaningful insights from large datasets to inform strategic decision-making. Students will learn to apply various data science techniques, including machine learning, data mining, predictive analytics, and big data technologies. The course emphasizes practical application through hands-on experience with programming languages such as Python and R, and tools like SQL, Hadoop, and Tableau. Topics such as data visualization, data ethics, and the impact of data science on modern business practices will also be covered.

prerequisite: BSC001

**BIDA4008: Business Applications in Python****Cr Hr (3.0)****ECTS (4.5)**

Business Applications in Python is an advanced course crafted to explore the practical uses of Python in various business contexts. This course equips students with the programming skills necessary to develop and implement powerful business solutions using Python, one of the most popular programming languages in the business world today. The curriculum includes an in-depth examination of Python's capabilities in data analysis, automation, web development, and financial modeling. Students will work with libraries such as Pandas, NumPy, and Flask, and apply these tools to real-world business problems. The course emphasizes practical, hands-on learning experiences through project-based assignments that simulate business scenarios and data-driven decision-making processes.

prerequisite: BSC001

## VIII. Course Offered by Other Departments.

**ACC1001: Principles of Accounting I****3 Cr Hr (3,0)****4.5 ECTS**

This course covers the conceptual foundation of accounting, the accounting cycle for service and merchandising enterprises, the preparation of income statement and related information, the balance sheet of proprietorships and partnerships, basics of accounting information systems, introduction to the conceptual framework for the preparation and presentation of financial statements as well as the valuation and reporting of selected items reported in the balance sheet; such as cash and inventories

Prerequisites: NA

**ACC2501: Fundamentals of Finance****3 Cr Hr (3,0)****5 ECTS**

This course covers the conceptual foundation of finance; Revenue & Gross Margin, Operating Expense & Net Income, Gross & Net Margin, Advanced Income Statement, Revenue Recognition, Expense Recognition, Balance Sheet Basics - Liabilities & Net Worth, Double Entry Book-keeping, Working Capital and Debt / Equity Ratio and Return on Net Worth, Cash Flow Statement Basics, building a Cash Flow Statement Analyzing a Cash Flow Statement, Depreciation & Amortization and Taxes.

Prerequisites: ACC1001, ENGL0099

**LOGS1001: Introduction to Logistics** **3 Cr Hr (3,0)** **4.5 ECTS**

Business logistics considers the two-directional flow and storage of products and information; into, within, and out of the organization. The logistics system consists of three sub-systems: inbound, internal, and outbound logistics. As the first module in logistics, LOGS10001 starts with defining logistics and determining the scope of logistics management as a part of supply chain management. The importance of logistics in the micro- and macro-economic levels, the systems and total cost approaches to logistics, logistical relationships within the firm, and the main logistics activities are also covered in the first part of this module. Thereafter, more detailed examination of logistics activities is considered including procurement; demand management, order management, and customer service; inventory management; warehousing management; packaging and material handling; and transportation management. Afterwards, the organizational and managerial issues related to logistics are considered including organizational structure and design, productivity, quality, risk, sustainability, and complexity.

*Prerequisites: NA*

**LOGS4303 Logistics Enterprise Resource Planning Modules** **3 Cr Hr** **4.5 ECTS**

Enterprise Resource Planning (ERP) systems use a centralized database to integrate business transactions along and between processes, leading to benefits such as efficient and error-free workflows plus accounting, management reporting and improved decision-making. This module will introduce the student to ERP systems and show how organizations use these systems to run their operations more efficiently and effectively. The module will examine typical ERP modules, such as: materials management (MM), supply chain management (SCM), customer relationship management (CRM), financials, projects, and human resource management (HRM).

*prerequisite: BSC001*

**LOGS4406 Humanitarian Logistics** **3 Cr Hr** **4.5 ECTS**

Students get acquainted with the fundamental concepts of disaster management and humanitarian logistics. Logistics is one of the most critical components to successful humanitarian assistance, characterized by the efficient and effective delivery of the right assistance to the right beneficiaries at the right time. This module will prepare students for roles ranging from planning, managing, implementing, and controlling the flow and storage of goods, material, cost and information along the entire emergency supply chain for the purpose of relief and alleviating the suffering of people in places with disasters.

*Prerequisites: BSC001*

**ACC4305 Accounting Ethics and Corporate Governance** **4.5 ECTS** **3 Cr Hr (3,0)**

The module starts with introducing and defining corporate governance, key theoretical models, and how the definition of corporate governance can be varied according to its objectives to the stakeholders that are intended to be served by corporate governance mechanisms and to the ownership structure prevails in different environments. Control vs. ownership is shown, how the separation between the control and ownership might impact different corporate governance mechanisms and how it might play a crucial role in addressing agency conflict from the classical agency theory point of view. Different ownership structures (concentrated, dispersed) and control mechanisms (weak, strong) are introduced, and it is shown how different combinations might be achieved in different environments, especially the combination of dispersed ownership and strong control and the mechanisms that violate one-share-one vote right to achieve such this combination. The definition of accounting ethics, code of professional conduct, and moral development are introduced.

*Prerequisites: BSC001*

**ACC4505 Islamic Finance and Accounting** **3 Cr Hr (3,0)** **4.5 ECTS**

This module provides an insight into the key features of Islamic banking business from theoretical foundations to the development of Islamic banking practices and main types of Islamic banking products. In addition, the module examines the operational features of Islamic banks focusing on their performance and how they differ from conventional interest-based banks. The module also focuses on the accounting and

reporting for Islamic banks transactions.

*Prerequisites: BSC001*

## IX. Courses offered by Other Schools

<b>CS115: Computing Fundamentals</b>	<b>3 Cr Hr (3,0)</b>	<b>ECTS (4.5)</b>
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This course aims to equip business students with the basic information technology (IT) skills and concepts, electronic commerce, application software, system software, database concepts, database management systems, basics of the structured query language (SQL), and theories of business intelligence programming. Furthermore, students will be exposed to selected and appropriate computer languages that illustrate the basic principles of programming structure to serve specific purposes in an integrated business intelligence system.

*Prerequisites:*

<b>CS1150: Computing Fundamentals Lab</b>	<b>1 Cr Hr (0,3)</b>	<b>ECTS (1.5)</b>
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The students will have a practical Lab session every week to offer hands-on experience on the topics that are covered in CS115. Also, on the selected computer languages that illustrate the basic principles of programming structure to serve specific purposes in an integrated business intelligence system.

Co-requisite: CS115

<b>ARB0099: Elementary Arabic</b>	<b>0 Cr Hr (3,0)</b>	<b>0 ECTS</b>
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This course aims to develop student's ability to read, comprehend, literary analyze, grammatically analyze, linguistically analyze, poetically analyze, and rhetorically analyze texts properly. The course also includes a selection of Arabic literature in poetry and prose representing different literary ages, in addition to several common forms of writing such as scientific article, news article, and others.

*Prerequisites: Placement Test-*

<b>ARB100: Arabic</b>	<b>3 Cr Hr (3,0)</b>	<b>3 ECTS</b>
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This course aims to improve the student's competence in the various linguistic skills in terms of reading, comprehension, and taste. This is achieved through the study of selected texts with many implications that raise issues in spelling, grammar, composition, meaning, and inference, and the use of an old and modern thesaurus.

*Prerequisites: ARB0099*

<b>ENGL0098: Elementary English</b>	<b>1 Cr Hr (3,0)</b>	<b>3 ECTS</b>
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Students will focus on English at an elementary level through the receptive skills of reading and listening and the productive skills of writing and speaking. English III is aimed at students who have achieved a grade of between 0 and 60 on the English Placement Test. This course is zero credit hours. This course enables students to contribute their own knowledge or experience in speaking activities, and use the language correctly. The exposure to a wide variety of listening material with a variety of accents, including some non-native speakers of English improves their level. English III integrates the focus on individual sounds of word and sentence stress where students are encouraged to copy the rhythm of English. Pronunciation is also integrated into Grammar and Vocabulary activities.

*Prerequisite: Placement test*

<b>ENGL0099: Intermediate English</b>	<b>1 Cr Hr (3,0)</b>	<b>3 ECTS</b>
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Students will focus on English at an intermediate level through the receptive skills of reading and listening and the productive skills of writing and speaking. English IV is aimed at students who have successfully passed English III or achieved a grade of between 61-80 on the English Placement Test. This course is zero credit hours. Attendance: Students are required to attend regularly according to the regulations of GJU

and should provide the instructor with official excuses in case they are absent for a long time. Participation and homework: Students are required to participate in the group discussion in class. Interaction is necessary as well as oral presentations will be given to measure how fluent students are and to improve their skill of speaking. Medium of communication: GJU email, face to face (on campus) and during office hours. Teaching method: Explaining, discussing and doing the exercises given to students.

*Prerequisites:* **ENGL0098**

**ENGL1001: Upper Intermediate English** **2 Cr Hr (3,0)** **3 ECTS**

“Education is the ability to listen to almost anything without losing your temper or your self-confidence.” Robert Frost (1874 - 1963) English V is aimed at students who have achieved a passing grade in English IV or a grade between 81 and above on the English Placement Test. English V is equal to three credit hours. Students will focus on English at an upper intermediate level. Students will analyze and produce essays with an emphasis on argumentation and persuasion working both independently and cooperatively to gather, evaluate, and synthesize necessary information. Class activities include interactive lectures, small group and class discussions, informal debates, peer feedback, individual presentations, focused listening exercises and focused viewing exercises as well as assorted reading, writing, and grammar assignments. There will be some poetry analysis together with reading and understanding a short story and a drama using basic literary terms and concepts. Note: The process of argumentation enables us to clarify and develop our own responses to important issues, and a significant part of that process involves dialogue with both those who share our opinions and those who do not. In order to participate responsibly and effectively in meaningful dialogue, we must maintain an attitude characterized by openness, responsibility, rationality, and respect for all participants. Upon finishing this level, all students are eligible to receive an English language proficiency letter indicating their level according to the Common European Framework Reference for Languages (CEFR) varying between B1 and B2 according to the grade they get upon finishing this level..

*Prerequisites:* **ENGL0098**

**ENGL1002: Advanced English** **2 Cr Hr (3,0)** **3 ECTS**

English VI, is the last of the English levels at the German Jordanian University to arm graduates with the best command of the English language in its varied aspects: Reading, Writing, Speaking, Listening and Understanding. It is aimed at students who successfully pass English V and it is three credit hours. This level focuses on a higher level of enhancement of their language. Students can address any audience, through delivering a persuasive speech, making an informative presentation, or analyzing controversial News through News Analysis. The students' Thesis Statements are backed up with: mistake-free language, persuasive logic and verified statistics, numbers and facts to convince the audience with their points of view. Other tools are enhanced involving their language, including specific terminology, tone, intonation and body language to make them acquire the best outcome. Students can also address any topic in writing. With the language skills provided in this level, GJU graduates become more equipped with outstanding abilities and get better chances in the work market, in addition to their knowledge and education in the major fields. The assessment of the students applies Bloom's Taxonomy where the learning objectives are classified according to the different domains including: learning (remembering), understanding, applying, analyzing, evaluating, the creating. Upon finishing this level, all students are eligible to receive an English language proficiency letter indicating their level according to the Common European Framework Reference for Languages (CEFR) varying between B2, C1 or C2 according to the grade they get upon finishing this level.

*Prerequisites:* **ENGL1001**

**GERL101B1: German I B1 track** **3 Cr Hr (9,0)** **6 ECTS**

By the end of this module, the student will be able to:

- Comprehend very familiar, everyday expressions and very simple sentences and structures related to areas of most immediate relevance according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the Level A1.1 (beginners without pre-knowledge).
- Introduce herself/himself and others, express likes and dislikes, fill out a personal form, ask questions and give answers in present and partially in past tense, set private and semi-official

appointments, describe people and things and express frequency and quantity in a very basic way both orally and in writing.

- Communicate with native speakers on a very basic level if those involved in the conversation speak slowly and clearly and are willing to support the non-native speaker.

*Prerequisites: Intensive pre-course (only for 1st semester of an academic year)*

<b>GERL102B1: German II B1 track</b>	<b>3 Cr Hr (9,0)</b>	<b>6 ECTS</b>
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By the end of this module, the student will be able to:

- Understand and use familiar, everyday expressions and very simple sentences and structures related to areas of most immediate relevance according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level A1.2 (basic users).
- Introduce herself/himself and others, express likes and dislikes, fill out a personal form, ask questions and give answers in present and past tense, set private and official appointments, describe people and things, ask for directions, express frequency and quantity in a basic way both orally and in writing.
- Communicate with native speakers on a very basic level if those involved in the conversation speak slowly and clearly and, if need be, are willing to support the non-native speaker.

*Prerequisites: GERL101B1*

<b>GERL201B1: German III B1 track</b>	<b>3 Cr Hr (6,0)</b>	<b>4 ECTS</b>
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By the end of this module, the student will be able to:

- Understand and use familiar, frequently used expressions and simple sentences and structures related to areas of a wider immediate relevance according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level A2.1 (basic users).
- Talk about their academic and/or professional background, describe their living conditions, express likes and dislikes, ask questions and give answers in present and past tense, ask for help and support, make suggestions and give advice, describe health problems and talk with medical doctors and nurses, express pity, sorrow and hopes, express frequency and quantity in a basic way both orally and in writing.
- Communicate with native speakers within simple and familiar tasks requiring a simple and direct exchange of information on familiar and routine matters.

*Prerequisites: GERL102B1*

<b>GERL202B1: German IV B1 track</b>	<b>3 Cr Hr (9,0)</b>	<b>6 ECTS</b>
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By the end of this module, the student will be able to:

- Distinguish between familiar expressions, sentences and structures related to areas of immediate relevance and more elaborated components like the main points of clear standard input on familiar matters regularly encountered in work, school, leisure etc. according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level A2.2 (basic users) and, partially, at the level B1.1 (independent user).
- Talk about personal experiences with languages, express feelings of happiness, joy and discomfort, describe own media consumption habits, describe travel experiences, convince others, describe and report in official situations, describe statistics, write formal invitations and short emails, make suggestions and talk about future events and situations, describe dreams hopes and ambitions and briefly give reasons or explanations for opinions and plans.
- Communicate with native speakers about essential points and ideas in familiar contexts.
- Understand the characteristics of the official B1 exam according to the CEFR and use strategies to overcome obstacles while solving said exam.

*Prerequisites: GERL201B1*

**GERL301B1: German V B1 track****3 Cr Hr (9,0)****6 ECTS**

By the end of this module, the student will be able to:

- Understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure etc. according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level B1.1 and B1.2 (independent user).
- Deal with most situations likely to arise whilst traveling in an area where German is spoken, produce simple connected texts on topic which are familiar or of personal interest, describe experiences and events, dreams, hopes and ambitions, statistics, and briefly give reasons and explanations for opinions and plans.
- Understand the main point of many radio or TV programmes on current events and topics, understand the description of events, feelings and wishes in personal letters, write personal letters/texts describing experiences and impressions, write straightforward connected texts on topics which are familiar or of personal interest.
- Communicate with native speakers about essential points and ideas in familiar contexts and about topics of personal or partially professional interest.
- Follow a lecture or talk within her/his field, provided the subject matter is familiar and the presentation straightforward and clearly structured.
- Understand simple technical information, such as operating instructions for everyday equipment.
- Understand all characteristics of the official B1 exam according to the CEFR and use a variety of strategies to overcome obstacles while solving said exam and all its components.

*Prerequisites:* **GERL202B1**

**GERL302REG: German VI Regular****3 Cr Hr (6,0)****6 ECTS**

By the end of this module, the student will be able to:

- Successfully manage the application process for a six months internship in Germany which is part of the obligatory 'German Year' for all GJU students. The process consists of finding and understanding a suitable add in accordance with the students' major, writing a convincing CV and cover letter, and mastering an effective and mostly fluent interview, departing spontaneously, taking initiatives, expanding ideas with little help or prodding from the interviewer.
- Successfully manage the most significant situations which the student, in accordance with the currently studied major, encounters during her/his theoretical and practical semester in Germany. This process is being achieved within a technical language training focussing on action orientated and communicative scenarios like following lectures, taking notes, summarizing academic and technical texts, writing official emails and texts related to academic and vocational encounters, holding presentations, communicating both verbally and in writing with professors, university staff, students as well as with colleagues and customers during an internship.
- Understand the concept of general intercultural phenomena, reflect and understand the differences between culture and cultural standards in Jordan and in Germany, understand the concept of 'culture shock' and potentially cope with its different stages, reflect about appropriate and inappropriate behaviour in Germany as well as understand the concepts of open-mindedness and 'culture clash'.

*Prerequisites:* **GERL301B1**

<b>GERL302INT: German VI Intensive</b>	<b>3 Cr Hr (9,0)</b>	<b>6 ECTS</b>
By the end of this module, the student will be able to:		
<ul style="list-style-type: none"> <li>• Successfully manage the application process for a six months internship in Germany which is part of the obligatory 'German Year' for all GJU students. The process consists of finding and understanding a suitable add in accordance with the students' major, writing a convincing CV and cover letter, and mastering an effective and mostly fluent interview, departing spontaneously, taking initiatives, expanding ideas with little help or prodding from the interviewer.</li> </ul>		

- Successfully manage the most significant situations which the student, in accordance with the currently studied major, encounters during her/his theoretical and practical semester in Germany. This process is being achieved within a technical language training focussing on action orientated and communicative scenarios like following lectures, taking notes, summarizing academic and technical texts, writing official emails and texts related to academic and vocational encounters, holding presentations, communicating both verbally and in writing with professors, university staff, students as well as with colleagues and customers during an internship.
- Understand the concept of general intercultural phenomena, reflect and understand the differences between culture and cultural standards in Jordan and in Germany, understand the concept of 'culture shock' and potentially cope with its different stages, reflect about appropriate and inappropriate behaviour in Germany as well as understand the concepts of open-mindedness and 'culture clash'.
- Understand all characteristics of the official B1 exam according to the CEFR and use different strategies to overcome obstacles while solving said exam and its different components.

*Prerequisites:* **GERL301B1**

### **GERL102B2: German II B2 track**

**3 Cr Hr (9,0)**

**6 ECTS**

By the end of this module, the student will be able to:

- Understand and use familiar, everyday expressions and simple sentences and structures related to areas of most immediate relevance according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level A1.2 and, partially, A2.1 (basic users).
- Talk about their academic and/or professional background, describe their living conditions, express likes and dislikes, ask questions and give answers in present and past tense, ask for help and support, make suggestions and give advice, express pity, sorrow and hopes, express frequency and quantity in a basic way both orally and in writing.
- Introduce herself/himself and others, express likes and dislikes, fill out a personal form, ask questions and give answers in present and past tense, set private and official appointments, describe people and things, ask for directions, express frequency and quantity in a basic way both orally and in writing.
- Communicate with native speakers on a basic level if those involved in the conversation speak slowly and clearly and, if need be, are willing to support the non-native speaker.

*Prerequisites:* **GERL101B1**

### **GERL201B2: German III B2 track**

**3 Cr Hr (6,0)**

**4 ECTS**

By the end of this module, the student will be able to:

- Distinguish between familiar expressions, sentences and structures related to areas of immediate relevance and more elaborated components like the main points of clear standard input on familiar matters regularly encountered in work, school, leisure etc. according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level A2.1 and A2.2 (basic users).
- Talk about their academic and/or professional background, describe their living conditions, express likes and dislikes, ask questions and give answers in present and past tense, ask for help and support, make suggestions and give advice, describe health problems and talk with medical doctors and nurses, express pity, sorrow and hopes, describe simple statistics, express frequency and quantity in a basic way both orally and in writing, express feelings of happiness, joy and discomfort and write personal emails and letters, understand and produce comments, blogs and reports.
- Communicate with native speakers in simple and familiar tasks requiring a simple and direct exchange of essential information on familiar and routine matters.

<b>GERL202B2: German IV B2 track</b>	<b>3 Cr Hr (9,0)</b>	<b>6 ECTS</b>
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By the end of this module, the student will be able to:

- Understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure etc. according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level B1.1 and B1.2 (independent user).
- Deal with most situations likely to arise whilst traveling in an area where German is spoken, produce simple connected texts on topic which are familiar or of personal interest, describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans.
- Understand the main point of many radio or TV programmes on current events and topics, understand the description of events, feelings and wishes in personal letters, write personal letters/texts describing experiences and impressions, write straightforward connected texts on topics which are familiar or of personal interest.
- Communicate with native speakers about essential points and ideas in familiar contexts and about topics of personal or partially professional interest.
- Follow a lecture or talk within her/his field, provided the subject matter is familiar and the presentation straightforward and clearly structured.
- Understand simple technical information, such as operating instructions for everyday equipment.
- Understand all characteristics of the official B1 exam according to the CEFR and use different strategies to overcome obstacles while solving said exam and all its components.

Prerequisites: GERL201B2

<b>GERL301B2: German V B2 track</b>	<b>3 Cr Hr (9,0)</b>	<b>6 ECTS</b>
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By the end of this module, the student will be able to:

- Largely understand and produce rather complex texts on both concrete and abstract topics, including technical discussions in her/his field of specialisation and according to the discretionary standards in the *Common European Framework of Reference for Languages* (CEFR) at the level B2.1 (independent user).
- Interact with an initial degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party.
- Largely understand standard spoken language, live or broadcast, on both familiar and unfamiliar topics normally encountered in personal, social, academic or vocational life.
- Show a relatively high controlled degree of grammatical control without making errors which cause misunderstanding and with the growing ability to correct most of her/his mistakes.
- Largely follow essentials of lectures, talks, reports and other forms of academic/professional presentation which are propositionally and linguistically complex.
- Understand announcements and messages on concrete and abstract topics spoken in standard dialect at normal speed.
- Scan quickly through long texts, locating relevant details and understand and exchange complex information and advice on the full range of matters related to her/his occupational role.
- Understand the main characteristics of the official B2 exam according to the CEFR and use different strategies to overcome obstacles while solving said exam and its different components.

Prerequisites: GERL202B2

<b>GERL302B2: German VI B2 track</b>	<b>3 Cr Hr (6,0)</b>	<b>6 ECTS</b>
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By the end of this module, the student will be able to:

- Understand and produce rather complex texts on both concrete and abstract topics, including technical discussions in her/his field of specialisation and according to the discretionary standards

in the *Common European Framework of Reference for Languages* (CEFR) at the level B2.2 (independent user).

- Interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party.
- Understand standard spoken language, live or broadcast, on both familiar and unfamiliar topics normally encountered in personal, social, academic or vocational life.
- Show a highly controlled degree of grammatical control without making errors which cause misunderstanding and with the growing ability to correct most of her/his mistakes.
- Follow essentials of lectures, talks, reports and other forms of academic/professional presentation which are propositionally and linguistically complex.
- Understand announcements and messages on concrete and abstract topics spoken in standard dialect at normal speed.
- Scan quickly through long texts, locating relevant details and understand and exchange complex information and advice on the full range of matters related to her/his occupational role.
- Understand all characteristics of the official B2 exam according to the CEFR and use different strategies to overcome obstacles while solving said exam and its different components.
- Successfully manage the application process for a six months internship in Germany which is part of the obligatory 'German Year' for all GJU students. The process consists of finding and understanding a suitable add in accordance with the students' major, writing a convincing CV and cover letter, and mastering an effective and mostly fluent interview, departing spontaneously, taking initiatives, expanding ideas with little help or prodding from the interviewer.
- Successfully manage the most significant situations which the student, in accordance with the currently studied major, encounters during her/his theoretical and practical semester in Germany. This process is being achieved within a technical language training focussing on action orientated and communicative scenarios like following lectures, taking notes, summarizing academic and technical texts, writing official emails and texts related to academic and vocational encounters, holding presentations, communicating both verbally and in writing with professors, university staff, students as well as with colleagues and customers during an internship.
- Understand the concept of general intercultural phenomena, reflect and understand the differences between culture and cultural standards in Jordan and in Germany, understand the concept of 'culture shock' and potentially cope with its different stages, reflect about appropriate and inappropriate behaviour in Germany as well as understand the concepts of open-mindedness and 'culture clash'.

*Prerequisites:* **GERL301B2**

**MILS100: Military Science**

**3 Cr Hr (3,0)**

**3 ECTS**

History of the Jordanian Arab Army. United Nations Peace Keeping Forces. Preparation of the nation for defense and liberation. History of the Hashemite Kingdom of Jordan and its development

*Prerequisites:*

**NE101: National Education**

**3 Cr Hr (3,0)**

**3 ECTS**

In a context of striving towards democracy like the one Jordan enjoys today, the meaning and practice of active and responsible citizenship becomes more crucial. It is often argued that democracy requires "democrats" to flourish, and become well established. Democrats are those women and men who recognize pluralism, inclusion, positive engagement, and participation as the main values that govern their interaction with the state as citizens and with each other as diverse people of different interests. In this course you will be able to understand your rights and responsibilities as Jordanian citizen expand your knowledge about the frameworks, and processes that regulates citizen-state relationships as well as the basic necessary skills for you to practice your citizenship rights in a civic manner.

*Prerequisites:*

**DS101 Dual Study Practical I**

**3 Cr Hr**

**3 ECTS**

Student and the company/organization agree on a training plan for the 12-week practical phase. The

student will be given a general orientation to the company/organization and be assigned to one or more departments in the company. He/She and will contribute to the completion of routine tasks. In addition to guidance from the company/organization, the student will be supervised and evaluated by a University instructor. Supervision can be performed via a combination of field visits, virtual meetings, and direct communication with the student and/or his supervisor in the company/organisation. The regular aim for the academic supervisor is to visit the student once during the practical phase. During the training, the student will learn about the various responsibilities of professionals in his/her field and interact with employees. He/she will learn the basic processes and services inside the company/organization. The student will also perform supervised work and apply their basic professional knowledge in their work activities. Students will learn about the importance of professionalism, organization, effective communication, and ethics in the work environment. They will construct a general awareness of the culture of the company and develop a good understanding of the company's position in its targeted market. Students will get the opportunity to start building their professional network.

*Prerequisites: Departmental Approval*

**DS201 Dual Study Practical II** **3 Cr Hr** **3 ECTS**

Student and the company/organization agree on a training plan for the 12-week practical phase. The student will be assigned to one or more departments in the company and will contribute to the completion of their routine tasks. In addition to guidance from the company/organization, the student will be supervised and evaluated by a University instructor. Supervision can be performed via a combination of field visits, virtual meetings, and direct communication with the student and/or his supervisor in the company/organisation. The regular aim for the academic supervisor is to visit the student once during the practical phase. During the training, the student will learn to become aware of the main responsibilities of professionals in his/her field. He/she will become familiar with processes and services inside the company/organization. The student will also perform work with limited supervision and apply their scientific knowledge in their work activities. Students will learn and practice professionalism, organization, effective communication, and ethics in the work environment. They will construct a sound awareness of the culture of the company and develop a very good understanding of the company's position in its targeted market. Students will get the opportunity to expand their professional network. They will also work on a project assignment related to the work of his/her company. The project is then evaluated at the end of the training period.

*Prerequisites: DS101, Departmental Approval*

**DS301 Dual Study Practical III** **0 Cr Hr** **6 ECTS**

Student and the company/organization agree on a training plan for the 12-week practical phase. The student will be assigned to one or more departments in the company and will contribute to the completion of their routine tasks. During the training, the student will learn to become fully aware of the main responsibilities of professionals in his/her field. He/she will become familiar with processes, projects, and services inside the company/organization. The student will also perform work with limited or no supervision and apply their scientific knowledge in their work activities. Students will learn and practice professionalism, organization, effective communication, and ethics in the work environment. They will construct a strong awareness of the culture of the company and develop an excellent understanding of the company's position in its targeted market. Students will get the opportunity to expand their professional network.

*Prerequisites: DS201, Departmental Approval*