



澳門大學  
UNIVERSIDADE DE MACAU  
UNIVERSITY OF MACAU

## Newly offered programme in 2019/2020 academic year

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

(The programme is being registered and will come into operation upon publication in Macao SAR Gazette)

#### **Introduction**

In the last two decades, “business intelligence” and “data analytics” are emerging principles for companies to stay competitive in the market or even as the key to success. Unlike traditional way of doing business, successful organizations now rely on important tactic that involves with handling of compound technology as to sustain data-driven decision making, sales improvement and opportunities expansion. Many organizations, such as Facebook, Google and Alibaba and many other on-line shopping platforms, engage in myriad artificial intelligence and data processing to support their sales and marketing strategies. To address the talent needs of big data era, the University of Macau will launch a high quality programme “**Bachelor of Science in Business Intelligence and Data Analytics**” in the new academic year for which secondary school graduates from all streams (arts/science/commerce) may apply. Graduates of this programme will be equipped with business management, IT application, and data analytics knowledge and skills. The programme aims at nurturing globally-minded leaders and professionals for taking challenge in the complex business environment with their interdisciplinary and transformative competence.

#### **Features**

- The programme covers a wide range of specialized areas in big data, artificial intelligence, statistics, information system, database management, finance, accounting, economics, management and marketing etc.
- provides professional training in big data management and business analytical skills.

#### **Graduate Career Prospects**

Graduates can easily fit into the business and the public sector. They may work in various organizational functions particularly as:

- Programmers, Business Analysts, Marketing Analysts, Systems Analysts, Business Intelligence Analysts, Financial Analysts or Risk Analysts at banks, casinos, hedge funds, private equity firms, insurance companies, credit bureaus, technology firms, etc.
- Senior roles such as Database Developer/Administrator/Manager, Network Administrator/Engineer/Manager, Project Manager, IT Manager, Enterprise Architect, Chief Information Officer, Chief Technology Officer, Consultant, etc.



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### Admission Channel

- Applicants may apply for admission by one of the following channels, whichever is applicable to them:
  - ✓ Admission Examination (Application period: 3 – 18 January 2019)
  - ✓ Direct Admission (Application period: 3 December 2018 – 18 April 2019)
- Please refer to the Registry's webpage at <https://reg.um.edu.mo/admission/> for details.

### Academic and Teaching Arrangement

1. Degree Award: Bachelor of Science
2. Area of concentration: Business Intelligence and Data Analytics
3. Programme Duration: 4 years
4. Minimum credit requirement for graduation: 132 credits and pass all required courses
5. Medium of instruction: English
6. Programme Curriculum for Bachelor of Science in Business Intelligence and Data Analytics listed as below (Below curriculum may subject to change and final version will be announced on faculty website):

Course	Type	Credits
<b><i>1<sup>st</sup> Academic Year</i></b>		
Principles of Microeconomics	Compulsory Major Course	3
Principles of Business Management	"	3
Principles of Financial Accounting	"	3
Introduction to Business Intelligence	"	3
Languages and Skills <sup>1,2</sup>	"	12
Community & Peer Education <sup>1</sup>	"	2
General Education Course <sup>1</sup>	"	6
<b>Total Credits</b>		<b>32</b>
<b><i>2<sup>nd</sup> Academic Year</i></b>		
Programming for Business Analytics	Compulsory Major Course	3
Database Management	"	3
Statistics and Data Analysis	"	3



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Course	Type	Credits
Advanced Computer Programming	"	3
Computer Networking for Business	"	3
Financial Management	"	3
Principles of Marketing	"	3
Languages and Skills <sup>1, 2</sup>	"	3
Community & Peer Education <sup>1</sup>	"	1
General Education Course <sup>1</sup>	"	6
1 required elective from the “Required Elective Course List 1” of Bachelor of Science in Business Intelligence and Data Analytics	Required Elective	3
<b>Total Credits</b>		<b>34</b>
<i>3<sup>rd</sup> Academic Year</i>		
Quantitative Decision Analysis	Compulsory Major Course	3
Operations Management	"	3
Business Project Management	"	3
Big Data Management	"	3
Business Data Mining and Visualization	"	3
Cyber Security and Blockchain	"	3
General Education <sup>1</sup>	"	6
1 required elective from the “Required Elective Course List 2” of Bachelor of Science in Business Intelligence and Data Analytics	Required Elective	3
3 Free Electives <sup>3</sup>	Free Elective	9
<b>Total Credits</b>		<b>36</b>
<i>4<sup>th</sup> Academic Year</i>		
Machine Learning for Business Intelligence	Compulsory Major Course	3
Forecasting Models in Business	"	3



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Course	Type	Credits
Final Year Project	"	3
General Education <sup>1</sup>	"	6
1 required elective from the “Required Elective Course List 2” of Bachelor of Science in Business Intelligence and Data Analytics	Required Elective	3
4 Free Electives <sup>3</sup>	Free Elective	12
<b>Total Credits</b>		<b>30</b>
<b>Grand Total Credits</b>		<b>132</b>

1. General Education course list will be posted on University of Macau’s website.
2. Students who test out of some of the “Languages and Skills course(s)” are required to make up the credits by taking additional Free Elective(s). Please refer to University of Macau’s website for the details of exemption application from taking “Language and Skills” courses.
3. Students can select any courses provided by home faculty or other faculties as free elective courses to fulfil credit requirement of Free Elective Course.



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**List of Required Elective Courses for  
Bachelor of Science in Business Intelligence and Data Analytics**

Course	Credits
<b>List 1</b>	
Analysis and Design Information Systems	3
E-Commerce and M-Commerce Strategies	3
<b>List 2</b>	
Web Site Design and Internet Business Applications	3
Internet of Things and Cloud Computing	3
Mobile Application Development	3
Business Modeling and Simulation	3
Advanced Computer Networking for Business	3