

**Xi'an Jiaotong University**  
**Big Data Management and Application**

*\* The information below is extracted from the existing curriculum, which is subject to change. Please refer to the curriculum used in the year of entry as final curriculum.*

**1. Program Overview**

University/School: School of Management, Xi'an Jiaotong University (XJTU)

Major: Big Data Management and Application

Awarding Degree: Bachelor of Management

Duration: 4 Years

Credit requirement for graduation: For graduation, students should complete all modules with 145 credits and practice with 8 credits as required in the curriculum, passing the PE test. Students, who have met the criteria as required by the university regulation on undergraduate student registration and degree awarding, will be awarded with degree certificate.

**2. Teaching Outcomes**

This program aims to develop international talents into management talent, who are capable of business analysis by using big data, with understandings about the management foundation and techniques and methods for big data management.

Teaching Methods:

Management theory and practice will be combined in program delivery. In the first four semesters, students will receive general education to complete foundational modules in social science, mathematics, English and computer science, as well as core modules in the Science and Engineering category. In Semesters 5, 6 and 7, students will learn modules and practices in ecommerce and big data management and application. Students will complete graduation design (thesis) and defense in Semester 8.

### 3. Curriculum

| Module Title                           | Category                      | Hours | Credits | Semester |
|--|-------------------------------|-------|---------|----------|
| Chinese Listening and Speaking         | Chinese Language and China    | 64    | 4       | 1-1, 1-2 |
| Chinese Laws                           |                               | 32    | 2       | 1-2      |
| Chinese Reading                        |                               | 192   | 12      | 1-1, 1-2 |
| China Overview                         |                               | 32    | 2       | 1-2      |
| Ethics and Conduct                     |                               |       | 3       | 2-2      |
| Sub-total                              |                               |       | 23      |          |
|  |                               |       |         |          |
| PE 1                                   | PE                            | 32    | 0.5     | 1-1      |
| PE 2                                   |                               | 32    | 0.5     | 1-2      |
| PE 3                                   |                               | 32    | 0.5     | 2-1      |
| PE 4                                   |                               | 32    | 0.5     | 2-2      |
| Sub-total                              |                               |       | 2       |          |
|  |                               |       |         |          |
| Advanced Mathematics I -1              | Platform Foundational Modules | 110   | 6.5     |          |
| Advanced Mathematics I -2              |                               | 110   | 6.5     |          |
| Linear Algebra                         |                               | 32    | 2       |          |
| Probability Theory                     |                               | 32    | 2       |          |
| University Physics III                 |                               | 64    | 4       |          |
| University Computer Science II         |                               | 48    | 3       |          |
| Database Foundation and Application    |                               | 48    | 3       |          |
| Python Data Processing                 |                               | 48    | 3       |          |
| Life Science Foundation II             |                               | 2     | 2       |          |
| Introduction to Mechanical Engineering |                               | 2     | 2       |          |
| Electrical Techniques                  |                               | 2     | 2       |          |
| Data Structure and Algorithm           |                               | 2     | 2       |          |
| Sub-total                              |                               |       |         | 38       |
|  |                               |       |         |          |
| Operational Research                   | Subject Introductory Modules  | 48    | 3       |          |
| Management                             |                               | 48    | 3       |          |
| Microeconomics                         |                               | 48    | 3       |          |
| Macroeconomics                         |                               | 48    | 3       |          |

|  |                          |    |    |    |
|--|--------------------------|----|----|----|
| Applied Statistics                     |                          | 48 | 3  |    |
| Marketing                              |                          | 32 | 2  |    |
| Corporate Finance                      |                          | 32 | 2  |    |
| Organizational Behaviour               |                          | 32 | 2  |    |
| Technical Economics                    |                          | 32 | 2  |    |
| Operational Management                 |                          | 32 | 2  |    |
| Human Resources                        |                          | 32 | 2  |    |
| Management Information System          |                          | 32 | 2  |    |
| Sub-total                              |                          |    | 29 |    |
|  |                          |    |    |    |
| E-commerce                             | Subject Core Modules     | 32 | 2  |    |
| Introduction to Big Data Technology    |                          | 32 | 2  |    |
| Online Transaction and Payment         |                          | 32 | 2  |    |
| Machine Learning                       |                          | 32 | 2  |    |
| Optimization Theory and Algorithm      |                          | 32 | 2  |    |
| Social Network Analysis                |                          | 32 | 2  |    |
| Data Analysis Language Foundation      |                          | 32 | 2  |    |
| Data Resource Management               |                          | 32 | 2  |    |
| Data Quality Management                |                          | 32 | 2  |    |
| Sub-total                              |                          |    |    | 18 |
|  |                          |    |    |    |
| Consumer Behaviour                     | Subject Optional Modules | 32 | 2  |    |
| Business Data Analysis                 |                          | 32 | 2  |    |
| Video Data Analysis                    |                          | 32 | 2  |    |
| Logistics and Supply Chain Management  |                          | 32 | 2  |    |
| Accounting                             |                          | 32 | 2  |    |
| System Engineering                     |                          | 32 | 2  |    |
| Big Data Analysis in Finance           |                          | 32 | 2  |    |
| Big Data Analysis in Health            |                          | 32 | 2  |    |
| Big Data Analysis in Telecommunication |                          | 32 | 2  |    |
| Project Management and Decision Making |                          | 32 | 2  |    |

|   |          |  |     |    |
|---|----------|--|-----|----|
| Sub-total   |          |  | 14  |    |
|   |          |  |     |    |
| Operational Research Practice                                 | Practice |  | 1   |    |
| Applied Statistics Practice                                   |          |  | 1   |    |
| Management Information System Practice                        |          |  | 2   |    |
| Website Development and Design                                |          |  | 2   |    |
| Data Video Production   |          |  | 2   |    |
| Practice for Big Data Analysis in Finance                     |          |  | 1   |    |
| Practice for Big Data Analysis in Health                      |          |  | 1   |    |
| Individual Behaviour Analysis based on Telecommunication Data |          |  | 2   |    |
| Internship  |          |  | 4   |    |
| Graduation Design (Thesis)                                    |          |  |     | 10 |
| Sub-total   |          |  | 26  |    |
|   |          |  |     |    |
| Total   |          |  | 138 |    |

Notes:

**1. The number of total credits does not include the 8 credits for Practice.**

Please refer to the requirement and implementation methods from the student management department for the 8 credits.

**2. Requirement**

In principle, the total credits to be achieved by students in this program for each semester should not be more than 24 credits. Students who have achieved 90 in the previous semester will be able to acquire additional 2 credits as appropriate.