**Master Program**

**Industrial Engineering and Management Department, Yuan Ze University**

(Applicable for the students enrolled in the academic year 2022/23)

Passed by the 6th Academic Affairs Meeting, Academic Year 2021, on April 20, 2022

A minimum of 30 credit hours, including 6 credit hours for thesis, are required for graduation. Students may select 8 courses, 24-credit hours, from the list below. The student can select up to 3 graduate courses from other departments at YZU to count toward graduation course requirements (3 of the 8) with the IEM approval. Foreign students whose undergraduate major is not Industrial Engineering or Industrial Management related need to take “IE335 Production Planning and Control” as the extra credits.

**Mandatory Elective – Chinese (1 academic year, 4 credits)**

A minimum of 4 credit hours of Chinese language courses are required for graduation. The 4 credit hours can be waived by the TOCFL Level 1 or above certificate, or equivalent (including listening, reading, speaking, and writing.)

**Thesis Proposal:**

The graduate students should obtain the consent of a faculty member as the thesis advisor no later than the first month of the second semester.

The committee member for proposal should include the adviser and one faculty member in the IEM department.

**Thesis Defense:**

The thesis final oral defense should be held no less than two months after the proposal.

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| Course Code | Courses Taught in English | Credits |
| IE503 | Simulation | 3 |
| IE505 | Stochastic Processes (I) | 3 |
| IE507 | Mathematical Programming (I) | 3 |
| IE517 | Inventory Systems and Control | 3 |
| IE533 | Probabilistic Analysis | 3 |
| IE538 | Experimental Design and Applications | 3 |
| IE555 | Group Decision Making | 3 |
| IE561 | Statistical Methods and Data Analysis | 3 |
| IE562 | 3D Visual Simulation and Virtual Reality | 3 |
| IE576 | Global Logistics Management | 3 |
| IE579 | Transportation Management | 3 |
| IE581 | Service System Design | 3 |
| IE590 | Machine Vision | 3 |
| IE599 | Data Mining | 3 |
| IE602 | The Operational Models of E-Enterprise | 3 |
| IE604 | Enterprise Resources Planning | 3 |
| IE607 | Heuristic Optimization | 3 |
| IE609 | The Management of Enterprise Digitization | 3 |
| IE610 | Mobile Commerce | 3 |
| IE614 | Data Pattern Recognition and Classification | 3 |
| IE619 | Design and Construction of Virtual Reality Systems | 3 |
| IE622 | Managing for Business Excellence | 3 |
| IE624 | Usability Engineering | 3 |
| IE625 | Big Data Analytics | 3 |

Note:

1. Other courses taught in Chinese are available at your own discretion (list available on YZU website). You may discuss with the professor for possible lecturing in English which must be based on his/her final decision.
2. You are responsible to plan ahead base on courses’ availability at different semesters and their corresponding prerequisites.
3. Courses listed above are generally offered in the span of 2 years, and subject to change without further notice.
4. For those graduate students who shall complete **Academic Research Ethics Education Course** before the end of their first academic semester, they must follow the regulations of Yuan Ze University Academic Research Ethics Education Course Implementation Highlights. The latest deadline for them shall be their course completions and then their applications towards the degree’s oral exam.