# Industrial Systems Engineering (To be confirmed)

AY2021 cohort

| E-Scholars 3-years schedule (ISE) | | | |
|---|---|---|---|
| **Semester 0 (APT)** | | | |
| EG1311 Design and Make | | | 4 |
| MA1505  Mathematics I (4 MC but it is mapped to MA1511 which is 2 MC) | | | 4 |
| MA2001 Linear Algebra I (maps to MA1508E) | | | 4 |
| CS1010E Programming Methodology | | | 4 |
| **Sub-total** | | | 16 |
| **Semester 1** | | **Semester 2** | |
| MA1512 Differential Equations for Engineering | 2 | ST2334 Probability and Statistics | 4 |
| IE1111R Industrial & Systems Engineering Principles & Practice I | 4 | DTK1234 Design Thinking | 4 |
| UE | 4 | EE2211 Introduction to Machine Learning | 4 |
| UTCP #1 | 4 | PF1101 Fundamentals of Project Management | 4 |
| UE | 4 | IE2111 Industrial & Systems Engineering Principles & Practice II | 4 |
| UE | 4 | IE2100 Probability Models with Applications | 4 |
| | | UTCP #2 | 4 |
| | | | |
| **Sub-total** | 22 | **Sub-total** | 28 |
| **Semester 3** | | **Semester 4** | |
| IE2110 Operations Research I | 4 | Three options: | 20 |
| IE3101 Statistics for Engineering Applications | 4 | 1. NOC experience (20 MC) | |
| IE3110R Simulation | 4 | mappable to EG3611A (10 MC) + 10 MCs UE | |
| UTCP #3 (IE2141 Systems Thinking and Dynamics) | 4 | 2. EG3611A (10 MCs) + EG3611B (2 MCs) + 8 MCs UE | |
| CS2040 Data Structures and Algorithms | 4 | 3. EG3612 (Vacation Industrial Attachment) + EG2605 (Undergraduate Research Opportunity, UROP) + 10 MC UE | |
| UE (or IE2141 if not staying at RC4) | 4 | | |
| EG2101 Pathways to engineering Leadership | 2 | Note that option 2 can be done in Semester 3 as well | |
| | | Note that, for option 3, UROP can be done in Semester 3 as well. | |
| **Sub-total** | 26 | **Sub-total** | 20 |
| **Semester 5** | | **Semester 6** | |
| IE3100R Systems Design Project | 4 | IE3100R Systems Design Project | 4 |
| Technical Elective | 4 | Technical Elective | 4 |
| UTCP #4 | 4 | Xxxx Creating Narratives | 4 |
| UE | 4 | EG2501 Liveable Cities | 4 |
| UE | 4 | UE | 4 |
| Technical Elective | 4 | UE | 4 |
| | | | |
| **Sub-total** | 24 | **Sub-total** | 24 |
| | | Grand total | 160 |

Notes:

1. If APT modules are not cleared, those modules must be cleared during the normal semesters

2. Improtant rules for NOC:

- You MUST be on campus the semester BEFORE going to NOC.

- You MUST have cleared at least 70 MC before applying to NOC