Major Programme Requirement

Students are required to complete a minimum of 75 units of courses as follows:

1. Faculty Package:
   - ENGG1110/ESTR1002
   - ENGG1120/ESTR1005
   - ENGG1130/ESTR1006
   - Units: 9

2. Foundation Courses (all courses in group (a), one course from group (b), and one course from group (c) are required):
   (a) ENGG2440/ESTR2004, ENGG2760/ESTR2018, ENGG2780/ESTR2020, MATH1151[a], SEEM2440/ESTR2500
   (b) Programming Courses: CSCI1120/ESTR1100, CSCI1130/ESTR1102
   (c) Other Courses[b][c]: ENGG1310/ESTR1003, ENGG2720/ESTR2014, ENGG2740/ESTR2016, PHYS1003, 1110, SEEM2460/ESTR2540
   - Units: 18

3. Required Courses:
   (a) CSCI2040#, CSCI2100#/ESTR2102, SEEM2420, 2602, 3410, SEEM3440/ESTR3500, SEEM3550/ESTR3506, SEEM3650/ESTR3516
   - Units: 24
   (b) Research Component Courses[d]: SEEM4998, 4999
   - Units: 6

4. Elective Courses:
   - AIST3510#/SEEM3510, CSCI4140#, ENGG1820, FTEC4001#, 4002#, 4005#, 4007#, IERG4210#, MKTG2016#, SEEM2520, 3430, SEEM3600/ESTR3504, SEEM3490, 3500, 3580, SEEM3590/ESTR3509, SEEM3620/ESTR3514, SEEM3630/ESTR3510, SEEM3680/ESTR3512, SEEM4540, 4570, 4630, 4670, SEEM4720/ESTR4506, SEEM4730/ESTR4508, SEEM4750/ESTR4510, SEEM4760/ESTR4512
   - Units: 18

Streams of Specialization

There are two streams: Business Information Systems, and Decision Analytics. Students choosing a stream should take at least six courses from the corresponding list for their chosen stream. Students who do not wish to specialize in any of the two streams should follow a study scheme devised with the advice of the academic advisers of the Department.

(a) Business Information Systems
   Required Courses (6 units):
   - SEEM3430, 4540
   Elective Courses (12 units):
   - AIST3510/SEEM3510, CSCI4140, ENGG1820, FTEC4001, 4005, 4007, IERG4210, SEEM3460/ESTR3504, SEEM3490, SEEM3680/ESTR3512, SEEM4570, 4630

(b) Decision Analytics
   Required Courses (6 units):
SEEM3620/ESTR3514, SEEM4760/ESTR4512

Elective Courses (12 units):
ENG1820, FTEC4002, 4005, MKTG2010, SEEM2520, 3500, 3580, SEEM3590/ESTR3509, SEEM3630/ESTR3510, SEEM4630, 4670, SEEM4720/ESTR4506, SEEM4730/ESTR4508, SEEM4750/ESTR4510

Total: 75

In addition to fulfilling the above Major Programme Requirement, students may also challenge themselves by taking the following stream offered by the Faculty:

Engineering Leadership, Innovation, Technology and Entrepreneurship (ELITE) Stream[c]

Elective Courses:
15 units of courses[f]:

i) 12 units of ESTR courses of which at most 6 units of courses at 1000 or 2000 level and at least 6 units of courses at 3000 or 4000 level[g]

ii) 3 units of BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level[h]

Explanatory Notes:
1. ENGG, ESTR and SEEM courses at 2000 and above level as well as those labeled as # will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package and Foundation courses.

2. Full exemption from the qualifying examination will be granted by the Chartered Institute of Logistics and Transport in Hong Kong (CILTHK) to graduates with successful completion of courses MKTG2010, SEEM2520, SEEM3620/ESTR3514 and SEEM4750/ESTR4510 plus a final year project in transport/logistics.

[a] i) Non-JUPAS admittees and JUPAS admittees with HKDSE Mathematics Extended Modules I or II are required to attend a Mathematics Placement Test. Students who fail or are absent from the Placement Test will be required to take MATH1020 in the same term when they take MATH1510.

ii) JUPAS admittees without HKDSE Mathematics Extended Modules I or II are required to take MATH1020 concurrently with MATH1510.

iii) Students who fail MATH1510 in Term 1 will have to retake the course in Term 2. The pre-assigned course, ENGG1130/ESTR1006, will also be dropped.

[b] If students choose a Physics course from this group, the course shall be taken in accordance with students' HKDSE results or placement test results as follows:

i) Students who have attained Level 4 or above in HKDSE Mathematics (Compulsory Part) AND Level 4 or above in Physics or Level 5 or above in Combined Science with Physics Component shall take ENGG1310/ESTR1003 or PHYS1110.

ii) Students withHKDSE results but did not attain the academic levels as stated in (i) shall take PHYS1003.

iii) Students without HKDSE results shall sit for the placement test arranged by the Department of Physics. Students who pass the placement test shall take ENGG1310/ESTR1003 or PHYS1110. Students who fail or are absent from the placement test shall take PHYS1003.

[c] Students are recommended to take SEEM2460/ESTR2540.

[d] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for SEEM4998 and 4999.

[e] Details of the entrance and coursework requirements, and declaration procedures for the ELITE Stream can be found at the ELITE website (www.erg.cuhk.edu.hk/elite). Non-ELITE Engineering students may be allowed to take ESTR courses. Students are required to seek approval from their respective Major Programmes for using ESTR courses taken to fulfill the Major Programme Requirement. Details are available at the ELITE website.

[f] Students can use up to 9 units of courses which have been taken to fulfill the requirements of items 1 to 4 above to fulfill the elective requirements of the ELITE Stream. Item 3(b) Research Component Courses will not be included in these 9 units. A full list of ESTR courses is available at the ELITE website.

[g] Students can use BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level to substitute for ESTR courses at 3000 or 4000 level, subject to the approval of the Stream Director and the Associate Dean (Education).

[h] The requirement of at least 3 units of Engineering courses at 5000 level is a requirement for the ELITE Stream only. It should not be interpreted as a requirement of the Major Programme.
| First Year of Attendance | 1st term | Faculty Package: ENGG1110/ESTR1002 | 3 |
| | | Major Required: MATH1510 | 3 |
| | 2nd term | Faculty Package: ENGG1120/ESTR1005, ENGG1130/ESTR1006 | 6 |
| | | Major Required: 1 Foundation course | 2 |
| Second Year of Attendance | 1st term | Major Required: CSC11120/1130/ESTR1100/1102, ENGG2440/ESTR2004, ENGG2760/ESTR2018, SEEM2440/ESTR2500 | 11 |
| | 2nd term | Major Required: CSC12100/ESTR2102, ENGG2780/ESTR2020, SEEM2420, 2602 | 9 |
| Third Year of Attendance | 1st term | Major Required: CSC12040, SEEM3410, SEEM3440/ESTR3500 | 8 |
| | | Major Elective(s): 1 course | 3 |
| | 2nd term | Major Required: SEEM3550/ESTR3506, SEEM3650/ESTR3516 | 6 |
| | | Major Elective(s): 1 course | 3 |
| Fourth Year of Attendance | 1st term | Major Required: SEEM4998 | 3 |
| | | Major Elective(s): 2 courses | 6 |
| | 2nd term | Major Required: SEEM3450/ESTR3502, SEEM4999 | 6 |
| | | Major Elective(s): 2 courses | 6 |
| | Total (including Faculty Package): | | 75 |

**Major Programme Requirement (for Associate Degree or Higher Diploma holders admitted to senior-year places)**

Students are required to complete a minimum of 55 units of courses as follows:

1. Faculty Package:
   - ENGG1110/ESTR1002  
2. Foundation Mathematics Courses:
   - ENGG2760/ESTR2018, ENGG2780/ESTR2020  
3. Required Courses:
   - a. CSC12040#, CSC12100#/ESTR2102, SEEM2420, 2602, 3410, SEEM3440/ESTR3500, SEEM3450/ESTR3502, SEEM3550/ESTR3506, SEEM3650/ESTR3516  
   - b. Research Component Courses[a]:  
     - SEEM4998, 4999  
4. Elective Courses:
   - AIST3510#/SEEM3510, CSC14140#, ENGG1820, FTEC4001#, 4002#, 4005#, 4007#, IEERG4210#, SEEM2520, 3430, SEEM3460/ESTR3504, SEEM3490, 3500, 3580, SEEM3800/ESTR3509, SEEM3620/ESTR3514, SEEM3630/ESTR3510, SEEM3650/ESTR3512, SEEM4540, 4570,4630, 4670, SEEM4720/ESTR4506, SEEM4730/ESTR4508, SEEM4750/ESTR4510, SEEM4760/ESTR4512  

**Streams of Specialization**

There are two streams: Business Information Systems, and Decision Analytics. Students choosing a stream should take at least six courses from the corresponding list for their chosen stream. Students who do not wish to specialize in any of the two streams should follow a study scheme devised...
with the advice of the academic advisers of the Department.

(a) Business Information Systems
Required Courses (6 units):
SEEM3430, 4540
Elective Courses (12 units):
AIST3510/SEEM3510, CSC14140, ENGG1820, FTEC4001, 4005, 4007, IERG4210, SEEM3460/ESTR3504, SEEM3490, SEEM3680/ESTR3512, SEEM4570, 4630

(b) Decision Analytics
Required Courses (6 units):
SEEM3620/ESTR3514, SEEM4760/ESTR4512
Elective Courses (12 units):
ENGG1820, FTEC4002, 4005, MKTG2010, SEEM2520, 3500, 3580, SEEM3590/ESTR3509, SEEM3630/ESTR3510, SEEM4630, 4670, SEEM4720/ESTR4506, SEEM4730/ESTR4508, SEEM4750/ESTR4510
Total: 55

In addition to fulfilling the above Major Programme Requirement, students may also challenge themselves by taking the following stream offered by the Faculty:

Engineering Leadership, Innovation, Technology and Entrepreneurship (ELITE) Stream
Elective Courses:
15 units of courses[c]:
  i) 12 units of ESTR courses of which at most 6 units of courses at 1000 or 2000 level and at least 6 units of courses at 3000 or 4000 level[d]
  ii) 3 units of BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level[e]

Explanatory Notes:
1. ENGG, ESTR and SEEM courses at 2000 and above level as well as those labeled as # will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package and Foundation Mathematics courses.
2. Full exemption from the qualifying examination will be granted by the Chartered Institute of Logistics and Transport in Hong Kong (CILTHK) to graduates with successful completion of courses MKTG2010, SEEM2520, SEEM3620/ESTR3514 and SEEM4750/ESTR4510 plus a final year project in transport/logistics.
[a] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for SEEM4998 and 4999.
[b] Details of the entrance and coursework requirements, and declaration procedures for the ELITE Stream can be found at the ELITE website (www.erg.cuhk.edu.hk/elite).
[c] Non-ELITE Engineering students may be allowed to take ESTR courses. Students are required to seek approval from their respective Major Programmes for using ESTR courses taken to fulfill the Major Programme Requirement. Details are available at the ELITE website.
[d] The requirement of at least 3 units of Engineering courses at 5000 level is a requirement for the ELITE Stream only. It should not be interpreted as a requirement of the Major Programme.

Recommended Course Pattern (for Associate Degree or Higher Diploma holders admitted to senior-year places)

<table>
<thead>
<tr>
<th>First Year of Attendance</th>
<th>Units</th>
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<td><strong>1st term</strong></td>
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<td>Major Elective(s): 1 course</td>
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<tr>
<td><strong>2nd term</strong></td>
<td></td>
</tr>
<tr>
<td>Major Required: CSCI2100/ESTR2102, ENGG2780/ESTR2020, 2602, SEEM3550/ESTR3506</td>
<td>12</td>
</tr>
<tr>
<td>Major Elective(s): 1 course</td>
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</table>
Second year of Attendance

<table>
<thead>
<tr>
<th>1st term</th>
<th>2nd term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Required: SEEM3410, SEEM3440/ESTR3500, SEEM4998</td>
<td>Major Required: SEEM3450/ESTR3502, SEEM3650/ESTR3516, SEEM4999</td>
</tr>
<tr>
<td>Major Elective(s): 2 courses</td>
<td>Major Elective(s): 2 courses</td>
</tr>
</tbody>
</table>

Total (including Faculty Package): 55

Bachelor of Engineering (Systems Engineering and Engineering Management) and Bachelor of Business Administration (Integrated BBA Programme) Double Degree Option

**1st Degree: Bachelor of Engineering (Systems Engineering and Engineering Management)**

**Major Programme Requirement**

Students are required to complete a minimum of 75 units of courses as follows:

1. Faculty Package: 9 units
   - ENGG1110/ESTR1002, ENGG1120/ESTR1005, ENGG1130/ESTR1006

2. Foundation Courses (all courses in group (a), one course from group (b), and one course from group (c) are required): 18 units
   - (a) ENGG2440/ESTR2004, ENGG2760/ESTR2018, ENGG2780/ESTR2020, MATH1151(a), SEEM2440/ESTR2500
   - (b) Programming Courses: CSCI1120/ESTR1100, CSCI1130/ESTR1102
   - (c) Other Courses: ENG1310/ESTR1003, ENGG2720/ESTR2014, ENGG2740/ESTR2016, PHYS1003, 1110, SEEM2460/ESTR2540

3. Required Courses: 24 units
   - (a) CSCI2040#, CSCI2100#/ESTR2102, SEEM2420, 2602, 3410, SEEM3440/ESTR3500, SEEM3450/ESTR3502, SEEM3550/ESTR3506, SEEM3650/ESTR3516
   - (b) Research Component Courses: 6 units
     - SEEM4998, 4999

4. Elective Courses: 18 units
   - AIST3510#/SEEM3510, CSCI4140#, ENGG1820, FTEC4001#, 4002#, 4005#, 4007#, IERG4210#, MKTG2010#, SEEM2520, 3430, SEEM3460/ESTR3504, SEEM3490, 3500, 3580, SEEM3590/ESTR3509, SEEM3620/ESTR3514, SEEM3630/ESTR3510, SEEM3680/ESTR3512, SEEM4540, 4570, 4630, 4670, SEEM4720/ESTR4506, SEEM4730/ESTR4508, SEEM4750/ESTR4510, SEEM4760/ESTR4512

**Streams of Specialization**

There are two streams: Business Information Systems, and Decision Analytics. Students choosing a stream should take at least six courses from the corresponding list for their chosen stream. Students who do not wish to specialize in any of the two streams should follow a study scheme devised with the advice of the academic advisers of the Department.

(a) Business Information Systems
   - Required Courses (6 units): SEEM3430, 4540
   - Elective Courses (12 units): AIST3510#/SEEM3510, CSCI4140#, ENGG1820, FTEC4001#, 4002#, 4005#, 4007#, IERG4210#, MKTG2010#, SEEM2520, 3430, SEEM3460/ESTR3504, SEEM3490, 3500, 3580, SEEM3590/ESTR3509, SEEM3620/ESTR3514, SEEM3630/ESTR3510, SEEM3680/ESTR3512, SEEM4570, 4630

(b) Decision Analytics
   - Required Courses (6 units): SEEM3620/ESTR3514, SEEM4760/ESTR4512
   - Elective Courses (12 units): ENGG1820, FTEC4002, 4005, MKTG2010, SEEM2520, 3500, 3580, SEEM3590/ESTR3509, SEEM3630/ESTR3510, SEEM4630, 4670
In addition to fulfilling the above Major Programme Requirement, students may also challenge themselves by taking the following stream offered by the Faculty:

**Engineering Leadership, Innovation, Technology and Entrepreneurship (ELITE) Stream**

**Elective Courses:**
15 units of courses:

1. 12 units of ESTR courses of which at most 6 units of courses at 1000 or 2000 level and at least 6 units of courses at 3000 or 4000 level
2. 3 units of BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level

**Explanatory Notes:**
1. ENGG, ESTR and SEEM courses at 2000 and above level as well as those labeled as # will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package and Foundation courses.
2. Full exemption from the qualifying examination will be granted by the Chartered Institute of Logistics and Transport in Hong Kong (CILTHK) to graduates of the first degree with successful completion of courses MKTG2010, SEEM2520, SEEM3620/ESTR3514 and SEEM4750/ESTR4510 plus a final year project in transport/logistics.
3. Students are advised to take some courses of the University Core Requirements or Major courses in summer sessions to reduce their course load in regular terms.

**a**
1. Non-JUPAS admittees and JUPAS admittees with HKDSE Mathematics Extended Modules I or II are required to attend a Mathematics Placement Test. Students who fail or are absent from the Placement Test will be required to take MATH1020 in the same term when they take MATH1510.
2. JUPAS admittees without HKDSE Mathematics Extended Modules I or II are required to take MATH1020 concurrently with MATH1510.
3. Students who fail MATH1510 in Term 1 will have to retake the course in Term 2. The pre-assigned course, ENGG1130/ESTR1006, will also be dropped.

**b**
If students choose a Physics course from this group, the course shall be taken in accordance with students’ HKDSE results or placement test results as follows:
1. Students who have attained Level 4 or above in HKDSE Mathematics (Compulsory Part) AND Level 4 or above in Physics or Level 5 or above in Combined Science with Physics Component shall take ENGG1310/ESTR1003 or PHYS1110.
2. Students with HKDSE results but did not attain the academic levels as stated in (i) shall take PHYS1003.
3. Students without HKDSE results shall sit for the placement test arranged by the Department of Physics. Students who pass the placement test shall take ENGG1310/ESTR1003 or PHYS1110. Students who fail or are absent from the placement test shall take PHYS1003.

**c**
Students are recommended to take SEEM2460/ESTR2540.

**d**
Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for SEEM4998 and 4999.

**e**
Details of the entrance and coursework requirements, and declaration procedures for the ELITE Stream can be found at the ELITE website (www.erg.cuhk.edu.hk/elite). Non-ELITE Engineering students may be allowed to take ESTR courses. Students are required to seek approval from their respective Major Programmes for using ESTR courses taken to fulfill the Major Programme Requirement. Details are available at the ELITE website.

**f**
Students can use up to 9 units of courses which have been taken to fulfill the requirements of items 1 to 4 above to fulfill the elective requirements of the ELITE Stream. Item 3(b) Research Component Courses will not be included in these 9 units. A full list of ESTR courses is available at the ELITE website.

**g**
Students can use BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level to substitute for ESTR courses at 3000 or 4000 level, subject to the approval of the Stream Director and the Associate Dean (Education).

**h**
The requirement of at least 3 units of Engineering courses at 5000 level is a requirement for the ELITE Stream only. It should not be interpreted as a requirement of the Major Programme.

Requirements for admission to the 2nd degree programme
1. Admission to the second degree programme is guaranteed if students have:
i. fulfilled all graduation requirements of the first degree programme;
ii. Major GPA of at least 3.0 upon completion of studies of the first degree programme (ERG); and
iii. taken at least 30 relevant units, of which includes ELTU2014, ELTU3014 and mutually recognized courses by both the Engineering and Business Administration Faculties. In addition, students should have achieved a GPA of at least 3.0 in these courses while pursuing the first degree programme. For details of the mutually recognized courses, please refer to the explanatory notes on mutual recognition or exclusion.

Students who do not satisfy the above requirements may still apply for admission to the second degree programme which has discretion to judge the suitability of the students for studying for the second degree programme through assessments like conducting interview, considering the recommendation from the first degree programme etc.

Upon fulfillment of the requirements of the first degree programme, students can still choose to or not to pursue the second degree programme. If a student decides not to pursue the second degree programme but has fulfilled the requirements of a relevant BBA minor programme, a minor of that BBA programme would be awarded.

2nd Degree: Bachelor of Business Administration (Integrated BBA Programme)

Major Programme Requirement

Students are required to complete a minimum of 56 units of courses as follows:

1. Faculty Package: Units
   DSME1030, 1040, MGNT1020 9

2. Required Courses: Units
   ACCT2111, 2121, 2151 or 3151[a], DSME2011, 2030, 2051, FINA2010, IBBA3040, MGNT2511, 2512, 2611, 4010, MKTG2010 32-33

3. Elective Courses (Concentration):
   Students must choose at least one concentration and take five or six courses among the courses prescribed under respective concentration area as follows:
   (a) Business Economics
      (i) DSME2021, 4110;
      (ii) two courses selected from: DSME3000, 3011, 3030, 3050, 3080, 3090, 4040, 4080; and
      (iii) one DSME course at 3000 or above level, excluding the courses those taken for fulfillment of requirement (i) or (ii)
   (b) Business Analytics
      (i) DSME2021, 2040, 4020;
      (ii) one course selected from: DSME4070, 4240, 4260; and
      (iii) one course selected from: DSME3030, 4030, 4110, 4220, 4280, MKTG4120
   (c) Finance
      (i) DSME2021 or FINA2020; and
      (ii) 15 units of FINA courses at 3000 or above level, with no more than three 1-unit FINA courses
   (d) Entrepreneurship
      (i) MGNT1070, 2070, 3070, 4170; and
      (ii) two courses selected from: MGNT4070, 4090, 4130, 4270, 4570
   (e) Management of International Business
      (i) MGNT3580, 4150; and
      (ii) four courses selected from: MGNT3010, 3080, 3100, 4080, 4090, 4110, 4130, 4140, 4510, 4530, 4540, 4550, 4570
   (f) Human Resource Management
      (i) MGNT2040, 3010; and
      (ii) four courses selected from: MGNT3040, 3060, 3090, 3100, 4050, 4060, 4080, 4110, 4130, 4140
   (g) Marketing
      (i) MKTG3010, 3020, 3030, 4040; and
      (ii) two courses selected from: MKTG3040, 3050, 4010, 4020, 4030, 4050, 4070, 4080, 4090, 4110, 4160
   (h) Big Data and Quantitative Marketing
### Big Data and Quantitative Marketing

(i) MKTG3010, 3060, 4080, 4090; and  
(ii) two courses selected from: MKTG3020, 4030, 4050, 4120, 4150, 4160, 4170, 4180, 4190

#### (i) General Business

(i) 3 units of DSME/FINA/MGNT/MKTG courses at 2000 or above level; and  
(ii) 12 units of DSME/FINA/MGNT/MKTG courses at 3000 or above level, excluding the courses taken for fulfillment of requirement(i), with no more than three 1-unit FINA courses

**Total:** 56-60

**Explanatory Notes:**

1. ACCT/DSME/FINA/IBBA/MGNT/MKTG courses at 2000 and above level (excluding ACCT2111, 2121, IBBA3040, MGNT2511 and 2512) will be included in the calculation of Major GPA for honours classification.
2. Double concentrations in Marketing and Big Data and Quantitative Marketing are not allowed.
3. DSME2021 and the associated units can be used to satisfy concentration requirements of double concentrations within (a) to (c).  
   MGMT3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (e) and (f).
4. Courses taken for the concentration requirements of General Business Concentration cannot be counted towards the requirements of concentrations (a) to (h).
5. Students claiming Entrepreneurship Concentration are not allowed to declare Minor in Entrepreneurship and Innovation.

[a] ACCT2151 and ACCT3151 are mutually exclusive. Students who would like to pursue a career in accounting profession are advised to take ACCT3151 instead of ACCT2151.

**Explanatory Notes on Mutual Recognition or Exclusion:**

1. DSME2011 and the associated units can be exempted from the requirement of the second degree by successfully completing ENGG2450/ESTR2005 or ENGG2760/ESTR2018 and ENGG2780/ESTR2020.
2. DSME2051 and the associated units can be exempted from the requirement of the second degree by successfully completing SEEM3490.
3. DSME4120 and the associated units can be exempted from the requirement of the second degree by successfully completing SEEM3430.
4. FINA3010 and the associated units can be used to satisfy both the requirements of the first and second degrees.
5. MKTG2010 and the associated units can be used to satisfy both the requirements of the first and second degrees.

### Recommended Course Pattern

<table>
<thead>
<tr>
<th>First Year of Attendance</th>
<th>1st degree: Bachelor of Engineering (Systems Engineering and Engineering Management)</th>
<th>Units</th>
<th>2nd degree: Bachelor of Business Administration (Integrated BBA Programme)</th>
<th>Units</th>
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<tbody>
<tr>
<td>1st term</td>
<td>Faculty Package: ENGG1110/ESTR1002, MATH1510</td>
<td>3</td>
<td>Faculty Package: Major Required: Major Elective(s):</td>
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<tr>
<td>2nd term</td>
<td>Faculty Package: ENGG1120/ESTR1005, ENGG1130/ESTR1006, 1 Foundation course</td>
<td>6</td>
<td>Faculty Package: Major Required: Major Elective(s):</td>
<td>2</td>
</tr>
</tbody>
</table>

| Second Year of Attendance | 1st term: Major Required: CSCI1120/1130/1100/1102, ENGG2440/ESTR2004, ENGG2760/ESTR2018, SEEM2440/ESTR2500, Major Elective(s): | 11    | 1st term: Faculty Package: DSME1030, Major Required: Major Elective(s):         | 3     |
### Minor Programme Title

Logistics and Supply Chain Management

### Minor Programme Requirement

Students are required to complete a minimum of 18 units of courses, with at least 6 units at 3000 or above level, as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Unit(s)</th>
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<td>SEEM3620/ESTR3514</td>
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<td>SEEM4760/ESTR4512</td>
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Explanatory Note:

1. This Minor Programme is not applicable to students who major in Systems Engineering and Engineering Management and the Bachelor of Engineering (Systems Engineering and Engineering Management) and Bachelor of Business Administration (Integrated BBA Programme) Double Degree Option; and students in the Mathematics-Multidisciplinary Stream of Mathematics Major Programme.
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<th>Course Code</th>
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(2) The ability to design and conduct experiments, as well as to analyze and interpret data (K/S);

(3) The ability to design a system, component, or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability (K/S);

(4) The ability to function in multi-disciplinary teams (S/V);

(5) The ability to identify, formulate, and solve engineering problems (K/S);

(6) The understanding of professional and ethical responsibility (V);

(7) The ability to communicate effectively (S);

(8) The ability to understand the impact of engineering solutions in a global and societal context, especially the importance of health, safety and environmental considerations to both workers and the general public (V);

(9) The ability to stay abreast of contemporary issues (S/V);

(10) The ability to recognize the need for, and to engage in life-long learning (V);

(11) The ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the degree discipline (K/S);

(12) The ability to use the computer/IT tools relevant to the discipline along with an understanding of their processes and limitations (K/S/V);

(13) The ability to apply the skills relevant to the discipline of operations research and information technology and their applications in engineering and managerial decision making, especially in financial services, logistics and supply chain management, business information systems, and service engineering and management (K/S).

K = Knowledge outcomes  S =Skills outcomes  V = Values and attitude outcomes

Minor Programme:
Upon completion of their studies, LSCM students will have developed:

(1) An understanding of the role of logistics and supply chain management in modern economics;

(2) The ability to apply knowledge of mathematics, science, and engineering appropriate to logistics and supply chain management;

(3) The ability to identify, formulate, and solve problems in logistics and supply chain management;

(4) The ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to logistics and supply chain management;

(5) The ability to apply the skills relevant to the discipline of logistic and supply chain management in related innovations, such as in the areas of e-commerce, the incorporation of supply chain with techniques of block chain and big data analytics.