Mechanical and Automation Engineering
Applicable to students admitted in 2012-13

<table>
<thead>
<tr>
<th>Title of Double Degree Programme/Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Engineering (Mechanical and Automation Engineering) and Bachelor of Business Administration (Integrated BBA Programme) Double Degree Option</td>
</tr>
</tbody>
</table>

1st Degree: Bachelor of Engineering (Mechanical and Automation Engineering)

**Major Programme Requirement**

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

<table>
<thead>
<tr>
<th>Units</th>
<th>1. Faculty Package:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2600/ESTR2008</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>2. Foundation Science Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>(a) 6 units of Physics:</td>
</tr>
<tr>
<td></td>
<td>(i) ENGG2520/ESTR2006[a], PHYS1110 OR</td>
</tr>
<tr>
<td></td>
<td>(ii) PHYS1003[b], 1110</td>
</tr>
<tr>
<td></td>
<td>(b) 3 units of other Science Course:</td>
</tr>
<tr>
<td></td>
<td>CHEM1070, 1280, 1380, LSCI11001, 1003</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>3. Foundation Mathematics Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ESTR2002, MATH1510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>4. Required Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>(a) ELEG2202, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG3010, MAEG3020/ESTR3404, MAEG3050/ESTR3406</td>
</tr>
<tr>
<td></td>
<td>(b) Research Component Courses[c]:</td>
</tr>
<tr>
<td></td>
<td>ENGG4010, 4020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>(a) Breadth Electives (12 units chosen from the following courses):</td>
</tr>
<tr>
<td></td>
<td>CSCI1020, 1040, 1050, CSCI2100/ESTR2102, CSCI2120, 2800, 3170, DSME1030, ELEG2401, 3101, ENER2010 [ENGG1500], 2020, ENER3030/ESTR3402, ENGG1820, ENGG2020/ESTR2104, MAEG1010, 2010, 3030, 3040, MAEG3060/ESTR3408, MAEG3070, 3080, 3920, 5040, 5050 (or ENGG5404), 5080, MGNT1020, 4090, SEEM3450/ESTR3502, SEEM3490, 3500</td>
</tr>
<tr>
<td></td>
<td>(b) Depth Electives (9 units chosen from the following courses):</td>
</tr>
</tbody>
</table>
ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ESTR4404, ENER4040/ESTR4406, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010 (or ENGG5402), 5020 (or ENGG5403), 5030, 5060, 5070, 5090, 5100 (or ENGG5405), 5110

Streams
Students may choose not to specialize in any stream or to specialize in one of the four streams and complete a minimum of 15 units of courses prescribed by the stream.

Design
(a) Required Courses:
CSCI1020, MAEG2010, 3040
(b) Elective Courses:
ENER3030/ESTR3402, MAEG3070, 3920, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4060, MAEG4070/ESTR4418, MAEG5030, 5100 (or ENGG5405)

Energy
(a) Required Courses:
ENER2010[ENGG1500], 2020, MAEG3030
(b) Elective Courses:
ENER3030/ESTR3402, ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ESTR4404, ENER4040/ESTR4406, MAEG4030/ESTR4412, MAEG4080/ESTR4420

Mechatronics
(a) Required Courses:
CSCI1020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
(b) Elective Courses:
ELEG2401, ENER3030/ESTR3402, ENGG2020/ESTR2104, MAEG3080, 5050 (or ENGG5404), 5080

Robotics
(a) Required Courses:
CSCI1020, MAEG1010, MAEG3060/ESTR3408
(b) Elective Courses:
ENER3030/ESTR3402, MAEG4010/ESTR4408, MAEG5010 (or ENGG5402), 5040, 5050 (or ENGG5404), 5090

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[d]
Elective Courses:
15 units of courses[e]:

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

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

Explanatory Notes:
1. Students who have completed the courses ENGG1110/ESTR1002 and ENGG2600/ESTR2008 (or equivalent courses as approved by the Academic IT Steering Committee) will be eligible to apply for exemption of 1 unit of University Core IT Requirement. Students are required to apply for the exemption. When exemption from a particular course is recognized, students can only be exempted from the course but not the units. Please follow the application procedures as announced by the IT Foundation Course Office at https://engg1000.cse.cuhk.edu.hk/index.html. (The use of ENGG1110/ESTR1002 and ENGG2600/ESTR2008, in lieu of ENGG1110 and 2600, for exemption of 1 unit of University Core IT Requirement is subject to the Senate’s approval.)

2. BMEG/CENG/CSCI/ELEG/ENER/ENGG/ESTR/IERG/MAEG/SEEM courses at 2000 and above level will be included in the calculation of Major GPA for honours classification.

3. Results of the graduation project as prescribed by ENGG4020/ESTR4999 will be included in the calculation for honours classification.

4. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded in the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.

5. Students are advised to take some courses in summer sessions to reduce their course load in regular terms.

[a] For students who have attained Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent.

[b] For students who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics component or equivalent.

[c] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for ENGG4010 and 4020.

[d] 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).

[e] Students can use up to 9 units of courses taken to fulfill the requirements of items 1 to 5 above (excluding item 4(b) Research Component Courses) to fulfill the elective requirements of the ELITE Stream. A full list of ESTR courses is available at the ELITE website.

[ ] Old course code used in 2012-13 and before.
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 a reasonable number of units (30 units as mutually agreed by both the Engineering and Business Administration Faculties) of courses prescribed by the second degree programme and have achieved a GPA of at least 3.0 in these courses while pursuing the first degree programme. These second degree programme courses include the required language courses and the mutually recognized courses of the double degree programme.

   Students who do not satisfy the above requirements may still apply for admission to the second degree programme which has discretion in judging the suitability of the students in studying for the second degree 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 of this double degree programme can 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 58 units of courses as follows:

<table>
<thead>
<tr>
<th>Course Category</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Faculty Package:</td>
<td>9</td>
</tr>
<tr>
<td>DSME1030, 1040, MGNT1020</td>
<td></td>
</tr>
<tr>
<td>2. Required Courses:</td>
<td>34</td>
</tr>
<tr>
<td>ACCT2111, 2121, 3151, DSME2011, 2030, 2051, FINA2010, MGNT2510, 3010, 4010, MKTG2010</td>
<td></td>
</tr>
<tr>
<td>3. Elective Courses (Concentration):</td>
<td>15</td>
</tr>
<tr>
<td>Students must choose at least one concentration and take five courses among the courses prescribed under each concentration area as follows:</td>
<td></td>
</tr>
<tr>
<td>(a) Business Economics</td>
<td></td>
</tr>
<tr>
<td>DSME2021, one from any concentration area and three courses selected from: DSME3030, 3040, 3050, 3070, 3080, 3090,</td>
<td></td>
</tr>
</tbody>
</table>
(b) Management Information Systems  
DSME2021, and four courses selected from: DSME4020, 4030, 4070, 4120, 4140, 4160, 4180, 4200, 4220, 4230, 4240, 4280

(c) Supply Chain and Logistics Management  
DSME2021, one from any concentration area and three courses selected from: DSME4020, 4070, 4170, 4180, 4190, 4240, 4260, 4270

(d) General Decision Sciences and Managerial Economics  
DSME2021, one from any concentration area and three courses selected from: DSME3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280

(e) General Finance  
DSME2021, and 12 units of FINA courses at 3000 or above level, with no more than three 1-unit FINA courses

(f) Financial Engineering  
DSME2021, and four courses selected from: FINA3220, 4110, 4120, 4130, 4140, 4150, 4160, 4190, 4210, 4220, 4250, 4260, 4370, 4380

(g) Insurance and Risk Management  
DSME2021, FINA3210 and three courses selected from: FINA2210, 3080, 3230, 3240, 4230, 4240

(h) Management of International Business  
MGNT3580, MKTG3010 and three courses selected from: MGNT4120, 4140, 4150, 4510, 4520, 4530, 4540, 4550, 4570, 4600, 4610, 4620, 4630

(i) Human Resource Management  
MGNT2040, MKTG3010 and three courses selected from: MGNT3040, 3060, 4050, 4060, 4080, 4110, 4130, 4140, 4620, 4630

(j) Marketing  
MKTG3010, 4040 and three courses selected from: MKTG3020, 3030, 3040, 3050, 4010, 4020, 4030, 4050, 4070, 4080, 4090, 4100, 4110

(k) Quantitative Marketing  
MKTG3010, 4090, 4120 and two courses selected from: MKTG4030, 4070, 4080, 4130

(l) General Business  
DSME2021/MKTG3010 and 12 units of DSME/FINA/MGNT/MKTG courses at 3000 or above level, with no more than three 1-unit FINA courses

**Total:** 58

Explanatory Notes:
1. Students who have completed the course HTMG2010 will be eligible to apply for exemption of 3 units of University Core English Language Requirement (ELTU2012). Students are required to apply for the exemption. When exemption from a particular course is recognized, students can only be exempted from the course but not the units.

2. Students can choose to graduate with double concentrations. In that case, they will have to take 15 more units of courses (five courses) to fulfill the requirement of another concentration in addition to the Major Programme Requirement of 58 units.

3. ACCT/DSME/FINA/IBBA/MGNT/MKTG courses at 2000 and above level (excluding ACCT2111 and 2121) will be included in the calculation of Major GPA for honours classification.

4. DSME2021 and the associated units can be used to satisfy concentration requirements of double concentrations within (a) to (g) and (l). MKTG3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (h) to (l).

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 ENGG2430/ESTR2002.
2. DSME2051 and the associated units can be exempted from the requirement of the second degree by successfully completing SEEM3490.
3. DSME1030 and the associated units can be used to satisfy both the requirements of the first and second degrees.
4. MGNT1020 and the associated units can be used to satisfy both the requirements of the first and second degrees.
5. MGNT4090 and the associated units can be used to satisfy both the requirements of the first and second degrees.
# Mechanical and Automation Engineering

**Applicable to students admitted in 2013-14**

## Title of Double Degree Programme/Option

Bachelor of Engineering (Mechanical and Automation Engineering) and Bachelor of Business Administration (Integrated BBA Programme) Double Degree Option

## 1st Degree: Bachelor of Engineering (Mechanical and Automation Engineering)

### Major Programme Requirement

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

<table>
<thead>
<tr>
<th>Units</th>
<th>1. Faculty Package:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2600/ESTR2008</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>2. Foundation Science Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 units of Physics:</td>
</tr>
<tr>
<td></td>
<td>(i) ENGG2520/ESTR2006[a], PHYS1110 OR (ii) PHYS1003[b], 1110</td>
</tr>
<tr>
<td></td>
<td>(b) 3 units of other Science Course: CHEM1070, 1280, 1380, LSCI1001, 1003</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>3. Foundation Mathematics Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ESTR2002, MATH1510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>4. Required Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(a) ELEG2202, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG3010, MAEG3020/ESTR3404, MAEG3050/ESTR3406</td>
</tr>
<tr>
<td></td>
<td>(b) Research Component Courses[c]: ENGG4010, 4020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(a) Breadth Electives (12 units chosen from the following courses): CSCI1020, 1040, 1050, CSCI2100/ESTR2102, CSCI2120, 2800, 3170, DSME1030, ELEG2401, 3101, ENER2010, 2020, ENER3030/ESTR3402, ENGG1820, ENGG2020/ESTR2104, MAEG1010, 2010, 3030, 3040, MAEG3060/ESTR3408, MAEG3070, 3080, 3920, 5040, 5050 (or ENGG5404), 5080, MGNT1020, 4090, SEEM3450/ESTR3502, SEEM3490, 3500</td>
</tr>
<tr>
<td></td>
<td>(b) Depth Electives (9 units chosen from the following courses): ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/...</td>
</tr>
</tbody>
</table>
Streams
Students may choose not to specialize in any stream or to specialize in one of the four streams and complete a minimum of 15 units of courses prescribed by the stream.

Design
(a) Required Courses:
CSCI1020, MAEG2010, 3040
(b) Elective Courses:
ENER3030/ESTR3402, MAEG3070, 3920, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010 (or ENGG5402), 5020 (or ENGG5403), 5030, 5060, 5070, 5090, 5100 (or ENGG5405), 5110

Energy
(a) Required Courses:
ENER2010, 2020, MAEG3030
(b) Elective Courses:
ENER3030/ESTR3402, ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ESTR4404, ENER4040/ESTR4406, ENER4050/ESTR4412, MAEG4080/ESTR4420

Mechatronics
(a) Required Courses:
CSCI1020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
(b) Elective Courses:
ELEG2401, ENER3030/ESTR3402, ENGG2020/ESTR2104, MAEG3080, 5050 (or ENGG5404), 5080

Robotics
(a) Required Courses:
CSCI1020, MAEG1010, MAEG3060/ESTR3408
(b) Elective Courses:
ENER3030/ESTR3402, MAEG4010/ESTR4408, MAEG5010 (or ENGG5402), 5040, 5050 (or ENGG5404), 5090

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
(d) Elective Courses:
15 units of courses[e]:
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
ii) 3 units of BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level

Explanatory Notes:
1. Students who have completed the courses ENGG1110/ESTR1002 and ENGG2600/ESTR2008 (or equivalent courses as approved by the Academic IT Steering Committee) will be eligible to apply for exemption of 1 unit of University Core IT Requirement. Students are required to apply for the exemption. When exemption from a particular course is recognized, students can only be exempted from the course but not the units. Please follow the application procedures as announced by the IT Foundation Course Office at https://engg1000.cse.cuhk.edu.hk/index.html. (The use of ENGG1110/ESTR1002 and ENGG2600/ESTR2008, in lieu of ENGG1110 and 2600, for exemption of 1 unit of University Core IT Requirement is subject to the Senate’s approval.)
2. BMEG/CENG/CSCI/ELEG/ENER/ENGG/ESTR/IERG/MAEG/SEEM courses at 2000 and above level will be included in the calculation of Major GPA for honours classification.
3. Results of the graduation project as prescribed by ENGG4020/ESTR4999 will be included in the calculation for honours classification.
4. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded in the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
5. Students are advised to take some courses in summer sessions to reduce their course load in regular terms.
   [a] For students who have attained Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent.
   [b] For students who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics component or equivalent.
   [c] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for ENGG4010 and 4020.
   [d] 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).
   [e] Students can use up to 9 units of courses taken to fulfill the requirements of items 1 to 5 above (excluding item 4(b) Research Component Courses) to fulfill the elective requirements of the ELITE Stream. A full list of ESTR courses is available at the ELITE website.

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 a reasonable number of units (30 units as mutually agreed by both the Engineering and Business Administration Faculties) of courses prescribed by the second degree programme and have achieved a GPA of at least 3.0 in these courses while pursuing the first degree programme. These second degree programme courses include the required language courses and the mutually recognized courses of the double degree programme.

Students who do not satisfy the above requirements may still apply for admission to the second degree programme which has discretion in judging the suitability of the students in studying for the second degree 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 of this double degree programme can 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 58 units of courses as follows:

<table>
<thead>
<tr>
<th>Units</th>
<th>1. Faculty Package:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DSME1030, 1040, MGNT1020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>2. Required Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACCT2111, 2121, 3151, DSME2011, 2030, 2051, FINA2010, MGNT2510, 3010, 4010, MKTG2010</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>3. Elective Courses (Concentration):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students must choose at least one concentration and take five courses among the courses prescribed under each concentration area as follows:</td>
</tr>
<tr>
<td></td>
<td>(a) Business Economics</td>
</tr>
<tr>
<td></td>
<td>DSME2021, one from any concentration area and three courses selected from: DSME3030, 3040, 3050, 3070, 3080, 3090, 4040, 4050, 4080, 4090, 4110</td>
</tr>
<tr>
<td></td>
<td>(b) Management Information Systems</td>
</tr>
<tr>
<td></td>
<td>DSME2021, and four courses selected from: DSME4020, 4030, 4070, 4120, 4140, 4160, 4180, 4200, 4220, 4230, 4240, 4280</td>
</tr>
<tr>
<td></td>
<td>(c) Supply Chain and Logistics Management</td>
</tr>
</tbody>
</table>
DSME2021, one from any concentration area and three courses selected from: DSME4020, 4070, 4170, 4180, 4190, 4240, 4260, 4270

(d) General Decision Sciences and Managerial Economics
DSME2021, one from any concentration area and three courses selected from: DSME3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280

(e) General Finance
DSME2021, and 12 units of FINA courses at 3000 or above level, with no more than three 1-unit FINA courses

(f) Financial Engineering
DSME2021, and four courses selected from: FINA3220, 4110, 4120, 4130, 4140, 4150, 4160, 4190, 4210, 4220, 4250, 4260, 4370, 4380

(g) Insurance and Risk Management
DSME2021, FINA3210 and three courses selected from: FINA2210, 3080, 3230, 3240, 4230, 4240

(h) Management of International Business
MGNT3580, MKTG3010 and three courses selected from: MGNT4120, 4140, 4150, 4510, 4520, 4530, 4540, 4550, 4570, 4600, 4610, 4620, 4630

(i) Human Resource Management
MGNT2040, MKTG3010 and three courses selected from: MGNT3040, 3060, 4050, 4060, 4080, 4110, 4130, 4140, 4620, 4630

(j) Marketing
MKTG3010, 4040 and three courses selected from: MKTG3020, 3030, 3040, 3050, 4010, 4020, 4030, 4050, 4070, 4080, 4090, 4100, 4110

(k) Quantitative Marketing
MKTG3010, 4090, 4120 and two courses selected from: MKTG4030, 4070, 4080, 4130

(l) General Business
DSME2021/MKTG3010 and 12 units of DSME/FINA/MGNT/MKTG courses at 3000 or above level, with no more than three 1-unit FINA courses

Total: 58

Explanatory Notes:
1. Students can choose to graduate with double concentrations. In that case, they will have to take 15 more units of courses (five courses) to fulfill the requirement of another concentration in addition to the Major Programme Requirement of 58 units.
2. ACCT/DSME/FINA/IBBA/MGNT/MKTG courses at 2000 and above level (excluding ACCT2111 and 2121) will be included in the calculation of Major GPA for honours classification.
3. DSME2021 and the associated units can be used to satisfy concentration requirements of double concentrations within (a) to (g) and (l). MKTG3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (h) to (l).

<table>
<thead>
<tr>
<th>Explanatory Notes on Mutual Recognition or Exclusion:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DSME2011 and the associated units can be exempted from the requirement of the second degree by successfully completing ENGG2430/ESTR2002.</td>
</tr>
<tr>
<td>2. DSME2051 and the associated units can be exempted from the requirement of the second degree by successfully completing SEEM3490.</td>
</tr>
<tr>
<td>3. DSME1030 and the associated units can be used to satisfy both the requirements of the first and second degrees.</td>
</tr>
<tr>
<td>4. MGNT1020 and the associated units can be used to satisfy both the requirements of the first and second degrees.</td>
</tr>
<tr>
<td>5. MGNT4090 and the associated units can be used to satisfy both the requirements of the first and second degrees.</td>
</tr>
</tbody>
</table>
Title of Double Degree Programme/Option
Bachelor of Engineering (Mechanical and Automation Engineering) and Bachelor of Business Administration (Integrated BBA Programme) Double Degree Option

1st Degree: Bachelor of Engineering (Mechanical and Automation Engineering)

Major Programme Requirement

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

<table>
<thead>
<tr>
<th>Units</th>
<th>1. Faculty Package: ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2601, 2602</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Foundation Science Courses:</td>
</tr>
<tr>
<td></td>
<td>(a) PHYS1110</td>
</tr>
<tr>
<td></td>
<td>(b) i) One course from[a]: CHEM1070, 1280, 1380, ENGG2520/ESTR2006 OR</td>
</tr>
<tr>
<td></td>
<td>ii) One course from[b]: CHEM1070, 1280, 1380, ENGG2520/ESTR2006, LSCI1001, 1003</td>
</tr>
<tr>
<td></td>
<td>(c) i) Other than the one taken to fulfill (b) above, one course from[a]: ENGG2520/ESTR2006, LSCI1001, 1003 OR</td>
</tr>
<tr>
<td></td>
<td>ii) PHYS1003[b]</td>
</tr>
<tr>
<td></td>
<td>3. Foundation Mathematics Courses[c]: ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ESTR2002, MATH1510</td>
</tr>
<tr>
<td></td>
<td>4. Required Courses:</td>
</tr>
<tr>
<td></td>
<td>(a) ELEG2202, MAEG2020/ESTR2400, MAEG2030/ESTR2402, 18</td>
</tr>
<tr>
<td></td>
<td>(b) Research Component Courses[d]: ENGG4010, 4020</td>
</tr>
<tr>
<td></td>
<td>5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):</td>
</tr>
<tr>
<td></td>
<td>(a) Breadth Electives (12 units chosen from the following courses):</td>
</tr>
<tr>
<td></td>
<td>CSCI1020, 1040, 1050, CSCI2100/ESTR2102, CSCI2120, 2800, 3170, DSME1030, ELEG2401, 3101, ENER2010, 2020, ENER3030/ESTR3402, ENGG1820, ENGG2020/ESTR2104,</td>
</tr>
</tbody>
</table>
(b) Depth Electives (9 units chosen from the following courses):
ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ESTR4404, ENER4040/ESTR4406, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010 (or ENGG5402), 5020 (or ENGG5403), 5030, 5060, 5070, 5090, 5100 (or ENGG5405), 5110

Streams
Students may choose not to specialize in any stream or to specialize in one of the three streams and complete a minimum of 15 units of courses prescribed by the stream.

Design and Manufacturing
(a) Required Courses: 
CSCI11020, MAEG2010, 3040 
(b) Elective Courses: 
ENER3030/ESTR3402, MAEG3060/ESTR3408, MAEG3070, 3080, 3920, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010 (or ENGG5402), 5020 (or ENGG5403), 5030, 5060, 5070, 5090, 5100 (or ENGG5405), 5110

Mechatronics
(a) Required Courses: 
CSCI11020, MAEG4040/ESTR4414, MAEG4050/ESTR4416 
(b) Elective Courses: 
ELEG2401, ENER3030/ESTR3402, ENGG2020/ESTR2104, MAEG3080, 5050 (or ENGG5404), 5080

Robotics and Automation
(a) Required Courses: 
CSCI11020, MAEG3060/ESTR3408, MAEG4050/ESTR4416 
(b) Elective Courses: 
ENER3030/ESTR3402, MAEG1010, MAEG4010/ESTR4408, MAEG5010 (or ENGG5402), 5020 (or ENGG5403), 5040, 5050 (or ENGG5404), 5090

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

Explanatory Notes:
1. Students who have completed the courses ENGG1110/ESTR1002, ENGG2601 and 2602 (or equivalent courses as approved by the Academic IT Steering Committee) will be eligible to apply for exemption of 1 unit of University Core IT Requirement. Students are required to apply for the exemption. When exemption from a particular course is recognized, students can only be exempted from the course but not the units. Please follow the application procedures as announced by the IT Foundation Course Office at https://engg1000.cse.cuhk.edu.hk/index.html. (The use of ENGG1110/ESTR1002, ENGG2601 and 2602, in lieu of ENGG1110 and 2600, for exemption of 1 unit of University Core IT Requirement is subject to the Senate’s approval.)
2. BMEG/CENG/CSCI/ELEG/ENER/ENGG/IERG/MAEG/SEEM courses at 2000 and above level will be included in the calculation of Major GPA for honours classification.
3. Results of the graduation project as prescribed by ENGG4020/ESTR4999 will be included in the calculation for honours classification.
4. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded in the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
5. Students are advised to take some courses in summer sessions to reduce their course load in regular terms.
   [a] For students who have attained Level 3 or above in HKDSE Physics or Combined Science with Physics component or equivalent.
   [b] For students who are without HKDSE Physics or have attained Level 2 or below in HKDSE Physics or Combined Science with Physics component or equivalent.
   [c] Students admitted without HKDSE Mathematics Extended Modules I or II are required to take MATH1020. MATH1020 will be exempted if students pass the assessment test (optional) in the first lecture of MATH1020.
   [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 ENGG4010 and 4020.
   [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).
   [f] Students can use up to 9 units of courses taken to fulfill the requirements of items 1 to 5 above (excluding item 4(b) Research Component Courses) to fulfill the elective requirements of the ELITE Stream. A full list of ESTR courses is available at the ELITE website.

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 a reasonable number of units (30 units as mutually agreed by both the Engineering and Business Administration Faculties) of courses prescribed by the second degree programme and have achieved a GPA of at least 3.0 in these courses while pursuing the first degree programme. These second degree programme courses include the required language courses and the mutually recognized courses of the double degree programme.

Students who do not satisfy the above requirements may still apply for admission to the second degree programme which has discretion in judging the suitability of the students in studying for the second degree 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 of this double degree programme can 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 55 units of courses as follows:

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Faculty Package: 9</td>
</tr>
<tr>
<td>DSME1030, 1040, MGNT1020</td>
</tr>
<tr>
<td>2. Required Courses: 31</td>
</tr>
<tr>
<td>ACCT2111, 2121, DSME2011, 2030, 2051, FINA2010, MGNT2510, 2610, 4010, MKTG2010</td>
</tr>
<tr>
<td>3. Elective Courses (Concentration): 15-18</td>
</tr>
<tr>
<td>Students must choose at least one concentration and take five or six courses among the courses prescribed under respective concentration area as follows:</td>
</tr>
<tr>
<td>(a) Business Economics</td>
</tr>
<tr>
<td>i) DSME2021, 4110</td>
</tr>
<tr>
<td>ii) two courses selected from: DSME3030, 3050, 3080, 3090, 4040, 4080; and</td>
</tr>
<tr>
<td>iii) one DSME course at 3000 or above level and other than those taken for fulfillment of requirement i) or ii)</td>
</tr>
<tr>
<td>(b) Business Analytics</td>
</tr>
<tr>
<td>i) DSME2021, 4020, 4070</td>
</tr>
</tbody>
</table>
ii) one course selected from: DSME4240, 4260; and

iii) one course selected from: DSME3030, 4030, 4110, 4220, 4280, MKTG4120

(c) General Finance
i) DSME2021 or FINA2020
ii) 12 units of FINA courses at 3000 or above level, with no more than three 1-unit FINA courses; and

iii) one course from FINA4040, 4130, 4140, 4390

(d) Financial Engineering
i) DSME2021 or FINA2020
ii) four courses selected from: FINA3080, 3220, 4110, 4120, 4150, 4160, 4190, 4210, 4220, 4250, 4260, 4370, 4380; and

iii) one course from FINA4040, 4130, 4140, 4390

(e) Insurance and Risk Management
i) DSME2021 or FINA2020, and FINA3210
ii) three courses selected from: FINA2210, 3080, 3230, 3240, 3280, 4230, 4240; and

iii) one course from FINA4040, 4130, 4140, 4270, 4291, 4390

(f) Management of International Business
i) MGNT3580, 4150, MKTG3010; and

ii) three courses selected from: MGNT3010, 4120, 4140, 4510, 4520, 4530, 4540, 4550, 4570, 4600, 4610, 4620, 4630

(g) Human Resource Management
i) MGNT2040, 3010, MKTG3010; and

ii) three courses selected from: MGNT3040, 3060, 4050, 4060, 4080, 4110, 4130, 4140, 4620, 4630

(h) Marketing
i) MKTG3010, 3020, 3030, 4040; and

ii) two courses selected from: MKTG3040, 3050, 4010, 4020, 4030, 4050, 4070, 4080, 4090, 4100, 4110

(i) Quantitative Marketing
i) MKTG3010, 4080, 4090, 4120; and

ii) two courses selected from: MKTG3020, 3030, 4030, 4040, 4070, 4130

(j) General Business
i) DSME2021/FINA2020/MKTG3010; and

ii) 12 units of DSME/FINA/MGNT/MKTG courses at 3000 or above level, with no more than three 1-unit FINA courses

Total: 55

Explanatory Notes:
1. Students can choose to graduate with double concentrations. In that case, they will have to take 15 or 18 more units of courses (five or six courses) as prescribed under respective concentration requirements to fulfill the requirement of another
concentration in addition to the Major Programme Requirement of 55 or 58 units.

2. ACCT/DSME/FINA/MGNT/MKTG courses at 2000 and above level (excluding ACCT2111 and 2121) will be included in the calculation of Major GPA for honours classification.

3. DSME2021 and the associated units can be used to satisfy concentration requirements of double concentrations within (a) to (e) and (j). FINA2020 and the associated units can be used to satisfy concentration requirements of double concentrations within (c) to (e) and (j). MKTG3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (f) to (j).

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 ENGG2430/ESTR2002.

2. DSME2051 and the associated units can be exempted from the requirement of the second degree by successfully completing SEEM3490.

3. DSME1030 and the associated units can be used to satisfy both the requirements of the first and second degrees.

4. MGNT1020 and the associated units can be used to satisfy both the requirements of the first and second degrees.

5. MGNT4090 and the associated units can be used to satisfy both the requirements of the first and second degrees.