

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

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:

	Units
1. Faculty Package: ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2600/ ESTR2008	9
2. Foundation Science Courses:	9
(a) 6 units of Physics:	
(i) ENGG1310/2520/ESTR2006[a], PHYS1110 OR	
(ii) PHYS1003[b], 1110	
(b) 3 units of other Science Course: CHEM1070, 1280, 1380, LSCI1001, 1003	
3. Foundation Mathematics Courses: ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ ESTR2002, MATH1510	12
4. Required Courses:	
(a) ELEG2202, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG3010, MAEG3020/ESTR3404, MAEG3050/ESTR3406	18
(b) Research Component Courses[c]: MAEG4998, 4999	6
5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):	21
(a) <u>Breadth Electives</u> (12 units chosen from the following courses): CSCI1020, 1040, 1050, CSCI2100/ESTR2102, CSCI2120, 2800, 3170, DSME1030, ELEG2401, 3101, ENER2010[ENGG1500], ENER2020, ENER3030/ESTR3402, ENGG1820, ENGG2020/ ESTR2104, MAEG1010, 2010, 3030, 3040, MAEG3060/ ESTR3408, MAEG3070, 3080, 3920, 5040, MAEG5050/ ENGG5404, MAEG5080, 5120, MGNT1020, 4090, SEEM3450/ ESTR3502, SEEM3490, 3500	
(b) <u>Depth Electives</u> (9 units chosen from the following courses): ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ ESTR4404, ENER4040/ESTR4406, ENER4050/ESTR4422, ENER4060/ESTR4424, MAEG4010/ESTR4408, MAEG4020/	

ESTR4410, MAEG4030/ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5030, 5060, 5070, 5090, MAEG5100/ENGG5405, MAEG5110

Streams

Students may choose not to specialize in any stream or to specialize in one of the four streams by completing 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, MAEG5100/ENGG5405

Energy

- (a) Required Courses:
ENER2010[ENGG1500], 2020, MAEG3030
- (b) Elective Courses:
ENER3030/ESTR3402, ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ESTR4404, ENER4040/ESTR4406, ENER4050/ESTR4422, ENER4060/ESTR4424, MAEG4030/ESTR4412, MAEG4080/ESTR4420, MAEG5120

Mechatronics

- (a) Required Courses:
CSCI1020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
- (b) Elective Courses:
ELEG2401, ENER3030/ESTR3402, ENGG2020/ESTR2104, MAEG3080, MAEG5050/ENGG5404, MAEG5080

Robotics

- (a) Required Courses:
CSCI1020, MAEG1010, MAEG3060/ESTR3408
- (b) Elective Courses:
ENER3030/ESTR3402, MAEG4010/ESTR4408, MAEG5010/ENGG5402, MAEG5040, MAEG5050/ENGG5404, MAEG5090, 5120

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

level[g]

Explanatory Notes:

1. Students who have completed the courses ENGG1110/ESTR1002 and ENGG2600/ESTR2008 (or equivalent courses as approved by the Sub-Committee on Education Technologies) 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>.
2. BMEG/CENG/CSCI/EEEN/ELEG/ENER/ENGG/ESTR/IERG/MAEG/SEEM courses at 2000 and above level and ENGG1310 will be included in the calculation of Major GPA for honours classification.
3. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
4. 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 MAEG4998 and 4999.
 - [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). 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.
 - [e] Students can use up to 9 units of courses which have been 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.
 - [f] 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).
 - [g] 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.
 - [] 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 to judge the suitability of the students for 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:

	Units
1. Faculty Package: DSME1030, 1040, MGNT1020	9
2. Required Courses: ACCT2111, 2121, 3151, DSME2011, 2030, 2051, FINA2010, MGNT2510, 3010, 4010, MKTG2010	34
3. Elective Courses (Concentration): Students must choose at least one concentration and take five courses among the courses prescribed under each concentration area as follows:	15
(a) Business Economics DSME2021, one from any concentration area and three courses selected from: DSME3030, 3040, 3050, 3070, 3080, 3090, 4040, 4050, 4080, 4090, 4110	
(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, 3090, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 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: MGNT4080, 4090, 4120, 4130, 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, 4150
- (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. 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. Double concentrations (i) among the finance-related concentration areas (i.e. any combination of General Finance, Financial Engineering, Insurance and Risk Management), and (ii) in Marketing and Quantitative Marketing are not allowed.
4. DSME2021 and the associated units can be used to satisfy concentration requirements of double concentrations within (a) to (g) and (l), except for the impermissible combination of concentrations as stipulated in Note 3 above.
MKTG3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (h) to (l), except for the impermissible combination of concentrations as stipulated in Note 3 above.

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.

Recommended Course Pattern				
	1st degree: Bachelor of Engineering (Mechanical and Automation Engineering)	Units	2nd degree: Bachelor of Business Administration (Integrated BBA Programme)	Units
First Year of Attendance	1 st term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/LSCI1001, MATH1510, PHYS1110 (or 1003) Major Elective(s):	3 6-9	1 st term Faculty Package: Major Required: Major Elective(s):	
	2 nd term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/LSCI1003, ENGG1310/2520/ESTR2006 (or PHYS1110), ENGG1410/ESTR1004 Major Elective(s):	3 6-9	2 nd term Faculty Package: Major Required: Major Elective(s):	
Second Year of Attendance	1 st term Major Required: ENGG2420/ESTR2000, MAEG2020/ESTR2400 Major Elective(s): 1 Breadth Elective course	6 2-3	1 st term Faculty Package: DSME1030, MGNT1020 Major Required: Major Elective(s):	6
	2 nd term Faculty Package: ENGG2600/ESTR2008 Major Required: ELEG2202, ENGG2430/ESTR2002, MAEG2030/ESTR2402 Major Elective(s):	3 9	2 nd term Faculty Package: DSME1040 Major Required: DSME2011 Major Elective(s):	3 4
Third Year of Attendance	1 st term Major Required: MAEG3010, MAEG3050/ESTR3406	6	1 st term Major Required: ACCT2111 Major Elective(s):	3

	Major Elective(s): 0 to 1 Breadth Elective course	0-3		
	2 nd term Major Required: MAEG3020/ ESTR3404 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: ACCT2121, MKTG2010 Major Elective(s):	6
Fourth Year of Attendance	1 st term Major Required: MAEG4998 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	1 st term Major Required: DSME2030, FINA2010 Major Elective(s):	6
	2 nd term Major Required: MAEG4999 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: DSME2051, MGNT2510 Major Elective(s):	6
Fifth Year of Attendance			1 st term Major Required: MGNT3010 Major Elective(s): 3 courses	3 9
			2 nd term Major Required: ACCT3151, MGNT4010 Major Elective(s): 2 courses	6 6
Total (including Faculty Package):		75	Total (including Faculty Package):	58

**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:

	Units
1. Faculty Package: ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2600/ ESTR2008	9
2. Foundation Science Courses:	9
(a) 6 units of Physics:	
(i) ENGG1310/2520/ESTR2006[a], PHYS1110 OR	
(ii) PHYS1003[b], 1110	
(b) 3 units of other Science Course: CHEM1070, 1280, 1380, LSCI1001, 1003	
3. Foundation Mathematics Courses: ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ ESTR2002, MATH1510	12
4. Required Courses:	
(a) ELEG2202, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG3010, MAEG3020/ESTR3404, MAEG3050/ESTR3406	18
(b) Research Component Courses[c]: MAEG4998, 4999	6
5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):	21
(a) <u>Breadth Electives</u> (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, MAEG5050/ENGG5404, MAEG5080, 5120, MGNT1020, 4090, SEEM3450/ESTR3502, SEEM3490, 3500	
(b) <u>Depth Electives</u> (9 units chosen from the following courses): ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ ESTR4404, ENER4050/ESTR4422, ENER4060/ESTR4424, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/	

ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5030, 5060, 5070, 5090, MAEG5100/ENGG5405, MAEG5110

Streams

Students may choose not to specialize in any stream or to specialize in one of the four streams by completing 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, MAEG5100/ENGG5405

Energy

- (a) Required Courses:
ENER2010, 2020, MAEG3030
- (b) Elective Courses:
ENER3030/ESTR3402, ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/ESTR4404, ENER4050/ESTR4422, ENER4060/ESTR4424, MAEG4030/ESTR4412, MAEG4080/ESTR4420, MAEG5120

Mechatronics

- (a) Required Courses:
CSCI1020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
- (b) Elective Courses:
ELEG2401, ENER3030/ESTR3402, ENGG2020/ESTR2104, MAEG3080, MAEG5050/ENGG5404, MAEG5080

Robotics

- (a) Required Courses:
CSCI1020, MAEG1010, MAEG3060/ESTR3408
- (b) Elective Courses:
ENER3030/ESTR3402, MAEG4010/ESTR4408, MAEG5010/ENGG5402, MAEG5040, MAEG5050/ENGG5404, MAEG5090, 5120

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

Explanatory Notes:

1. Students who have completed the courses ENGG1110/ESTR1002 and ENGG2600/ESTR2008 (or equivalent courses as approved by the Sub-Committee on Education Technologies) 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>.
2. BMEG/CENG/CSCI/EEEN/ELEG/ENER/ENGG/ESTR/IERG/MAEG/SEEM courses at 2000 and above level and ENGG1310 will be included in the calculation of Major GPA for honours classification.
3. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
4. 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 MAEG4998 and 4999.
 - [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). 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.
 - [e] Students can use up to 9 units of courses which have been 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.
 - [f] 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).
 - [g] 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 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 to judge the suitability of the students for 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:

	Units
1. Faculty Package: DSME1030, 1040, MGNT1020	9
2. Required Courses: ACCT2111, 2121, 3151, DSME2011, 2030, 2051, FINA2010, MGNT2510, 3010, 4010, MKTG2010	34
3. Elective Courses (Concentration): Students must choose at least one concentration and take five courses among the courses prescribed under each concentration area as follows:	15
(a) Business Economics DSME2021, one from any concentration area and three courses selected from: DSME3030, 3040, 3050, 3070, 3080, 3090, 4040, 4050, 4080, 4090, 4110	
(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, 3090, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 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: MGNT4080, 4090, 4120, 4130, 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, 4150
- (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. 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.
2. Double concentrations (i) among the finance-related concentration areas (i.e. any combination of General Finance, Financial Engineering, Insurance and Risk Management), and (ii) in Marketing 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 (g) and (l), except for the impermissible combination of concentrations as stipulated in Note 2 above.
MKTG3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (h) to (l), except for the impermissible combination of concentrations as stipulated in Note 2 above.

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.

Recommended Course Pattern

	1st degree: Bachelor of Engineering (Mechanical and Automation Engineering)	Units	2nd degree: Bachelor of Business Administration (Integrated BBA Programme)	Units
First Year of Attendance	1 st term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/LSCI1001/1003, MATH1510, PHYS1110 (or 1003) Major Elective(s):	3 6-9	1 st term Faculty Package: Major Required: Major Elective(s):	
	2 nd term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/LSCI1001/1003, ENGG1310/2520/ESTR2006 (or PHYS1110), ENGG1410/ESTR1004 Major Elective(s):	3 6-9	2 nd term Faculty Package: Major Required: Major Elective(s):	
Second Year of Attendance	1 st term Major Required: ENGG2420/ESTR2000, MAEG2020/ESTR2400 Major Elective(s): 0 or 1 Breadth Elective course	6 0-3	1 st term Faculty Package: DSME1030, MGNT1020 Major Required: Major Elective(s):	6
	2 nd term Faculty Package: ENGG2600/ESTR2008 Major Required: ELEG2202, ENGG2430/ESTR2002, MAEG2030/ESTR2402 Major Elective(s):	3 9	2 nd term Faculty Package: DSME1040 Major Required: DSME2011 Major Elective(s):	3 4
Third Year of Attendance	1 st term Major Required: MAEG3010, MAEG3050/ESTR3406 Major Elective(s): 0 or 1 Breadth Elective course	6 0-3	1 st term Major Required: ACCT2111 Major Elective(s):	3
	2 nd term Major Required: MAEG3020/ESTR3404 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: ACCT2121, MKTG2010 Major Elective(s):	6

Fourth Year of Attendance	1 st term Major Required: MAEG4998 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	1 st term Major Required: DSME2030, FINA2010 Major Elective(s):	6
	2 nd term Major Required: MAEG4999 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: DSME2051, MGNT2510 Major Elective(s):	6
Fifth Year of Attendance			1 st term Major Required: MGNT3010 Major Elective(s): 3 courses	3 9
			2 nd term Major Required: ACCT3151, MGNT4010 Major Elective(s): 2 courses	6 6
Total (including Faculty Package):		75	Total (including Faculty Package):	58

**Mechanical and Automation Engineering
Applicable to students admitted in 2014-15**

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:

	Units
1. Faculty Package: ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2601, 2602	9
2. Foundation Science Courses:	9
(a) PHYS1110	
(b) i) One course from the following[a]: CHEM1070, 1280, 1380, ENGG1310/2520/ESTR1003/2006	
OR	
ii) One course from the following[b]: CHEM1070, 1280, 1380, ENGG1310/2520/ESTR1003/2006, LSCI1001, 1003	
(c) i) One course from the following[a][c]: ENGG1310/ 2520/ESTR1003/2006, LSCI1001, 1003	
OR	
ii) PHYS1003[b]	
3. Foundation Mathematics Courses: ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ ESTR2002, MATH1510[d]	12
4. Required Courses:	
(a) ELEG2202#, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG3010, MAEG3020/ESTR3404, MAEG3050/ESTR3406	18
(b) Research Component Courses[e]: MAEG4998, 4999	6
5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):	21
(a) <u>Breadth Electives</u> (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, MAEG5050/ENGG5404, MAEG5080, 5120, 5130, 5140, MGNT1020, 4090,	

- SEEM3450#/ESTR3502, SEEM3490#, 3500#
- (b) Depth Electives (9 units chosen from the following courses):
 ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/
 ESTR4404, ENER4050/ESTR4422, ENER4060/ESTR4424,
 MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/
 ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416,
 MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420,
 MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5030,
 5060, 5070, 5090, MAEG5100/ENGG5405, MAEG5110

Streams

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

Design and Manufacturing

- (a) Required Courses:
 CSC11020, MAEG2010, 3040
- (b) Elective Courses:
 ENER3030/ESTR3402, MAEG3060/ESTR3408, MAEG3070,
 3080, 3920, MAEG4010/ESTR4408, MAEG4020/ESTR4410,
 MAEG4060, MAEG4070/ESTR4418, MAEG5030, MAEG5050/
 ENGG5404, MAEG5100/ENGG5405, MAEG5120, 5130,
 SEEM3500

Mechatronics

- (a) Required Courses:
 CSC11020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
- (b) Elective Courses:
 ELEG2401, ENER3030/ESTR3402, ENGG2020/ESTR2104,
 MAEG3080, MAEG5050/ENGG5404, MAEG5080

Robotics and Automation

- (a) Required Courses:
 CSC11020, MAEG3060/ESTR3408, MAEG4050/ESTR4416
- (b) Elective Courses:
 ENER3030/ESTR3402, MAEG1010, MAEG4010/ESTR4408,
 MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5040,
 MAEG5050/ENGG5404, MAEG5090, 5120

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[f]

Elective Courses:

15 units of courses[g]:

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

Explanatory Notes:

1. Students who have completed the courses ENGG1110/ESTR1002, ENGG2601 and 2602 (or equivalent courses as approved by the Sub-Committee on Education Technologies) 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>.
2. EEEN, ENER, ENGG and MAEG courses at 2000 and above level as well as those labeled as #, and their reciprocal ESTR courses will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package, Foundation Science courses and Foundation Mathematics courses.
3. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
4. 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 without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics component or equivalent.
 - [c] Courses used to fulfill item 2(b) requirement cannot be used to fulfill item 2(c) requirement.
 - [d] Students without HKDSE Mathematics Extended Modules I or II are required to take MATH1020 on top of the 12 units of the Foundation Mathematics Course requirements. MATH1020 will be exempted for students who opt to take and pass the assessment test in the first lecture of MATH1020.
 - [e] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for MAEG4998 and 4999.
 - [f] 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.
 - [g] Students can use up to 9 units of courses which have been 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.
 - [h] 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).
 - [i] 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 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 to judge the suitability of the students for 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:

	Units
1. Faculty Package: DSME1030, 1040, MGNT1020	9
2. Required Courses: ACCT2111, 2121, DSME2011, 2030, 2051, FINA2010, MGNT2510, 2610, 4010, MKTG2010	31
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:	15-18
(a) Business Economics	
(i) DSME2021, 4110;	
(ii) two courses selected from: DSME3030, 3050, 3080, 3090, 4040, 4080; and	
(iii) one DSME course at 3000 or above level and other than those taken for fulfillment of requirement (i) or (ii)	
(b) Business Analytics	
(i) DSME2021, 4020, 4070;	
(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 FINA3070, 3080, 4040, 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, 4080, 4090, 4120, 4130, 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, 4150
 - (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: 55-58

Explanatory Notes:

1. 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.
2. Double concentrations (i) among the finance-related concentration areas (i.e. any combination of General Finance, Financial Engineering, Insurance and Risk Management), and (ii) in Marketing 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 (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
 MKTG3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (f) to (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
 FINA2020 and the associated units can be used to satisfy concentration requirements of double concentrations within (c) to (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
 MGNT3010 and the associated units can be used to satisfy concentration requirements

of double concentrations within (f) and (g).

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.

Recommended Course Pattern

	1st degree: Bachelor of Engineering (Mechanical and Automation Engineering)	Units	2nd degree: Bachelor of Business Administration (Integrated BBA Programme)	Units
First Year of Attendance	1 st term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/ENGG1310/2520/ESTR1003/2006/LSCI1001/1003/PHYS1003/1110, MATH1510 Major Elective(s):	3 6-9	1 st term Faculty Package: Major Required: Major Elective(s):	
	2 nd term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/ENGG1310/2520/ESTR1003/2006/LSCI1001/1003/PHYS1003/1110, ENGG1410/ESTR1004 Major Elective(s):	3 6-9	2 nd term Faculty Package: Major Required: Major Elective(s):	
Second Year of Attendance	1 st term Major Required: ELEG2202, ENGG2420/ESTR2000, MAEG2020/ESTR2400 Major Elective(s):	9	1 st term Faculty Package: DSME1030, MGNT1020 Major Required: Major Elective(s):	6
	2 nd term Faculty Package: ENGG2601 Major Required: ENGG2430/ESTR2002, MAEG2030/ESTR2402 Major Elective(s): 0 or 1 Breadth Elective course	2 6 0-3	2 nd term Faculty Package: DSME1040 Major Required: DSME2011 Major Elective(s):	3 4

	Summer session Faculty Package: ENGG2602	1		
Third Year of Attendance	1 st term Major Required: MAEG3010, MAEG3050/ESTR3406 Major Elective(s): 0 or 1 Breadth Elective course	6 0-3	1 st term Major Required: ACCT2111 Major Elective(s):	3
	2 nd term Major Required: MAEG3020/ ESTR3404 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: ACCT2121, MKTG2010 Major Elective(s):	6
Fourth Year of Attendance	1 st term Major Required: MAEG4998 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	1 st term Major Required: DSME2030, FINA2010 Major Elective(s):	6
	2 nd term Major Required: MAEG4999 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: DSME2051, MGNT2510 Major Elective(s):	6
Fifth Year of Attendance			1 st term Major Required: MGNT2610 Major Elective(s): 2-3 courses	3 6-9
			2 nd term Major Required: MGNT4010 Major Elective(s): 2-3 courses	3 6-9
Total (including Faculty Package):		75	Total (including Faculty Package):	55-58

Mechanical and Automation Engineering
Applicable to students admitted in 2015-16

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:

	Units
1. Faculty Package: ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2601, 2602	9
2. Foundation Science Courses:	9
(a) PHYS1110	
(b) i) One course from the following[a]: CHEM1070, 1280, 1380, ENGG1310/ESTR1003	
OR	
ii) One course from the following [b]: CHEM1070, 1280, 1380, ENGG1310/ESTR1003, LSCI1001, 1003	
(c) i) One course from the following [a][c]: ENGG1310/ ESTR1003, LSCI1001, 1003	
OR	
ii) PHYS1003[b]	
3. Foundation Mathematics Courses: ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ ESTR2002, MATH1510[d]	12
4. Required Courses:	
(a) ELEG2202#, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG3010, MAEG3020/ESTR3404, MAEG3050/ESTR3406	18
(b) Research Component Courses[e]: MAEG4998, 4999	6
5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):	21
(a) <u>Breadth Electives</u> (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, MAEG5050/ENGG5404, MAEG5080, 5120, 5130, 5140, MGNT1020, 4090, SEEM3450#/ ESTR3502, SEEM3490#, 3500#	

- (b) Depth Electives (9 units chosen from the following courses):
 ENER4010/ESTR4400, ENER4020/ESTR4402, ENER4030/
 ESTR4404, ENER4050/ESTR4422, ENER4060/ESTR4424,
 MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/
 ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416,
 MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420,
 MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5030,
 5060, 5070, 5090, MAEG5100/ENGG5405, MAEG5110

Streams

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

Design and Manufacturing

- (a) Required Courses:
 CSCI1020, MAEG2010, 3040
- (b) Elective Courses:
 ENER3030/ESTR3402, MAEG3060/ESTR3408, MAEG3070,
 3080, 3920, MAEG4010/ESTR4408, MAEG4020/ESTR4410,
 MAEG4060, MAEG4070/ESTR4418, MAEG5030, MAEG5050/
 ENGG5404, MAEG5100/ENGG5405, MAEG5120, 5130,
 SEEM3500

Mechatronics

- (a) Required Courses:
 CSCI1020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
- (b) Elective Courses:
 ELEG2401, ENER3030/ESTR3402, ENGG2020/ESTR2104,
 MAEG3080, MAEG5050/ENGG5404, MAEG5080

Robotics and Automation

- (a) Required Courses:
 CSCI1020, MAEG3060/ESTR3408, MAEG4050/ESTR4416
- (b) Elective Courses:
 ENER3030/ESTR3402, MAEG1010, MAEG4010/ESTR4408,
 MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5040,
 MAEG5050/ENGG5404, MAEG5090, 5120

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[f]

- Elective Courses:
 15 units of courses[g]:
- 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[h]
- ii) 3 units of BMEG/CENG/CSCI/ELEG/ENGG/IERG/MAEG/SEEM courses at 5000 level[i]

Explanatory Notes:

1. Students who have completed the courses ENGG1110/ESTR1002, ENGG2601 and 2602 (or equivalent courses as approved by the Sub-Committee on Education Technologies) 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>.
2. EEEN, ENER, ENGG and MAEG courses at 2000 and above level as well as those labeled as #, and their reciprocal ESTR courses will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package, Foundation Science courses and Foundation Mathematics courses.
3. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
4. 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 without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics component or equivalent.
 - [c] Courses used to fulfill item 2(b) requirement cannot be used to fulfill item 2(c) requirement.
 - [d] Students without HKDSE Mathematics Extended Modules I or II are required to take MATH1020 on top of the 12 units of the Foundation Mathematics Course requirements. MATH1020 will be exempted for students who opt to take and pass the assessment test in the first lecture of MATH1020.
 - [e] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for MAEG4998 and 4999.
 - [f] 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.
 - [g] Students can use up to 9 units of courses which have been 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.
 - [h] 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).
 - [i] 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 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 to judge the suitability of the students for 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:

	Units
1. Faculty Package: DSME1030, 1040, MGNT1020	9
2. Required Courses: ACCT2111, 2121, DSME2011, 2030, 2051, FINA2010, MGNT2510, 2610, 4010, MKTG2010	31
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:	15-18
(a) Business Economics	
(i) DSME2021, 4110;	
(ii) two courses selected from: DSME3030, 3050, 3080, 3090, 4040, 4080; and	
(iii) one DSME course at 3000 or above level and other than those taken for fulfillment of requirement (i) or (ii)	
(b) Business Analytics	
(i) DSME2021, 4020, 4070;	
(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 FINA3070, 3080, 4040, 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, 4080, 4090, 4130, 4140, 4510, 4530, 4540, 4550, 4570, 4600, 4620
- (g) Human Resource Management
 - (i) MGNT2040, 3010, MKTG3010; and
 - (ii) three courses selected from: MGNT3040, 3060, 4050, 4060, 4080, 4110, 4130, 4140, 4620
- (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, 4150
- (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: 55-58

Explanatory Notes:

1. 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.
2. Double concentrations (i) among the finance-related concentration areas (i.e. any combination of General Finance, Financial Engineering, Insurance and Risk Management), and (ii) in Marketing 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 (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
 MKTG3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (f) to (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
 FINA2020 and the associated units can be used to satisfy concentration requirements of double concentrations within (c) to (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
 MGNT3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (f) and (g).

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.

Recommended Course Pattern

	1st degree: Bachelor of Engineering (Mechanical and Automation Engineering)	Units	2nd degree: Bachelor of Business Administration (Integrated BBA Programme)	Units
First Year of Attendance	1 st term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/ENGG1310/ESTR1003/LSCI1001/1003/PHYS1003/1110, MATH1510 Major Elective(s):	3 6-9	1 st term Faculty Package: Major Required: Major Elective(s):	
	2 nd term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1070/1280/1380/ENGG1310/ESTR1003/LSCI1001/1003/PHYS1003/1110, ENGG1410/ESTR1004 Major Elective(s):	3 6-9	2 nd term Faculty Package: Major Required: Major Elective(s):	
Second Year of Attendance	1 st term Major Required: ELEG2202, ENGG2420/ESTR2000, MAEG2020/ESTR2400 Major Elective(s):	9	1 st term Faculty Package: DSME1030, MGNT1020 Major Required: Major Elective(s):	6
	2 nd term Faculty Package: ENGG2601 Major Required: ENGG2430/ESTR2002, MAEG2030/ESTR2402 Major Elective(s): 0 or 1 Breadth Elective course	2 6 0-3	2 nd term Faculty Package: DSME1040 Major Required: DSME2011 Major Elective(s):	3 4
	Summer session Faculty Package: ENGG2602	1		

Third Year of Attendance	1 st term Major Required: MAEG3010, MAEG3050/ESTR3406 Major Elective(s): 0 or 1 Breadth Elective course	6 0-3	1 st term Major Required: ACCT2111 Major Elective(s):	3
	2 nd term Major Required: MAEG3020/ ESTR3404 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: ACCT2121, MKTG2010 Major Elective(s):	6
Fourth Year of Attendance	1 st term Major Required: MAEG4998 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	1 st term Major Required: DSME2030, FINA2010 Major Elective(s):	6
	2 nd term Major Required: MAEG4999 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: DSME2051, MGNT2510 Major Elective(s):	6
Fifth Year of Attendance			1 st term Major Required: MGNT2610 Major Elective(s): 2-3 courses	3 6-9
			2 nd term Major Required: MGNT4010 Major Elective(s): 2-3 courses	3 6-9
Total (including Faculty Package):		75	Total (including Faculty Package):	55-58

**Mechanical and Automation Engineering
Applicable to students admitted in 2016-17**

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:

	Units
1. Faculty Package: ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG2601, 2602	9
2. Foundation Science Courses:	9
(a) PHYS1110	
(b) i) One course from the following[a]: CHEM1380, ENGG1310/ ESTR1003	
OR	
ii) One course from the following [b]: CHEM1380, ENGG1310/ESTR1003, LSCI1001, 1003	
(c) i) One course from the following [a][c]: ENGG1310/ ESTR1003, LSCI1001, 1003	
OR	
ii) PHYS1003[b]	
3. Foundation Mathematics Courses: ENGG1410/ESTR1004, ENGG2420/ESTR2000, ENGG2430/ ESTR2002, MATH1510[d]	12
4. Required Courses:	
(a) ELEG2202#, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG3010, MAEG3020/ESTR3404, MAEG3030, MAEG3050/ ESTR3406	21
(b) Research Component Courses[e]: MAEG4998, 4999	6
5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):	18
(a) <u>Breadth Electives</u> (9 units chosen from the following courses with at least 3 units at MAEG3000 level): CSCI1020, 1040, 1050, CSCI2100#/ESTR2102, CSCI2120#, 2800#, 3170#, DSME1030, EEEN2020, EEEN3030/ESTR3402, ELEG2401#, 3101#, ENGG1820, ENGG2020/ESTR2104, MAEG1010, 2010, 3040, MAEG3060/ESTR3408, MAEG3070,	

3080, 3920, MAEG5050/ENGG5404, MAEG5080, 5120, 5130, 5140, MGNT1020, 4090, SEEM3450#/ESTR3502, SEEM3490#, 3500#

- (b) Depth Electives (9 units chosen from the following courses):
 EEEN4010/ESTR4400, EEEN4020/ESTR4402, EEEN4030/ESTR4404, EEEN4050/ESTR4422, EEEN4060/ESTR4424, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5030, 5060, 5070, 5090, MAEG5100/ENGG5405, MAEG5110

Streams

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

Design and Manufacturing

- (a) Required Courses:
 CSC11020, MAEG2010, 3040
- (b) Elective Courses:
 EEEN3030/ESTR3402, MAEG3060/ESTR3408, MAEG3070, 3080, 3920, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4060, MAEG4070/ESTR4418, MAEG5030, MAEG5050/ENGG5404, MAEG5100/ENGG5405, MAEG5120, 5130, SEEM3500

Mechatronics

- (a) Required Courses:
 CSC11020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
- (b) Elective Courses:
 EEEN3030/ESTR3402, ELEG2401, ENGG2020/ESTR2104, MAEG3080, MAEG5050/ENGG5404, MAEG5080

Robotics and Automation

- (a) Required Courses:
 CSC11020, MAEG3060/ESTR3408, MAEG4050/ESTR4416
- (b) Elective Courses:
 EEEN3030/ESTR3402, MAEG1010, MAEG4010/ESTR4408, MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5050/ENGG5404, MAEG5090, 5120

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[f]

Elective Courses:

15 units of courses[g]:

- 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[h]

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

Explanatory Notes:

1. Students who have completed the courses ENGG1110/ESTR1002, ENGG2601 and 2602 (or equivalent courses as approved by the Sub-Committee on Education Technologies) 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>.
2. EEEN, ENER, ENGG and MAEG courses at 2000 and above level as well as those labeled as #, and their reciprocal ESTR courses will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package, Foundation Science courses and Foundation Mathematics courses.
3. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
4. 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 without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics component or equivalent.
 - [c] Courses used to fulfill item 2(b) requirement cannot be used to fulfill item 2(c) requirement.
 - [d]
 - 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, ENGG1410, will also be dropped.
 - [e] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for MAEG4998 and 4999.
 - [f] 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.
 - [g] Students can use up to 9 units of courses which have been 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.
 - [h] 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).
 - [i] 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 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 to judge the suitability of the students for 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:

	Units
1. Faculty Package: DSME1030, 1040, MGNT1020	9
2. Required Courses: ACCT2111, 2121, DSME2011, 2030, 2051, FINA2010, MGNT2510, 2610, 4010, MKTG2010	31
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:	15-18
(a) Business Economics	
(i) DSME2021, 4110;	
(ii) two courses selected from: DSME3030, 3050, 3080, 3090, 4040, 4080; and	
(iii) one DSME course at 3000 or above level and other than 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) 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 FINA3070, 3080, 4040, 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, 4080, 4090, 4130, 4140, 4510, 4530, 4540, 4550, 4570, 4600, 4620
- (g) Human Resource Management
 - (i) MGNT2040, 3010, MKTG3010; and
 - (ii) three courses selected from: MGNT3040, 3060, 4050, 4060, 4080, 4110, 4130, 4140, 4620
- (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, 4150
- (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: 55-58

Explanatory Notes:

1. 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.
2. Double concentrations (i) among the finance-related concentration areas (i.e. any combination of General Finance, Financial Engineering, Insurance and Risk Management), and (ii) in Marketing 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 (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
MKTG3010 and the associated units can be used to satisfy concentration requirements

of double concentrations within (f) to (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.

FINA2020 and the associated units can be used to satisfy concentration requirements of double concentrations within (c) to (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.

MGNT3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (f) and (g).

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.

Recommended Course Pattern

	1st degree: Bachelor of Engineering (Mechanical and Automation Engineering)	Units	2nd degree: Bachelor of Business Administration (Integrated BBA Programme)	Units
First Year of Attendance	1 st term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1380/ENGG1310/ESTR1003/LSCI1001/1003/PHYS1003/1110, MATH1510 Major Elective(s):	3 6-9	1 st term Faculty Package: Major Required: Major Elective(s):	
	2 nd term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1380/ENGG1310/ESTR1003/LSCI1001/1003/PHYS1003/1110, ENGG1410/ESTR1004 Major Elective(s):	3 6-9	2 nd term Faculty Package: Major Required: Major Elective(s):	
Second Year of Attendance	1 st term Major Required: ELEG2202, ENGG2420/ESTR2000, MAEG2020/ESTR2400 Major Elective(s):	9	1 st term Faculty Package: DSME1030, MGNT1020 Major Required: Major Elective(s):	6
	2 nd term Faculty Package: ENGG2601	2	2 nd term Faculty Package: DSME1040	3

	Major Required: ENGG2430/ ESTR2002, MAEG2030/ ESTR2402 Major Elective(s): 0 or 1 Breadth Elective course	6 0-3	Major Required: DSME2011 Major Elective(s):	4
	Summer session Faculty Package: ENGG2602	1		
Third Year of Attendance	1 st term Major Required: MAEG3010, MAEG3050/ESTR3406 Major Elective(s): 0 or 1 Breadth Elective course	6 0-3	1 st term Major Required: ACCT2111 Major Elective(s):	3
	2 nd term Major Required: MAEG3020/ ESTR3404, MAEG3030 Major Elective(s): 0 or 1 Breadth / Depth Elective course(s)	6 0-3	2 nd term Major Required: ACCT2121, MKTG2010 Major Elective(s):	6
Fourth Year of Attendance	1 st term Major Required: MAEG4998 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	1 st term Major Required: DSME2030, FINA2010 Major Elective(s):	6
	2 nd term Major Required: MAEG4999 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: DSME2051, MGNT2510 Major Elective(s):	6
Fifth Year of Attendance			1 st term Major Required: MGNT2610 Major Elective(s): 2-3 courses	3 6-9
			2 nd term Major Required: MGNT4010 Major Elective(s): 2-3 courses	3 6-9
Total (including Faculty Package):		75	Total (including Faculty Package):	55-58

**Mechanical and Automation Engineering
Applicable to students admitted in 2017-18**

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:

	Units
1. Faculty Package: ENGG1100/ESTR1000, ENGG1110/ESTR1002, ENGG1410/ ESTR1004	9
2. Foundation Science Courses:	9
(a) PHYS1110	
(b) i) One course from the following[a]: CHEM1380, ENGG1310/ESTR1003	
OR	
ii) One course from the following [b]: CHEM1380, ENGG1310/ESTR1003, LSCI1001, 1003	
(c) i) One course from the following [a][c]: ENGG1310/ ESTR1003, LSCI1001, 1003	
OR	
ii) PHYS1003[b]	
3. Foundation Mathematics Courses: ENGG2420/ESTR2000, ENGG2430/ESTR2002, MATH1510[d]	9
4. Required Courses:	
(a) ELEG2202#, MAEG2020/ESTR2400, MAEG2030/ESTR2402, MAEG2601, 2602, 3010, MAEG3020/ESTR3404, MAEG3030, MAEG3050/ESTR3406	24
(b) Research Component Courses[e]: MAEG4998, 4999	6
5. Elective Courses (at least 9 units of courses at MAEG4000 and above level or ENGG5000 level):	18
(a) <u>Breadth Electives</u> (9 units chosen from the following courses with at least 3 units at MAEG3000 level): CSCI1020, 1040, 1050, CSCI2100#/ESTR2102, CSCI2120#, 2800#, 3170#, DSME1030, EEEN2020, EEEN3030/ESTR3402, ELEG2401#, 3101#, ENGG1820, ENGG2020/ESTR2104, MAEG1010, 2010, 3040, MAEG3060/ESTR3408, MAEG3070,	

3080, 3920, MAEG5050/ENGG5404, MAEG5080, 5120, 5130, 5140, MGNT1020, 4090, SEEM3450#/ESTR3502, SEEM3490#, 3500#

- (b) Depth Electives (9 units chosen from the following courses):
 EEEN4010/ESTR4400, EEEN4020/ESTR4402, EEEN4030/ESTR4404, EEEN4050/ESTR4422, EEEN4060/ESTR4424, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4030/ESTR4412, MAEG4040/ESTR4414, MAEG4050/ESTR4416, MAEG4060, MAEG4070/ESTR4418, MAEG4080/ESTR4420, MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5030, 5060, 5070, 5090, MAEG5100/ENGG5405, MAEG5110

Streams

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

Design and Manufacturing

- (a) Required Courses:
 CSC11020, MAEG2010, 3040
- (b) Elective Courses:
 EEEN3030/ESTR3402, MAEG3060/ESTR3408, MAEG3070, 3080, 3920, MAEG4010/ESTR4408, MAEG4020/ESTR4410, MAEG4060, MAEG4070/ESTR4418, MAEG5030, MAEG5050/ENGG5404, MAEG5100/ENGG5405, MAEG5120, 5130, SEEM3500

Mechatronics

- (a) Required Courses:
 CSC11020, MAEG4040/ESTR4414, MAEG4050/ESTR4416
- (b) Elective Courses:
 EEEN3030/ESTR3402, ELEG2401, ENGG2020/ESTR2104, MAEG3080, MAEG5050/ENGG5404, MAEG5080

Robotics and Automation

- (a) Required Courses:
 CSC11020, MAEG3060/ESTR3408, MAEG4050/ESTR4416
- (b) Elective Courses:
 EEEN3030/ESTR3402, MAEG1010, MAEG4010/ESTR4408, MAEG5010/ENGG5402, MAEG5020/ENGG5403, MAEG5050/ENGG5404, MAEG5090, 5120

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[f]

Elective Courses:

15 units of courses[g]:

- 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[h]

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

Explanatory Notes:

1. Students who have fulfilled the Major Programme Requirements of their respective Engineering programmes (or equivalent courses as approved by the Sub-Committee on Education Technologies) 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>.
2. EEEN, ENER, ENGG and MAEG courses at 2000 and above level as well as those labeled as #, and their reciprocal ESTR courses will be included in the calculation of Major GPA for honours classification, excluding courses in Faculty Package, Foundation Science courses and Foundation Mathematics courses.
3. Students satisfying all the requirements of a stream (except the ELITE Stream, which will be officially recorded on the academic transcript) will be given a certifying letter upon request. Further information is available from the Department.
4. 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 without HKDSE Physics or who have attained Level 2 or below in HKDSE Physics or Combined Science with Physics component or equivalent.
 - [c] Courses used to fulfill item 2(b) requirement cannot be used to fulfill item 2(c) requirement.
 - [d]
 - 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, ENGG1410, will also be dropped.
 - [e] Students who have declared to specialize in the ELITE Stream will be required to complete 6 units of ESTR4998 and 4999 to substitute for MAEG4998 and 4999.
 - [f] 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.
 - [g] Students can use up to 9 units of courses which have been 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.
 - [h] 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).
 - [i] 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 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 to judge the suitability of the students for 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:

	Units
1. Faculty Package: DSME1030, 1040, MGNT1020	9
2. Required Courses: ACCT2111, 2121, DSME2011, 2030, 2051, FINA2010, MGNT2510, 2610, 4010, MKTG2010	31
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:	15-18
(a) Business Economics	
(i) DSME2021, 4110;	
(ii) two courses selected from: DSME3030, 3050, 3080, 3090, 4040, 4080; and	
(iii) one DSME course at 3000 or above level and other than 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) 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 FINA3070, 3080, 4040, 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, 4080, 4090, 4130, 4140, 4510, 4530, 4540, 4550, 4570, 4600, 4620
- (g) Human Resource Management
 - (i) MGNT2040, 3010, MKTG3010; and
 - (ii) three courses selected from: MGNT3040, 3060, 4050, 4060, 4080, 4110, 4130, 4140, 4620
- (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, 4150
- (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: 55-58

Explanatory Notes:

1. 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.
2. Double concentrations (i) among the finance-related concentration areas (i.e. any combination of General Finance, Financial Engineering, Insurance and Risk Management), and (ii) in Marketing 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 (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.
MKTG3010 and the associated units can be used to satisfy concentration requirements

of double concentrations within (f) to (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.

FINA2020 and the associated units can be used to satisfy concentration requirements of double concentrations within (c) to (e) and (j), except for the impermissible combination of concentrations as stipulated in Note 2 above.

MGNT3010 and the associated units can be used to satisfy concentration requirements of double concentrations within (f) and (g).

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.

Recommended Course Pattern

	1st degree: Bachelor of Engineering (Mechanical and Automation Engineering)	Units	2nd degree: Bachelor of Business Administration (Integrated BBA Programme)	Units
First Year of Attendance	1 st term Faculty Package: ENGG1100/1110/ESTR1000/1002 Major Required: CHEM1380/ENGG1310/ESTR1003/LSCI1001/1003/PHYS1003/1110, MATH1510 Major Elective(s):	3 6-9	1 st term Faculty Package: Major Required: Major Elective(s):	
	2 nd term Faculty Package: ENGG1100/1110/ESTR1000/1002, ENGG1410/ESTR1004 Major Required: CHEM1380/ENGG1310/ESTR1003/LSCI1001/1003/PHYS1003/1110 Major Elective(s):	6 3-6	2 nd term Faculty Package: Major Required: Major Elective(s):	
Second Year of Attendance	1 st term Major Required: ELEG2202, ENGG2420/ESTR2000, MAEG2020/ESTR2400 Major Elective(s):	9	1 st term Faculty Package: DSME1030, MGNT1020 Major Required: Major Elective(s):	6
	2 nd term		2 nd term	

	Major Required: ENGG2430/ ESTR2002, MAEG2030/ ESTR2402, MAEG2601 Major Elective(s): 0 or 1 Breadth Elective course	8 0-3	Faculty Package: DSME1040 Major Required: DSME2011 Major Elective(s):	3 4
	Summer session Major Required: MAEG2602	1		
Third Year of Attendance	1 st term Major Required: MAEG3010, MAEG3050/ESTR3406 Major Elective(s): 0 or 1 Breadth Elective course	6 0-3	1 st term Major Required: ACCT2111 Major Elective(s):	3
	2 nd term Major Required: MAEG3020/ ESTR3404, MAEG3030 Major Elective(s): 0 or 1 Breadth / Depth Elective course(s)	6 0-3	2 nd term Major Required: ACCT2121, MKTG2010 Major Elective(s):	6
Fourth Year of Attendance	1 st term Major Required: MAEG4998 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	1 st term Major Required: DSME2030, FINA2010 Major Elective(s):	6
	2 nd term Major Required: MAEG4999 Major Elective(s): 1 to 2 Breadth / Depth Elective course(s)	3 3-6	2 nd term Major Required: DSME2051, MGNT2510 Major Elective(s):	6
Fifth Year of Attendance			1 st term Major Required: MGNT2610 Major Elective(s): 2-3 courses	3 6-9
			2 nd term Major Required: MGNT4010 Major Elective(s): 2-3 courses	3 6-9
Total (including Faculty Package):		75	Total (including Faculty Package):	55-58