

List of Courses for the CGPA Computation of **BEng (Computer Engineering)
under the Double Degree Programme in Business and Computer Engineering (BCE)**

| BEng (Computer Engineering) | | | AU Load | |
|------------------------------------|----------|---|--|---|
| Discipline Requirement | Core | SC1003 | Introduction to Computational Thinking & Programming | 3 |
| | | SC1004 | Linear Algebra for Computing | 3 |
| | | SC1005 | Digital Logic | 3 |
| | | SC1006 | Computer Organisation and Architecture | 3 |
| | | SC1007 | Data Structures & Algorithms | 3 |
| | | SC1013 | Physics for Computing | 2 |
| | | EG1001 | Engineers in Society | 2 |
| | | MH1810 | Mathematics I | 3 |
| | | MH1812 | Discrete Mathematics | 3 |
| | | SC2000 | Probability and Statistics for Computing | 3 |
| | | SC2001 | Algorithm Design and Analysis | 3 |
| | | SC2002 | Object Oriented Design and Programming | 3 |
| | | SC2103 | Digital System Design | 3 |
| | | SC2104 | Sensors, Interfacing & Digital Control | 3 |
| | | SC2005 | Operating Systems | 3 |
| | | SC2006 | Software Engineering | 3 |
| | | SC2107 | Microprocessor System Design & Development | 3 |
| | | SC2008 | Computer Networks | 3 |
| | | SC2079 | Multidisciplinary Design Project | 4 |
| | | SC3102 | Signal, Systems and Transform | 3 |
| | SC3103 | Embedded Programming | 3 | |
| | SC4079 | Final Year Project | 8 | |
| | | | (70) | |
| | Major PE | SC4xxx | Major Prescribe Elective (MPE-a) | 3 |
| SC4xxx | | Major Prescribe Elective (MPE-b) | 3 | |
| SC4xxx | | Major Prescribe Elective (MPE-c) | 3 | |
| SC4xxx | | Major Prescribe Elective (MPE-d) ¹ | 3 | |
| | | | (12) | |

| | | | | |
|--|----------------------------------|--------|---|------------------|
| Interdisciplinary Collaborative Core (ICC) | Common Core (CC) | CC0001 | Inquiry and Communication in an Interdisciplinary World | 2 |
| | | CC0002 | Navigating the Digital World | 2 |
| | | CC0003 | Ethics & Civics in a Multi-Cultural World | 2 |
| | | ML0004 | Career & Entrepreneurial Development for the Future World | 2 |
| | | CC0005 | Healthy Living & Wellbeing | 3 |
| | | CC0006 | Sustainability: Human Society Economic & Environment | 3 |
| | | CC0007 | Science & Technology for Humanity | 3 |
| | | | | (17) |
| | Foundational Core (FC) | HW0288 | Engineering Communication II ² | 2/4 ² |
| | | SC1015 | Introduction to Data Science & AI | 3 |
| | | SC3079 | Professional Internship ³ | 10 |
| | | | | (15/17) |
| | Broadening & Deepening Electives | Bxxxxx | BA/CE Integration ⁴ | 3 |
| | | Bxxxxx | BA/CE Integration ⁴ | 3 |
| | | BC2402 | Designing & Developing Databases ⁵ | 3 |
| | | BC2406 | Analytics I: Visual and Predictive Analytics ⁵ | 3/4 |
| | | BC2407 | Analytics II: Advanced Predictive Analytics ⁵ | 3/4 |
| | | HE5091 | Principles of Economics ⁵ | 3 |
| | | AB1501 | Marketing ⁵ | 3 |
| | | | | (21/23) |
| | Grand Total | | | |

⁺Total AU is 4AU more than the proposed BEng(CE) single degree programme under NTU ICC due to fulfillments of courses from BUS programme as indicated below.

¹One SC4xxx MPE (3AU) and 6AU of BDE are jointly fulfilled by

- three BA/CE Integration PEs (9AU)

| | | |
|---|--|---|
| BA/CE Integration PE*# (BC-PE, 3AU each) | | |
| *Students to choose any 3 courses below (as of July 2021) | | |
| #One of these BC-PE courses will be counted as Major PE | | |
| • BT2404 | Service Operations Management | 3 |
| • BC2409 | BC2409 Supply Chain Analytics | 3 |
| • BC3410 | BC3410 Financial Service Processes and Analytics | 3 |
| • BC3411 | Lean Operations & Analytics | 3 |
| • BC3412 | Business Analytics Consulting | 3 |
| • BC3414 | BC3414 Decision Modelling & Analytics | 3 |
| • BC3415 | BC3415 AI in Accounting and Finance | 3 |

²HW0288 Engineering Communication II (2AU) is fulfilled by:

- AB0602 Communication Management Strategy (4AU)

³SC3079 Professional Internship (10AU) is jointly fulfilled by

- AB1003 Professional Attachment (5AU)
- AB2008 Career Readiness (1AU)
- AB3602 Strategic Management (4AU)

⁴21AU of BDEs are jointly fulfilled by

- two BA/CE Integration PEs and five BA cores (23AU)

List of Courses for the CGPA Computation of **B. Bus (Business Analytics)
under the Double Degree Programme in Business and Computer Engineering (BCE)**

| B. Bus (Business Analytics) | | | | AU Load | |
|--------------------------------------|------------------|--|---|---|------------------|
| Discipline Requirement | Core | AD1101 | Financial Accounting | 3 | |
| | | AB1201 | Financial Management | 3 | |
| | | AB1301 | Business Law | 3 | |
| | | AB1202 | Statistics & Analysis | 3 | |
| | | AB1501 | Marketing | 3 | |
| | | AB1601 | Organisation Behaviour and Design | 3 | |
| | | HE5091 | Principles of Economics | 3 | |
| | | AD2101 | Management Accounting | 3 | |
| | | BC2402 | Designing & Developing Databases | 3 | |
| | | BC2406 | Analytics I: Visual and Predictive Analytics | 4 | |
| | | BC2407 | Analytics II: Advanced Predictive Analytics | 4 | |
| | | AB3601 | Strategic Management | 4 | |
| | | AB1403 | Intermediate Excel (1AU) | Jointly fulfil by SC4079 Final Year Project (8AUs) | 7/8 ¹ |
| | | BE1402 | Business Operations & Process (3AU) | | |
| | BE2602 | Management Principles, Skills & Competencies (3AU) | | | |
| | | | | (46/47) | |
| | | MPE | Bxxxxx | BA/CE Integration 1 | 3 |
| | | | Bxxxxx | BA/CE Integration 2 | 3 |
| | Bxxxxx | | BA/CE Integration 3 | 3 | |
| | | | | (9) | |
| Interdisciplinary Collaborative Core | Common Core (CC) | CC0001 | Inquiry and Communication in an Interdisciplinary World | 2 | |
| | | CC0002 | Navigating the Digital World | 2 | |
| | | CC0003 | Ethics & Civics in a Multi-Cultural World | 2 | |
| | | ML0004 | Career & Entrepreneurial Development for the Future World | 2 | |
| | | CC0005 | Healthy Living & Mental Wellbeing | 3 | |
| | | CC0006 | Sustainability: Human Society Economic & Environment | 3 | |
| | | CC0007 | Science & Technology for Humanity | 3 | |
| | | | | (17) | |
| | | Foundational Core (FC) | AB2008 | Careers II | 1 |
| | | | AB0602 | Communication Management Strategies | 4 |
| | | | AB0403 | Decision Making with Programming & Analytics ² | 3 |
| | AB1003 | | Professional Attachment | 5 | |
| | | | | (13) | |

| | | | |
|---|--------|----------------------------------|----------------------------|
| Broadening & Deepening Electives | SC2008 | Computer Networks | 3 |
| | SC3102 | Signal, Systems and Transform | 3 |
| | SC3103 | Embedded Programming | 3 |
| | SC4xxx | Major Prescribe Elective (MPE-a) | 3 |
| | SC4xxx | Major Prescribe Elective (MPE-b) | 3 |
| | SC4xxx | Major Prescribe Elective (MPE-c) | 3 |
| | | | 18 |
| | | Grand Total | 103/104[^] |

[^] Total AU is 1AU more than the proposed BBus(BA) single degree programme under NTU ICC (Ref: CoB (NBS)-R/00126/21) due to fulfillments of courses from CE programme as indicated below.

¹ AB1403(1AU), BE1402(3AU) and BE2602 (3AU) are jointly fulfilled by:
SC4079 Final Year Project (8AU)

² AB0403 Decision Making with Programming & Analytics (3AU) is fulfilled by:
SC1015 Introduction to Data Science and Artificial Intelligence (3AU)

| BA/CE Integration PE*# (BC-PE, 3AU each) | | |
|---|--|---|
| *Students to choose any 3 courses below (as of July 2021) | | |
| • BT2404 | Service Operations Management | 3 |
| • BC2409 | BC2409 Supply Chain Analytics | 3 |
| • BC3410 | BC3410 Financial Service Processes and Analytics | 3 |
| • BC3411 | Lean Operations & Analytics | 3 |
| • BC3412 | Business Analytics Consulting | 3 |
| • BC3414 | BC3414 Decision Modelling & Analytics | 3 |
| • BC3415 | BC3415 AI in Accounting and Finance | 3 |