

Name: \_\_\_\_\_  
 Contact No: \_\_\_\_\_

Date: \_\_\_\_\_  
 Student Number: \_\_\_\_\_

**FFG Checklist for CEG students (direct entry to CEG1 or streamed to CEG in Year 2) of AY2013 intake**  
**& Direct Entry Poly students of AY2013 intake:**

	Have I fulfilled the following requirements?	No. of MCs	Tick if fulfilled
1.	<p><b>University Level Requirements (ULR):</b></p> <p><b>(i) GEM/SS/ULR Breadth</b>            Students are <b>required</b> to read 20 MCs of the ULR consisting of:</p> <ul style="list-style-type: none"> <li>▪ 2 *GEM modules (8 MCs)</li> <li>▪ 1 SS (4 MCs)</li> <li>▪ 2 **ULR Breadth outside student's Faculties i.e. FoE and SoC (8 MCs)</li> </ul> <p>Note 1: * <b>At least 1 GEM module must be from Subject Group B: Humanities and Social Science.</b>            Singapore Studies (SS) module – SSA2204 or SSA2211 (recommended)            Recommended ULR Breadth outside student's Faculties: ACC1002X / BSP1004X / BSP1005 / DSC2006 / EC1301 / MKT1003X / MNO1001X / SC1101E. (These recommended ULR Breadths can also be used to meet <b>UEM requirements</b>. See section 2(iii) below).            Other modules offered as ULR Breadth (module type code <b>U9</b>) by other faculties (excluding those offered by FoE and SoC) can also be taken by students to fulfill their ULR Breadth requirements.</p> <p>Note 2: ** <b>CEG POLY DIRECT ENTRY students are required to take bridging module PC1222 Fundamentals of Physics II before taking PC1432.</b></p>	<b>20</b>	
	<p><b>(ii) Business Requirements</b>            Students are <i>strongly encouraged</i> to read <b>at least 1 business/management module from the School of Business (SoB) or the Engineering Technology Management Division (ETM).</b>            Students may use this business module to meet <b>ULR Breadth outside student's Faculties or UEM requirements</b> (see section 2(iii) below).</p>		
	<p><b>(iii) Minor Programmes</b>            A student may use up to <b>12 MCs to satisfy their UEM</b> (see section 2(ii) below) and another <b>8 MCs for their ULR Breadth outside student's Faculties</b> to fulfill the minor requirements.            For more info, please refer to <a href="http://www.eng.nus.edu.sg/ugrad/SP_minors.html">http://www.eng.nus.edu.sg/ugrad/SP_minors.html</a>.</p>		
	<p><b>(iv) University Scholars Programme (USP)</b>            For USP students, please refer to <a href="http://www.eng.nus.edu.sg/ugrad/SP_usp.html">http://www.eng.nus.edu.sg/ugrad/SP_usp.html</a>.</p>		
2.	<p><b>Unrestricted Elective Modules (UEM):</b></p> <p>Inclusive of CS2101 Effective Communication for Computing Professionals (4 MCs) (on graded basis)</p> <p>Remaining 12 MCs may be acquired through:</p> <p><b>(i) Enhancement Programmes</b></p> <ul style="list-style-type: none"> <li>▪ <a href="#">EG3601 Industrial Att Prog (IAP)/CP3880 Adv Tech Att Prog (ATAP)</a> – 12 MCs</li> <li>▪ <a href="#">EG3602 Vacation Internship Prog (VIP)/CP3200 Student Internship Prog (SIP)</a> – 6 MCs</li> <li>▪ EG1603, EG2603A Technopreneurship &amp; Incubation Prg (TIP) – 2 MCs each</li> <li>▪ EG2604 Innovation Prog (IP) – 4 MCs</li> <li>▪ EG2605 Undergraduate Research Opportunities Prog (UROP), CP3208, CP3209 – 4 MCs</li> <li>▪ EG2606A/B Independent Work Prog (IWP) – 2, 4 MCs respectively</li> </ul> <p>MCs of each prog can be obtained <b>only once</b>. For IAP/ATAP and/or VIP/SIP, up to 12 MCs may be approved. For more info, please refer to <a href="http://www.eng.nus.edu.sg/undergrad/ep/ep-menu.html">http://www.eng.nus.edu.sg/undergrad/ep/ep-menu.html</a>.</p>	<b>16</b>	
	<p><b>(ii) Business Requirements</b>            Students are <i>strongly encouraged</i> to read <b>at least 1 business/management module from the School of Business (SoB) or the Engineering Technology Management Division (ETM).</b> Students may use this business module to meet <b>UEM requirements or ULR Breadth outside student's Faculties</b> (see section 1(ii) above).</p>		
	<p><b>(iii) Recommended Modules</b>            Recommended UEMs: ACC1002X / BSP1004X / BSP1005 / DSC2006 / EC1301 / MKT1003X /</p>		

	<p>MNO1001X / SC1101E. (These recommended UEMs can also be used to meet ULR Breadth - see section 1(i) above). Other modules offered as UEM (module type code <b>27</b>) by other faculties can also be taken by students to fulfil their UEM requirements.</p> <p><i>CEG POLY DIRECT ENTRY students are required to take <b>MA1301 Introductory Mathematics</b> if they do not have Diploma Plus Certificate.</i></p>																																																
	<p><b>(iv) Minor Programmes</b> A student may use up to <b>18 MCs to satisfy their UEM</b> and another <b>8 MCs for their ULR Breadth outside student's Faculties</b> (see section 1(iii) above). <b>S/U option is NOT allowed for these modules.</b> For more info, please refer to <a href="http://www.eng.nus.edu.sg/ugrad/SP_minors.html">http://www.eng.nus.edu.sg/ugrad/SP_minors.html</a>.</p>																																																
	<p><b>(v) Other CEG Technical Electives</b> For students who wish to achieve greater specialisation within Computer Engineering. CEG students could also take other relevant modules (not listed in the CEG Master-list of Technical Electives) to fulfil UEM requirements. Refer to the advisory via <a href="http://www.ceb.nus.edu.sg/students/third_year.html">http://www.ceb.nus.edu.sg/students/third_year.html</a>.</p>																																																
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	<p><b>(vii) NUS Overseas Colleges (NOC)</b> For more info, please refer to <a href="http://www.overseas.nus.edu.sg/noc/">http://www.overseas.nus.edu.sg/noc/</a>.</p>																																																
	<p><b>(viii) EG1109 Statics &amp; Mechanics of Materials (4 MCs) &amp; MLE1101 Introductory Materials Science &amp; Engineering (4 MCs)</b> will count as UEM for those common engineering students (of AY2013 intake) who are <u>streamed to CEG in Year 2</u>.</p>																																																
3.	<p><b>Programme Requirements</b></p> <p><b>CEG Core Modules</b></p> <table border="1"> <tr><td>CG1001 Introduction to Computer Engineering</td><td>(2 MCs)</td></tr> <tr><td>CG1108 Electrical Engineering</td><td>(4 MCs)</td></tr> <tr><td>CG2023 Signals &amp; Systems</td><td>(4 MCs)</td></tr> <tr><td>CG2271 Real-Time Operating Systems</td><td>(4 MCs)</td></tr> <tr><td>CG3207 Computer Architecture</td><td>(4 MCs)</td></tr> <tr><td>CS1010 Programming Methodology</td><td>(4 MCs)</td></tr> <tr><td>CS1020 Data Structures and Algorithms I</td><td>(4 MCs)</td></tr> <tr><td>CS1231 Discrete Structures</td><td>(4 MCs)</td></tr> <tr><td>CS2103T Software Engineering</td><td>(4 MCs)</td></tr> <tr><td>EE2020 Digital Fundamentals</td><td>(5 MCs)</td></tr> <tr><td>EE2021 Devices &amp; Circuits</td><td>(4 MCs)</td></tr> <tr><td>EE2024 Programming for Computer Interfaces</td><td>(5 MCs)</td></tr> <tr><td>EE3204 Computer Communication Networks I</td><td>(4 MCs)</td></tr> <tr><td>ES1531 Critical Thinking and Writing</td><td>(4 MCs)</td></tr> <tr><td>EG2401 Engineering Professionalism</td><td>(3 MCs)</td></tr> <tr><td>HR2002 Human Capital in Organizations</td><td>(3 MCs)</td></tr> <tr><td>MA1505 Mathematics I</td><td>(4 MCs)</td></tr> <tr><td>MA1506 Mathematics II</td><td>(4 MCs)</td></tr> <tr><td>PC1432 Physics IIE</td><td>(4 MCs)</td></tr> <tr><td>ST2334 Probability &amp; Statistics</td><td>(4 MCs)</td></tr> </table> <p><b>CEG Projects</b></p> <table border="1"> <tr><td>CG3002 Embedded Systems Design Project</td><td>(6 MCs)</td></tr> <tr><td>EE3031 Innovation &amp; Enterprise I</td><td>(4 MCs)</td></tr> <tr><td>CG4001 B.Eng. Dissertation</td><td>(12 MCs)</td></tr> </table> <p><b>CEG Technical Electives</b> Minimum total of <b>6</b> Technical electives (<b>at least 24 MCs in total</b>) as follows: Depth (D) requirements - at least <b>3 technical depth electives</b> from any concentration</p>	CG1001 Introduction to Computer Engineering	(2 MCs)	CG1108 Electrical Engineering	(4 MCs)	CG2023 Signals & Systems	(4 MCs)	CG2271 Real-Time Operating Systems	(4 MCs)	CG3207 Computer Architecture	(4 MCs)	CS1010 Programming Methodology	(4 MCs)	CS1020 Data Structures and Algorithms I	(4 MCs)	CS1231 Discrete Structures	(4 MCs)	CS2103T Software Engineering	(4 MCs)	EE2020 Digital Fundamentals	(5 MCs)	EE2021 Devices & Circuits	(4 MCs)	EE2024 Programming for Computer Interfaces	(5 MCs)	EE3204 Computer Communication Networks I	(4 MCs)	ES1531 Critical Thinking and Writing	(4 MCs)	EG2401 Engineering Professionalism	(3 MCs)	HR2002 Human Capital in Organizations	(3 MCs)	MA1505 Mathematics I	(4 MCs)	MA1506 Mathematics II	(4 MCs)	PC1432 Physics IIE	(4 MCs)	ST2334 Probability & Statistics	(4 MCs)	CG3002 Embedded Systems Design Project	(6 MCs)	EE3031 Innovation & Enterprise I	(4 MCs)	CG4001 B.Eng. Dissertation	(12 MCs)	<b>124</b>	
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Note: All 6 technical electives must add up to 24 MCs. If not, student has to take more technical electives to make up 24 MCs.		
<b>Have I fulfilled all requirements to graduate?</b>		<b>160 (min)</b>

**Other information:****1. Mapping of EG1108 (3 MCs) to CG1108 (4 MCs)**

This is applicable to common engineering students (of AY2013 intake) who are streamed to CEG in Year 2 (i.e. sem 1, AY14/15) and have read EG1108. While EG1108 (3 MCs) may be mapped to CG1108 (4 MCs), affected students will need to make up for the 1 MC shortage (due to the mapping), with additional UEM i.e. they need to fulfill 17 MCs of UEM.

**2. Limit on Level 1000 modules:**

Students should not read more than 60 MCs of level 1000 modules towards their degree requirements (minimum of 160 MCs for graduation.)

[http://www.eng.nus.edu.sg/ugrad/SI\\_faq.html#A9](http://www.eng.nus.edu.sg/ugrad/SI_faq.html#A9)

**3. S/U Option (AY2013 intake):**

Please refer to the following links for more information on S/U Option:

<http://www.nus.edu.sg/registrar/edu/UG/graduation.html#SU>

[http://www.eng.nus.edu.sg/ugrad/SI\\_su\\_policies.html](http://www.eng.nus.edu.sg/ugrad/SI_su_policies.html) and

[http://www.nus.edu.sg/registrar/faqs/su\\_faq3.html](http://www.nus.edu.sg/registrar/faqs/su_faq3.html).

**4. Poly graduates of AY2013/14 intake admitted into CEG:**

4.1 Poly students without the relevant Diploma Plus certificate will graduate with minimum 164 MCs.

4.2 Poly student admitted into the CEG in AY2013/14 will follow AY2013/14 CEG curriculum and may be eligible for the following exemptions (up to 35 MCs), depending on the Diploma from the polytechnics.

- **University Level Requirements (up to 8 MCs)**
  - 1 GEM (Module code GXX1999 under Subject Group B: Humanities and Social Science) 4 MCs
  - 1 Breadth (ULR) module 4 MCs
- **Unrestricted Elective Modules (UEMs up to 12 MCs)**
- **Programme Requirements (up to 15 MCs)**
  - ES1531 Critical Thinking & Writing 4 MCs
  - HR2002 Human Capital in Organizations 3 MCs
  - EE3001 Project 4 MCs
  - CG1108 Electrical Engineering OR CS1010 Programming Methodology 4 MCs

For details on the poly exemptions, please refer to <http://www.ceb.nus.edu.sg/admissions/>. Note that the 12 MCs (UEMs) granted to diploma holders will not count against the limit on level 1000 modules.

**5. Module Type Code:**

11 TECHNICAL ESSENTIAL	B9 GEM B: HUMANITIES AND SOCIAL SCIENCES MODULE
12 TECHNICAL ELECTIVE	C9 GEM A (SCI & TECH) & GEM B (HUMANITIES & SOC SCI)
17 MINOR MODULE	S9 SINGAPORE STUDIES MODULE
27 UEM (UNRESTRICTED ELECTIVE OUTSIDE MAJOR)	MB DOUBLE COUNT (MINOR & ULR BREADTH)
U9 ULR BREADTH (ELECTIVES OUTSIDE STUDENT'S FACULTY)	ME DOUBLE COUNT (MINOR & TECHNICAL ELECTIVE)
A9 GEM A: SCIENCE AND TECHNOLOGY MODULE	MU DOUBLE COUNT (MINOR & UEM)

For conversion of module type code, please refer to

[http://www.eng.nus.edu.sg/ugrad/SI\\_Module\\_declaration.html](http://www.eng.nus.edu.sg/ugrad/SI_Module_declaration.html).