

3.1.4 Common Engineering

In the first year of study, common engineering students are required to read:

- MA1505 Mathematics I
- MA1512 Differential Equations for Engineering
- MA1513 Linear Algebra with Differential Equations
- GER1000 Quantitative Reasoning
- Unrestricted Elective Modules (UEM)
- CS1010E Programming Methodology (mapped to CE2409 for students who enter Civil/Environmental Engineering)
- Engineering Principles and Practice I & II (EG1111 & EG1112)
- MLE1010 Materials Engineering Principles and Practice
- EG1311 Design and Make
- Any of the following physics, engineering, and chemistry modules for entry into the various engineering programmes
- PC1431 Physics IE
- PC1432 Physics IIE
- CM1502 General and Physical Chemistry for Engineers

Table 3.1.4 shows the modules that common engineering students with H2 Chemistry/H2 Physics are required to read to **qualify to apply for entry** into the various engineering programmes. Common Engineering students with H2 Chemistry who plan to apply for Chemical Engineering or Environmental Engineering should read CM1502. Students should carefully choose a combination of Physics, Chemistry and Engineering modules which would qualify them to apply for entry into **at least three engineering disciplines**. Common Engineering students who have not read one or more of the required modules for an engineering discipline of interest may still be considered for the various disciplines on a case by case basis.

TABLE 3.1.4: PHYSICS, CHEMISTRY AND ENGINEERING MODULES REQUIRED TO BE READ BY COMMON ENGINEERING STUDENTS TO QUALIFY FOR THE VARIOUS ENGINEERING DISCIPLINES

Engineering Programme	Physics Modules	Engineering Modules	Chemistry Modules
Biomedical	PC1432	-	-
Chemical	-	-	CM1502
Civil	-	-	-
Electrical	-	-	-
Computer	-	-	-
Environmental	-	-	CM1502

Industrial & Systems	PC1431/PC1432	-	-
Mechanical	-	-	-
Materials Science	PC1432	-	CM1501

Students who have decided not to enter Mechanical Engineering and Electrical Engineering programmes will be allowed to opt out of EG1111 & EG1112, and to take Engineering Principles and Practice (EPP) modules from other engineering programmes of interest.

For students who have not decided on which engineering programmes to enter, it is advisable to take EG1111 & EG1112 to keep their options open.