Open University Top-up BEng (Hons) Q78 advice sheet

1. How is the top-up BEng (Hons) Q78 different from the BEng (Hons) Q65?

a) Content

Q78 offers a route to BEng (Hons) for students who have completed a vocational qualification such as a Foundation Degree, Diploma of Higher Education (DipHE) or a Higher National Diploma (HND), in engineering or a closely related subject (see section 4 for more details). Students accepted onto Q78 will already have successfully completed 240 credits of study and have the opportunity to ‘top-up’ their qualification to an honours degree by completing an additional 120 credits at OU level 3. By contrast, Q65 is a standard 360 credit undergraduate degree covering OU levels 1, 2 and 3 which does not require students to have already completed any study. The modules available within Q78 are the same as the level 3 modules within Q65, but with a little more flexibility about how they can be combined. The engineering project module T452 is a compulsory component of both qualifications.

b) Further study

Q65 students can also choose to move across and progress to the OU MEng (M04) at the end of level 2. M04 is not available to Q78 students as it is an integrated 480 credit undergraduate degree which requires all study, with a maximum of 120 credits of credit transfer, to be undertaken with the OU. Q78 graduates who wish to continue to a higher qualification can study the Postgraduate Diploma in Engineering (E22), which could be followed by the MSc in Engineering (F46).

c) Accreditation

Q78 has been accredited as fulfilling the educational requirements for IEng by the IET, IED and CIBSE. Q65 offers partial accreditation towards Chartered Engineer (CEng) registration, and M04 has full CEng accreditation. Full details can be found at http://mcs.open.ac.uk/engineering/Accreditation-new-framework.php

The MSc in engineering is accredited for CEng, provided students have an accredited honours degree. Completion of Q78 provides a good basis for applying for CEng registration through the

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1 ‘Credits’ throughout this document refers to Credit Accumulation and Transfer Scheme (CATS) credits
individual case procedure, depending on other professional qualifications and experience a student may have.

2. How to apply for Q78?

Contact credit-transfer@open.ac.uk and ask for a Q78 entry check form.

We will ask for details of any relevant previous qualifications and will request a copy of the transcript showing which modules were completed and what results were obtained. Syllabus information is also very useful and may help with the assessment. If you have completed a BTEC or SQA HNC or HND you do not need to provide syllabus information, but for qualifications specific to certain institutions (such as a FD offered by a specific University) it is very helpful to provide this and it will aid your application. The OU has well established credit rating procedures: our credit transfer centre will check that your qualification was completed within the past 8 years and assign a credit value that is consistent with the OU qualification framework. Then an academic assessor from the engineering programme will look at the content in more detail to check how it matches with Q78 requirements (see section 5 for more detail). Based on both of these assessments we will advise whether or not you are eligible for direct entry to Q78, and/or whether we can provide ‘bridging study’ (see section 8) if one or more of the requirements is not met.

3. Why is an entry check required?

Q78 was designed as a top-up to Open University Foundation Degrees/Diplomas of HE (FD/DipHE) in engineering (G17/E55/X11/W11) or Materials fabrication and engineering (G18/E56/X12/W12) and the Q78 learning outcomes are based on the combination of any one of those qualifications together with the level 3 modules in Q78. For applicants with comparable qualifications from other institutions we need to ensure that the prior study will be sufficient, in combination with the modules that make up Q78, to meet the Q78 learning outcomes. The content of the prior qualification does not need to exactly match that of an OU FD/DipHE, but does need to contain certain elements that will not necessarily be covered within the Q78 modules (see section 5 for more details).

4. What qualifications are suitable for direct entry to Q78?

Q78 is intended as a top-up to a completed vocational qualification such as a Foundation Degree (FD), a Diploma of HE (DipHE) or a Higher National Diploma (HND), in engineering or a closely related subject. In England, Wales or Northern Ireland the entry qualification needs to be at FHEQ\(^2\) level 5; or SCQF\(^3\) level 8 in Scotland. This corresponds to OU level 2. If you have already obtained an ordinary degree without honours, or have previously studied for a degree such as a BEng (Hons) or MEng but did not complete it, or failed modules and were offered a lower level qualification, we are unlikely to consider your application for Q78. In this case it would be more appropriate to apply for credit transfer for our BEng (Hons) Q65. We would only consider

\(^2\) Framework for Higher Education Qualifications
\(^3\) Scottish Credit and Qualifications Framework
previous honours degree study for entry to Q78 if it included a clear vocational component, and if no substantial level 3 study had been attempted.

Every previous qualification is considered in its own right: section 5 gives more detail of what we will be looking for. It is difficult to give exact guidance on what will be accepted since qualifications can vary considerably. Some examples of qualifications where direct entry to Q78 is often approved are BTEC HNDs (QCF\(^4\)) or Foundation degrees in General engineering, Mechanical engineering, Manufacturing engineering or Building Services engineering. Qualifications in Electrical/Electronic engineering (EE) generally do not match as well with the content of OU qualifications, although new OU electronics modules are in development which will improve this situation. Direct entry may be approved for an EE qualification, but the choice of relevant level 3 modules within Q78 is likely to be more restricted. Some qualifications, including SCQF HNDs and older (SQA/NQF\(^5\)) HNDs, may not meet the credit requirements for Q78 and bridging study may be required for entry. Other examples where bridging study is often required are qualifications in Engineering Systems, Automotive engineering, Civil engineering, Marine engineering.

5. **What will the entry check be looking for?**

For direct entry to Q78 your prior qualification will need to satisfy the following conditions:

- Your qualification must have been completed within the previous 8 years at the time of application (see 6 for more detail)

- The OU credit transfer assessment of your qualification must be at least 240 credits, with at least 120 at the equivalent of OU level 2. Recent FD/DipHE/HNDs are most likely to meet this requirement but some older qualifications may have a lower credit value. Applications with a minimum of 180 credits will be assessed for Q78, and up to 90 credits of bridging study may be specified if appropriate (see section 8). Accreditation of prior learning or prior experiential learning (APL or APEL) is not currently included in the credit assessment, and credit awarded by condonement or compensation will not be counted.

- Your qualification must include at least 30 credits of explicit maths content. This condition would be satisfied, for example, by passes in both the BTEC HND units *Analytical Methods for Engineers* and *Further Analytical methods for Engineers*, or equivalent.

- Your qualification must include practical content with a vocational focus. This might take the form of a work-based project, or modules with a clear vocational emphasis.

- Your qualification must include engineering content that provides adequate preparation for the modules available within Q78 (see section 9). The engineering curriculum

\(^4\) Qualifications and Credit Framework
\(^5\) Scottish Qualification Framework/National Qualification Framework

20/01/2017
currently offered by the OU has a bias towards mechanics, materials and design, with new electronics modules currently in production. Direct entry to Q78 will not be approved unless we can offer you a viable choice of modules at level 3, but in some cases this choice may be very limited. If your previous qualification is in an area that does not match the curriculum we can offer, Q78 may not be the best option.

- Your previous study must include some evidence of structured engagement with personal development planning (PDP). This condition would be satisfied, for example, by completion of the BTEC module *Personal and Professional Development* or equivalent. Non-assessed PDP undertaken as part of your programme of study is also acceptable providing you can supply evidence of this. If we do not find sufficient evidence of structured engagement with PDP in your previous study then we will ask you to complete a short PDP unit (see 7 for more details), however this will not stop you from beginning Q78.

6. What time limits apply?

Your previous qualification must have been completed within the last 8 years *at the time of application*. If the next available module start date is slightly outside the 8 year limit you will be able to register, provided you applied within the 8 year limit and started your studies at the earliest available opportunity.

The 120 credits required to complete Q78 must be completed within 5 years.

If bridging study is required, this must be completed either within the 8 year time limit for the previous qualification, or, for qualifications close to the 8 year limit, within 2 years of the bridging study offer.

7. How can the PDP requirement be satisfied?

If the transcript of your qualification does not include evidence of structured engagement with personal development planning (PDP) we will ask you to complete a short unit on *Personal development planning for engineering*, which is available from our OpenLearn website at [http://www.open.edu/openlearn/science-maths-technology/personal-development-planning-engineering/content-section-0](http://www.open.edu/openlearn/science-maths-technology/personal-development-planning-engineering/content-section-0). You will be asked to submit responses to activities 3, 5, 8, 10 and 12 (or equivalent exercises from any PDP you may have undertaken during your previous studies or at work). The unit should take no more than twelve hours to complete and there is no cost. We will contact you with more details if you fall into this category.

8. What is bridging study and why do I need it?

If your previous qualification does not satisfy all of the conditions set out in section 5 we are often able to recommend OU modules to fill the gap, which we refer to as ‘bridging study’. Successful completion of these modules within the required time frame (see section 6) would then qualify you to register for Q78. The most common reasons for specifying bridging study are either a shortfall in the credit value of the previous qualification, or to fill a gap in subject coverage. In either case we will recommend particular OU modules which will fill the gap and provide the best preparation for
the level 3 options available within Q78. The modules most commonly recommended as bridging study are the level 1 module MST124 Essential Mathematics 1, where there is insufficient explicit maths content in the previous qualification, or the level 2 module T207 Engineering: mechanics, material, design, which provides particularly good preparation for the choice of level 3 modules available within Q78. Modules studied on a standalone basis as bridging study are not part of the Q78 qualification and would not be covered by a Q78 tuition fee loan. The Student Support Team (see section 10) can advise on whether there may be other possible funding options.

Bridging study does not have to take the form of OU modules, but it would be advisable to check with us first if you plan to undertake additional external study in order to qualify for Q78.

9. How can I plan my Q78 studies?

You need to study 90 credits from the optional modules listed, followed by the compulsory 30 credit engineering project module T452. Your choice of optional modules must include at least one of the modules marked with an asterisk, on which your engineering project can be based. Ideally you should complete the module on which you intend to base your project before starting T452 and this is likely to influence the order in which you choose to study the optional modules. The links below provide more information about the content of each module and some further advice.

Optional modules:

- Innovation: designing for change (T317) (60 credits)*
- Engineering small worlds: micro and nano technologies (T356) (30 credits)*
- Structural integrity: designing against failure (T357) (30 credits)*
- Renewable energy (T313) (30 credits)*
- Environmental management 2 (T319) (30 credits)*
- Mathematical methods and fluid mechanics (MST326) (30 credits)*
- Graphs, networks and design (MT365) (30 credits)
- Deterministic and stochastic dynamics (MS327) (30 credits)
- Communications technology (TM355) (30 credits)

From October 2019:

- Electronics: comms, computing and control (T312) (30 credits)

Compulsory module:

- The engineering project (T452) (30 credits)

You will need to think carefully about how much time you have available to devote to your studies. All of the optional modules start in October and are spread over 31 study weeks, finishing in May of the following year. For a 30 credit module you will need to allow about 10 hours a week for your studies, twice this for a 60 credit module. This is a considerable workload and we strongly advise you not to take on more than 60 credits at a time, particularly if you are in full time employment. You can take up to 5 years to complete the modules for Q78 and are far more likely to succeed if you study at part time study intensity.

The level 3 modules that make up Q78 are ideally designed to follow on from OU modules at level 1 and 2 and tend to have a core focus on mechanics, materials and design, with additional options in
energy and sustainability, environmental management, mathematical methods and, from October 2019, electronics. You should choose modules that fit well with your previous studies and may find that you need to do some background reading if there is a significant mismatch.

- For T317 some previous experience of design is useful, but not absolutely essential. If you are interested in design and sustainability issues this is a good module to consider whatever you previous background. A project forms a significant part of the assessment for this module.
- For T356 you should be reasonably comfortable with basic physics, chemistry and maths, but there is no specific pre-requisite study required. This module includes substantial content on electronic materials, and is a good choice for students who have prior qualifications in electronic engineering.
- T357 is an excellent choice if your prior qualification focussed on mechanical or materials engineering and you are reasonably confident with mathematics.
- T313 is a particularly good choice if your previous qualification included general energy studies. You need to be reasonably confident in mathematics but there is no specific pre-requisite study required. T313 includes a technology feasibility assessment of the energy and carbon cost effectiveness of at least three renewable energy technologies and requires a considerable amount of simple spreadsheet modelling. If your previous qualification had a similar focus we would not advise you to take this module as there is likely to be considerable overlap.
- T319 will be of interest if your previous qualification included environmental management (EM). It is a web-based module and focuses on contemporary EM issues (in particular those which are emphasised at London’s Heathrow airport). It makes use of systems approaches to assess personal and stakeholder views of complex EM contexts and it engages you in group work (reflecting the reality of contemporary EM professionals working the field) and explores how EM is never done in isolation but requires group, team, leadership and facilitation skills. The module is designed to follow on from the level 2 OU module Environmental management 1 (T219) and it is a good idea to check this before choosing this option, to see what sort of background knowledge will be desirable.
- MST326 requires a very high level of mathematical ability. In particular, you will need to have a sound knowledge of ordinary differential equations, vector calculus, multiple integrals, basic particle mechanics and some knowledge of partial differential equations and Fourier series.
- For MT365 there is no specific pre-requisite study required but you need to have studied mathematics at HE level 2 and to be confident in dealing with mathematical topics.
- For MS327 you will need a good knowledge of applied mathematics including differential equations and some mechanics. A diagnostic quiz is available on the website.
- For TM355 you will need a reasonable background in mathematics, including the use of binary numbers to represent digital data, trigonometry, algebraic manipulation and linear and logarithmic graphs and you should be familiar with the distinction between analogue and digital data.
- The new electronics module T312 Electronics: comms, computing and control is expected to be available from October 2019 and will be designed to follow on from the level 2 OU module T212. T312 intends to explore the communications, computing and control
techniques that underpin complex electronic systems, with specific student activities including communication with a real satellite in orbit and control of a humanoid life-size robot. Further details of T312 are not yet available.

The engineering project module (T452) starts in February and you will be able to choose a project related to one of the optional modules you have studied. You need to take this as your final module and we strongly recommend that you have completed the module you intend to base the project on before starting on T452. Projects are available based on the module options marked with an asterisk in the list above.

10. Where can I get more advice?

If you want to talk to someone about applying for Q78, module choices, funding options, or have any other queries, please contact the Engineering, Design, Environment and Development Student Support Team at EDED-support@open.ac.uk or telephone 01908 541067.

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