

A Helping Hand for Students 56

Educational Opportunities

The Helping Hand articles are primarily for those actually learning to become clock or watchmakers, but you may be wondering how to begin. The Institute frequently receives queries concerning career opportunities in horology; the questions are often of a general nature. School leavers are considering how they can become a clock or a watchmaker and people in employment are thinking about a change in career. The recent launch of the George Daniels' Educational Trust prompted many enquiries of a similar nature. In the past, it seemed that few were aware that there is a rewarding and satisfying career for the horologist; today, there is much more interest. For many areas of employment there is a wealth of information readily available, but, for clock and watch making, the opportunities for training are limited and for some, hard to trace; even careers advisors seek guidance and advice.

Today, the internet is an invaluable resource providing detailed information; anyone looking at the Institute website, www.bhi.co.uk, or that of the Clockmakers' Company <http://www.clockmakers.org/horology/horological-training/> will be able to readily gain background information. Both websites contain a section which provides an overview and links for each of the centres which offer training for horologists:

There are also sites which provide overall information, for example:

<http://www.myjobsearch.com/careers/watchmaker.html>

In spite of information being available, many are still unaware of the various training opportunities and concise information will prove invaluable for both the enthusiast and the prospective student considering a career in clock or watch making. For simplicity, we shall consider two categories, education provided by the British Horological Institute and full and part time courses provided at colleges, universities, etc. The list will not be exhaustive and the inclusion of any particular facility should not be considered an endorsement by the Institute. Readers should satisfy themselves of the appropriateness of any particular course.

1. British Horological Institute

The British Horological Institute is the largest organisation for horologists both professional and non-professional; it is therefore in a unique position to offer horological education. When formed, in 1858, the primary function was to provide training, an objective which continues today. Its membership is an important resource to provide Tutors for the Distance Learning Course and for short courses; Upton Hall offers both workshop facilities and accommodation.

As well as managing the accredited examinations and providing continuing professional development, the BHI provides excellent opportunities for the aspiring horologist to take the first steps to becoming a clock or watch maker:

- a. The Distance Learning Course
- b. Short practical courses at the BHI, Upton Hall, Upton, Nr Newark, Nottinghamshire

British Horological Distance Learning Course (DLC):

For over fifty years, the Distance Learning Course has enabled hundreds of students living anywhere in the UK or overseas to learn clock and watchmaking from a structured course. In the early days of the DLC, the student was frequently an apprentice who gained practical experience during the day and the chance to master background knowledge by studying the DLC. The emphasis was towards knowledge with practical making skills and an understanding of Technical Drawing which formed an essential part of the examinations at that time.

Over the years, the course has been revised to include much new material. Today, there are few apprenticeships and the DLC has again changed to meet the needs of a new generation of students - many cannot easily attend a full time college course.

The best approach to begin your studies is to purchase the **Technician Grade Distance Learning Course** – Practical Clock and Watch Servicing. This is the first year of a three year course of instruction. This course has been completely re-written to teach the basic knowledge and skills required when learning the essentials of horology. Step by step the student learns from a blend of knowledge and understanding, workshop practice and clock and watch servicing skills. This sound foundation prepares the student for further learning.

The content and exercises contained in the Technician Grade Lessons prepare the candidate for the first year examinations arranged by the Institute for the awarding body EAL (Excellence, Achievement and Learning Ltd.) The Technician Grade DLC is a carefully structured course forming the first building block towards gaining a nationally accredited qualification (at degree level) which can lead to professional membership of the Institute. Candidates, both from the United Kingdom and overseas, use the Technician Grade DLC. Students at Birmingham City University rely on its content for examination preparation and The British School of Watchmaking also purchases copies. Version 2 was launched in October 2012; sales of the Technician Grade have quickly shown that it is the best course for those wanting to learn clock and watchmaking.

The course is presented in a spiral bound format in twelve A4 booklets which can be bought as a full set including the Introduction and Contents. Each lesson includes theory and practical exercises for the student to complete.



Fig 1. The Distance Learning Course is Spiral Bound.

The contents of the course are closely matched to the examination requirements and, commencing at Lesson 10, there are Examination Exercises designed to help prepare students for the examination.

The Technician Grade DLC is an essential learning resource whether or not the student wishes to enter the examinations and gain a qualification. Students will often complete the scheme in one year but many recognise that more time is required.

In addition to the twelve lessons, the student can purchase tuition either for single lessons or for the full course for submitting the theory and practical exercises for assessment and guidance.

Many students enquire whether a practical subject can be learnt from a series of books. The course includes sections giving instructions for undertaking all the fundamental processes in clock servicing together with step by step guides to the dismantling and re-assembly of quartz and mechanical watches. Clearly some students learn more readily than others but, with application, the DLC is an important aid to mastering the knowledge and skills required.



Figure 2, Step by step guide to servicing a quartz watch.

The process to rewrite the **Intermediate and Final Grades** to the same high standard has commenced but, for the interim period, candidates progressing to the Diploma in the Servicing and Repair of Clocks / Watches (Level 4¹) or the Diploma in the Repair, restoration and Conservation of Clocks / Watches (Level 5¹) must rely on the Intermediate and Final Grades; there are references provided in the syllabus and new sections are incorporated. As these new sections become available, they will be circulated to students but it will be some time before the work is completed. Brief information to help the student gain the most from the Intermediate and Final Grades is given in *Examination DLC Reference, Version 1.3*. This will enable students to gain a fuller understanding of the relationship between the new 'diploma' qualifications and the content of the existing Intermediate and Final Grade Courses. A new booklet, *Drawing Clock and Watch Escapements*, is ready for candidates considering entering Unit D6 : Drawing Clock / Watch Escapements.

The Intermediate and Final Grades are each produced in an A4 ring binder which contains the twelve lessons. The content lacks colour but includes excellent diagrams and clear descriptions. It is priced at a lower figure to reflect the difference in presentation.

For the student progressing towards the Diploma in the Servicing and Repair of Clocks / Watches or the Diploma in the Repair, Restoration and Conservation of Clocks / Watches, a delay in order to await the new versions for the Intermediate and Final Grades is not advised. The Technician Grade with the Intermediate and Final Grade will provide all the theory content to be examined.

How much does it cost?

Available to Institute Members:

The full course costs, £395.00 plus P&P. Tutor Feedback is priced £360.00 for twelve lessons. Tutor feedback may be purchased on a pay as you go basis; the first lesson costs £70.00 with subsequent lessons being £30.00.

Intermediate / Final Grade: without Tuition, £100.00 per Grade including P&P to UK. With postal Tuition, per grade £350.00 including UK P&P

Further details can be found at www.bhi.co.uk or telephone 01636 817604

b. British Horological Institute 'Short Practical Courses':

A programme of courses, generally two, three or five days duration, at Upton Hall, Near Newark, Nottinghamshire, is arranged throughout the year.

There are specialist courses, often directed towards the student who has some previous knowledge and courses of a more general nature to provide both an introduction to clock / watch making and the chance to extend knowledge and skills already gained. The courses often supplement the information provided in the Distance Learning Course; they are practical sessions taught by experts. Details of the wide range of courses can be found in the BHI monthly Horological Journal. The fact that some courses quickly become fully booked is testament to the quality of teaching and the value to the individual.

Mention of three examples will serve to demonstrate the choice available. **Servicing Chronographs** course is structured to teach the fundamental skills required to service mechanical chronograph movements; it is by nature, an advanced course. Students are required to have shown some experience by attending courses to learn about servicing manual winding mechanical watches and day / date automatic watches. The Chronograph course is therefore directed towards the more advanced student who has already gained basic skills; students are provided with chronograph movements and the Tutor demonstrates to the group using a digital microscope producing large images which enable the processes to be seen in detail.



Figure 3. The BHI Chronograph Course.

In contrast, **Basic Clock Part I** is a course suitable for the newcomer as well as the student with some experience. The syllabus, which includes the fundamental knowledge and servicing skills, is taught to students who bring their own clocks. A balance of group and individual tuition extends the achievement of each student enabling them to undertake procedures requiring greater knowledge and understanding.

Some courses such as **Cylinder Escapements** serve to teach highly specialised techniques for the student wishing to focus on watch restoration. The Tutor has considerable experience gained from restoring watches for the collector; the students benefit from personal attention and group teaching to master techniques essential for the watch restorer.



Figure 4. BHI Watch Workshop.

The maximum number of students that can be accommodated in the clock or the watch workshop is six; students can choose a range of courses to support and extend the knowledge and exercises they are learning from the BHI Distance Learning Course.

How much does it cost?

Available to BHI members:

5 days (4 nights) - £773; Tuition only £625

3 days (2 nights) - £449; Tuition only £375

2 days (1 nights) - £287; Tuition only £250

1 day - £125

Further details from www.bhi.co.uk or telephone 01636 817603.

2. Colleges

If you are considering becoming a professional clock or watch maker, the benefits of attending a full time course should be carefully considered. Brief information will be provided for each of the three colleges but prospective students should use the contact details to gain full information prior to visiting and considering and application.

a. Birmingham City University:

Birmingham City University includes a department for horology at the School of Jewellery in the heart of Birmingham's Jewellery Quarter. The department can accommodate up to fifteen students per year for three years using two well equipped workshops and the wider resources within the School of Jewellery. The main workshop is used by the majority of students for both clock and watch servicing and the making of components; a recently developed smaller workshop is used for watch servicing.



Figure 5. Main workshop at Birmingham City University.

Additional accommodation within the School of Jewellery is used for teaching the theory of horology and technical drawing; an engineering workshop is a valuable resource shared with other departments, as are the specialist casting, electroplating, forming, CAD and rapid prototyping facilities. In previous years, the focus of teaching at BCU has been the BHI / EAL examinations together with an HND qualification for Horology. In September 2012, however, the faculty replaced these programs with a new BA Hons Horology. There is a range of studies to prepare students for professional practice within the broad spectrum of horology. With core values of employability and student experience, the curriculum has been designed to develop the traditional skills associated with clock and watchmaking whilst encouraging the exploration and use of developing technologies to meet modern standards.

Students will design and make a final year 'Masterpiece' - A significant horological mechanism that will showcase the combined workshop and employability skills of the individual. The skills learnt will enable students to sit and gain the professional examination qualifications of the British Horological Institute, accredited by EAL



Figure 6. Birmingham City University - a final Year 'Masterpiece'.

How Much does it cost?

Tuition fees are in line with graduate courses nationally with student loans generally available to help the student finance the three year attendance.

Further details can be found at:

www.bcu.ac.uk/biad/courses/horology-ba or contact the Head of Horology at Jeremy.hobbins@bcu.ac.uk

b. The British School of Watchmaking:

Following the closure of the Watches of Switzerland Training and Educational Programme (WOSTEP) at the School of Horology, City College Manchester, it was recognised that there was an ongoing need for watchmakers to be trained

following the rigorous WOSTEP programme. In 2006, an industry group of ten companies was formed to finance the purchasing of equipment and the provision of teaching staff to offer the two year, 3,200 hour, course at premises near Manchester.



Figure 7. Workshop facilities at the British School of Watchmaking.

The majority of the eight students admitted each year are sponsored by the 'founder companies' but any available places are offered to 'private students'.



Figure 8. The British School of Watchmaking.

The staff to student ratio is excellent with staff periodically attending courses in Switzerland. The teaching facilities include well equipped workshops and training material provided by the Swiss watch industry. Sponsored students are employed and funded by the company concerned; private students finance their attendance independently.

How much does it cost?

Private students commencing in September 2013, £17,500, for the two years tuition together with £1615 for the purchase of tools.

Further details can be found at

www.britishschoolofwatchmaking.co.uk

c. West Dean College:

For a number of years, the Edward James Foundation has been providing a range of specialist full time courses at West Dean College, Sussex; these include the Conservation and Making of Clocks.

Students use the well equipped workshop and the full facilities of the college for their studies; historic clocks are provided for bench practice.

Most students are resident at the college and are able to use the college facilities during evenings and weekends. A total of around eight 'clock' students enrol each year with students following the various courses working together in the clock workshop.



Figure 9. West Dean College.

For students following the clocks course, there is currently a range of qualifications:

Two awards validated by West Dean College:

West Dean Diploma (one year)

Professional Development Diploma (one year, following the West Dean Diploma)

Three awards validated by Sussex University:

Graduate Diploma – Conservation of Clocks (one year)

Post Graduate Diploma – Conservation of Clocks (one year)

MA Conservation Studies (requiring an extension to the period required for the Post Graduate Diploma)



Figure 10. The Clock Workshop at West Dean College

How much does it cost?

The cost of tuition per academic year for students commencing September 2013 is £12,375 and, accommodation, if required, £6,225

Further details can be found at www.westdean.org.uk

d. A Note Concerning the Funding of Full Time Courses:

The opportunity to attend a full time horology course is often dependent on the ability to finance the fees and accommodation. The situation varies widely between each of the three colleges.

Birmingham City University, a student who has not attended university previously is likely to be able to access a student loan to assist with the cost of accommodation, books and materials required during the three years. Repayment of tuition fees will commence when the course is completed and income becomes over £21,000 per annum. Many students use savings and seek part time employment to help fund their period at college. A student who has attended university previously will normally be wholly responsible for the cost.

West Dean College, the student is expected to meet the cost of tuition and, if resident, accommodation. The Edward James Foundation and other charities frequently assist students by paying part or all of the cost for tuition. Students usually find it necessary to provide a portion of the funding from savings or a loan.

The British School of Watchmaking, 'private' students are entirely responsible for the cost of tuition and accommodation.

Bursaries For a number of years, the Worshipful Company of Clockmakers has assisted students attending Birmingham City University and West Dean College. For West Dean College, interviews take place when the student has been offered a place but before commencing in September. The bursary is paid each term, dependent on progress.

The **George Daniels Educational Trust** has recently been formed with the objective to use part of the income from the trust fund to assist students training to become clock and watchmakers. A committee, the George Daniels' Educational Trust Advisory Committee (GDETAC), has been established comprising representatives from both the Institute and the Clockmakers' Company. The Advisory Committee will consider applications for bursaries from students and make recommendations to the Trustees:

- Many students have been assisted to attend college courses.
- Support is being provided to enable the re-writing of the BHI Intermediate and Final Grades of the Distance Learning Course.
- A scheme is in place to provide financial assistance and support for students at Birmingham City University.
- An apprenticeship plan encourages the training of clock and watchmakers in the workplace.
- Assistance has been provided to enable the development of horological workshops for teaching.

The trust fund has been set up to encourage and financially assist apprentices and students, with grants and bursaries for training in all aspects of horology. By actively supporting those wishing to make a career from horology in the UK, whether employed or self-employed, the trust fund will ensure that future generations are given the opportunity to develop their horological skills. Students who have received the offer of a full time place at one of the colleges are able to apply for bursaries.

Throughout, the emphasis is on excellence and achievement; it is expected that students who receive bursaries from the George Daniels' Educational Trust will be high achievers ready to work hard to gain excellent standards.

Further details and an application form are available from:

www.gdetac.org

3. Other providers of horological training

a. Epping Forest Horology Centre:

The Epping Forest Horology Centre (EFHC) describes itself as an "organisation dedicated to the preservation of Horological skills through practical and theoretical teaching in a sociable atmosphere". In the seven years since it was first founded as a club, it has grown to over 100 members and provides a very affordable entry route for new clock and watchmakers, as well as being a place for the more experienced to meet like-minded folk and develop their skills. Located in West Essex, the Centre has two well equipped workshops for watch and clock making each having 12 benches, along with a large machine shop, a library and lecture facilities.



Figure 11. Clock Workshop, Epping Forest Horology Centre

There is a regular team of five tutors providing afternoon and evening sessions for forty weeks each year along with occasional special short courses for subjects like Silver Soldering, Dial Restoration, and Turning Using a Watchmakers Lathe. Sessions are available offering both structured teaching and informal support to suit all types of learning styles. At an early stage, EFHC was adopted as an examination centre for BHI/EAL qualifications.



Figure 12. Watch Workshop, Epping Forest Horology Centre

People joining EFHC range in age from 18 to 80+, a number are from the trade, but most are dedicated enthusiasts, some of whom use the skills they learn as a stepping stone into the industry. The Centre has a small initial joining fee, and a further payment for forty sessions during the year..

Further details can be found at:

www.efhc.org.uk

b. Short courses / clockmakers offering tuition for individuals or small groups:

Phillip Gale FBHI (Cornwall)

carpediem@criggan.freeserve.co.uk

Telephone, 01726 890715

Quality Time Clock Courses (Pulborough, West Sussex)

www.clockcourses.co.uk

From time to time, West Dean College offers short courses, enquiries should be made directly to the college.

4. Brief information about qualifications:

The British Horological Institute introduced new 'diploma' examinations introduced in 2012. Candidates in the UK attend examination centres for some units and undertake specified exercises to make Practical Test Pieces and Servicing Clocks / Watches using their own workshop or that of the college / university.

The examinations take place in May each year at the following

Examination Centres:

- a. Upton Hall, Newark, Nottinghamshire
- b. Epping Forest Horology Centre, West Essex

Overseas candidates may complete some units in their country of residence but attend UK examination centres for the final examinations.

There are three 'diploma' qualifications:

- a. Diploma in Clock and Watch Servicing (Level 3¹)
- b. Diploma in the Servicing and Repair of Clocks / Watches (Level 4¹)
- c. Diploma in the Repair, Restoration and Conservation of Clocks / Watches (Level 5¹)

The Diploma qualifications are accredited by Ofqual as part of the Qualifications and Credit Framework by the awarding body EAL (Excellence Learning and Achievement Ltd). The Institute worked closely with industry and EAL to prepare awards that reflect the current employment requirements within clock and watch servicing and restoration.

Professional Membership of the Institute:

The candidate who gains the Diploma in the Servicing and Repair of Clocks meets the technical competence and horological experience requirements for becoming MBHI.

The Diploma in the Repair, Restoration and Conservation of Clocks / Watches has met the technical competence and horological experience to become FBHI.

Full information about the Institute examinations and membership can be found at www.bhi.co.uk

References:

¹ The Level for each of the awards given above relates to the Qualifications and Credit Framework (QCF). A table (<http://www.ofqual.gov.uk/qualifications-and-assessments/qualification-frameworks/levels-of-qualifications/>) shows equivalent awards, for example:

- Level 3 = AS / A Levels
- Level 4 = Certificates of Higher Education
- Level 5 = Foundation Degrees / Higher National Diplomas