

PROGRAMME SPECIFICATION

1. Course Record Information	
Name and level of final & intermediate Awards	BSc (Hons) Clinical Photography BSc Clinical Photography Diploma of HE Clinical Photography Certificate of HE Clinical Photography
Awarding Body	University of Westminster
Location of Delivery	Harrow Campus, Northwick Park, Harrow, HA1 3TP NCS Campus, 115 New Cavendish Street, London W1M 6UW
Mode of Study	Full-time
UW Course Code	W50
JACS Code	W640
UCAS Code	WB69
QAA Subject Benchmarking Group	Communication, media, film, health care visiting, physics
Professional Body Accreditation	Institute of Medical Illustrators (IMI)
Date of initial course approval/last review	May 2008
Date of Programme Specification	January 2012
2. Admissions Requirements	
<p>The normal minimum qualifications entitling an applicant to be considered for admission to the course are as outlined in the University of Westminster's Undergraduate Prospectus.</p> <p>(i) Five General Certificate of Secondary Education (GCSE) passes, which should include minimum grade C in English Language and minimum grade B in Maths OR Science.</p> <p>(ii) Three Cs in GCE Advanced Level. These should normally include at least one A level in Biology and one preferably in Photography.</p> <p>(iii) Other equivalent qualifications.</p> <p>(iv) Competence in written and spoken English language for those whose first language is not English is required to at least IELTS 6.0, TOEFL 550 (paper based examinations) or TOEFL 213 (computer based test) and Edexcel London Tests of English level 4.</p> <p>Applicants who do not possess an A level in Biology (or equivalent) but have an A level in Photography and minimum grade B in both maths and science GCSE will be considered for application on a preparatory summer short course in Biology. Satisfactory completion of the short course will allow admission on the BSc in CPH.</p> <p>The student intake may include those returning to education after, sometimes, an interval of many years or those seeking retraining / qualification in this particular field. Admission for these students is based not only on qualifications, but also on their life experiences and motivation assessed at interview. Experience suggests that well motivated students have achieved considerable success, even from relatively unorthodox academic bases. Application of APLS will be carried out according to the University regulations.</p>	

3. Background and Aims of the course

3.1 Background

The BSc (Hons) in Clinical Photography is the only full-time, undergraduate honours degree in Clinical Photography (or Medical Illustration). It emanates from the distinguished and unique BSc in Photography and Digital Imaging Technologies, a course that has been delivered in some form by the University of Westminster for over 30 years. The University of Westminster has a well-established reputation in Imaging and is the only university in the UK delivering full-time undergraduate degrees combining the study theory, technical practice and underlying sciences related to photography and digital imaging.

The course is delivered by the Department of Photography and Film in the School of Media, Arts and Design in Harrow, in collaboration with the School of Life Sciences, based in Cavendish Campus in Central London. The Department of Photography and Film at the University of Westminster is one of the most active centres in the teaching of photography and digital imaging and associated imaging research in the country, with state-of-the-art professionally equipped photographic studios, darkrooms, digital darkrooms and imaging laboratories. The department has built up a photographic library and picture agency, to provide students with both work-based learning and specialist archives of photographic images. The multifaceted facilities available to students of the course also include modern biomedical and sports laboratories and a 'PolyClinic'. As well as having the advantage of the variety of specialities, teaching and expertise of the different departments involved, the course also gains from the input of a number of different related research groups.

A large part of the course is taught in working environments - clinics and hospitals. The Higher Education Funding Council for England (HEFCE) awarded the University of Westminster CETL status (Centre of Excellence in Teaching and Learning) for our Centre for Excellence in Professional Learning from the Workplace (CEPLW). PLW encompasses *for* work, learning *at* work and learning *through* work. It prepares students for professional life using the knowledge, skills and attributes typically acquired in the workplace. It is also a key part of Continuing Professional Development for established professionals. PLW is thus important in lifelong learning, in maintaining professional standards and in individual and organisational development. The University's CETL status arose from a fusion of ideas and good practice in the Schools involved in this course: Health Sciences and Media, Arts & Design, all of which have strong links with employers and professional bodies

Members of staff from the Schools of Media, Arts and Design are involved in the Imaging Technology Research Group (ITRG), and interdisciplinary group specialising in various areas in imaging sciences, colour imaging, digital archiving, image quality and vision.

Completing an honours degree in Clinical Photography at the University of Westminster thus provides many opportunities for acquiring and refining numerous skills related to photography and digital imaging, human anatomy, physiology and disease, patient-communication as well as a number of Higher Education and carriers-related transferable skills.

3.2 Aims

This programme is distinctive because it aims to develop expertise in photography and digital imaging, combined with knowledge and understanding of human physiological systems and foster communication skills necessary for employment in clinical settings.

The programme aims to:

1. To provide a useful and enjoyable educational experience through high quality teaching invigorated by work-based learning.
2. To provide in-depth knowledge and understanding of contemporary imaging systems, their performance and of imaging techniques using such systems.
3. To enable the development of practical skills for the production, manipulation, storage and archiving and viewing of images.
4. To cultivate the ability to produce competent work in operational aspects of photographic and digital imaging and professional practices in clinical environments.
5. To provide knowledge and understanding of human physiological systems in health and disease.
6. To enable the development of patient communications skills and attitude-awareness that can be integrated into work in therapeutic professional settings.
7. To provide knowledge and understanding of current issues in clinical photography.
8. To develop transferable skills such as communication skills associated with oral and written presentations of technical work and organisational skills associated with project planning, execution and appraisal.
9. To instil the development of further intellectual and transferable skills that will prepare students for employment or for further study.

4. Employment and Further Study Opportunities

Graduates of this course can work as clinical photographers in NHS hospitals. Employment may also be found in the private medical sector, university medical departments, research institutes, as freelance or contracted clinical photographers or in other fields of scientific, forensic and medical imaging.

The IMI (Institute of Medical Illustrators) has been closely involved in designing and setting up the course with the University of Westminster. The course will therefore be IMI accredited.

It is intended that in the future the course may become CAMIP (Committee for the Accreditation of Medical Illustration Practitioners) registered and will lead to students gaining inclusion on the State Register of Health Professionals.

5. Learning Outcomes (for Each Designated Academic Level)

5.1 Knowledge and Understanding

During the course the student is expected to develop knowledge and understanding of:

Level 4:

1. The underlying science relevant to digital imaging.
2. The nature and properties of photographic and digital images and imaging systems.
3. Principles and practices of a number of basic techniques in scientific imaging.
4. Basic numerical methods and computing.
5. The functioning of a range of physiological systems in health and disease.
6. History of medical illustration and the development of photographic processes related to it.
7. Basic principles supporting patient communication.
8. The context of being employed as a clinical photographer / medical illustrator.

Level 5:

1. Principles of image management, advanced colour management, image enhancement, manipulation, storage and archiving.
2. Principles of a range of techniques used in scientific and biomedical imaging.
3. Methods and standards related to the creation and production of digital video.
4. Ethical and copyright considerations in imaging, legal, financial and administrative requirements relating to employment and imaging practice.
5. Attributes and ethical considerations required for effective communication with patients and colleagues.
6. Advanced physiology of a range of body systems.
7. Anatomy of surface landmarks and physiology of disease.

Level 6:

1. Working practices in various areas of clinical photography such as dental photography, dermatology, paediatric photography, surgical photography and ophthalmic photography.
2. Research methodologies.
3. Planning and production of research proposals.
4. Current issues in clinical photography such as ethical issues and control and use of medical images.
5. Functions, procedures and responsibilities of imaging departments in clinics and hospitals.

5.2 Specific skills

Level 4:

Cognitive and Intellectual Skills

- Conceive and describe the formation of images in compound optical systems.
- Conceive and describe basic functions of the human visual system.
- Conceive and describe basic principles of colour theory.
- Relate aspects of image quality to measurable properties and measure simple aspects of objective image quality.
- Relate the historical development of photographic processes to their application in medical illustration.
- Conceive the relationships between structures and functioning of a range of physiological systems.
- Conceive basic principles and ethical considerations relating to patient communication.

Practical Skills

- Employ the basic methods of geometrical constructs and ray tracing in studying image formation in optical systems.
- Measure and interpret the input-output relationships for a variety of imaging processes.
- Acquire and process images using a wide variety of contemporary imaging systems.
- Correctly expose and process a variety of different image formats.
- Develop and print in black and white.
- Demonstrate effective use and control of flash lighting.
- Manipulate and enhance digital images.
- Calibrate image displays.
- Solve basic mathematical and statistical problems.
- Use computers, spreadsheets and software for the production of presentations.
- Demonstrate a good level of anatomy and familiarity with anatomical language used in medical facilities.
- Demonstrate patient-communication skills.
- Make use of the photographic and laboratory facilities with a clear and measured understanding of health and safety procedures.

Level 5:

Cognitive and Intellectual Skills

- Identify the scientific basis for imaging methods relating to scientific photography and biomedical imaging.
- Develop appropriate technical knowledge in the use of photographic equipment and accessories for clinical photography and the specialised techniques employed in that discipline.
- Describe the processes involved in imaging system management, including colour management and archiving of images.
- Identify ethical and copyright considerations in relation to medical images.
- Identify legal, administrative and financial requirements relating to intellectual property in imaging practices.
- Describe the function of various physiological systems in health and in disease.
- Recognise attitudes toward client-centred working in a clinical or commercial setting.
- Develop research skills necessary in planning a project.

Practical Skills

- Employ specific imaging techniques used in scientific and biomedical imaging.
- Use specialised photographic equipment and accessories to produce clinical photographs from a range of specialisms in studio and work-based settings.
- Optimise the acquisition, enhancement, storage and output of photographic and digital imagery.
- Demonstrate skills in the use of colour materials and the production of colour prints.
- Demonstrate skills in the use of video, including editing procedures and integration into multimedia applications.
- Select and critically evaluate images.
- Use of computers for desktop publishing.
- Identify various physiological systems in health and in disease.
- Demonstrate communications skills and attitude awareness that can be integrated in a range of therapeutic professional settings.

Level 6:

Cognitive and Intellectual Skills

- Critically evaluate developments in imaging systems as a basis for academic research or industrial development.
- Critically reflect on experience in a range of practice areas in relation to imaging techniques in clinical environments.
- Critically reflect on patient management, image management and business practice.
- Identify and evaluate current issues in clinical photography including ethical issues and the control and use of medical imagery.
- Consider and evaluate work in a reflective manner with reference to academic and/or professional issues, debates and conventions.
- Generate ideas, concepts, proposals, solutions or arguments independently and/or collaboratively in response to set briefs and/or as self-initiated activity.
- Demonstrate knowledge of imaging practices in areas relating to work-placements.
- Develop an understanding around areas of professional practice, issues of business practice and legal considerations in clinical photography.

Practical Skills

- Select and use safely a range of specialist instrumentation.
- Be proficient in the use of software for graphics production.
- Produce a substantial body of photography-based practical work, from a range of clinical photography specialisms to a professional level.
- Ability to produce written documentation relating to clinical photographic practice in working environments such as clinics and hospitals.
- Ability for self-directed study and for reporting results from it in written form and presentations.
- Demonstrate excellent communications skills and attitude awareness that can be integrated in a range of therapeutic professional settings.

6. Teaching, Learning and Assessment Methods

6.1 Methods

The course employs a wide range of teaching and learning strategies, modes of delivery and assessment methods appropriate to the aims and intended outcomes of each module and the course as a whole. The majority of the modules are delivered in the classroom/laboratory or classroom/computer-room sessions, which are effectively used throughout scientific/applied education. They are taught using a combination of lectures, small group-based or one-to-one tutorials, practical work and self directed study using web-based and intranet resources. All modules involve a large amount of self-directed study. Web resources are designed to promote student-centred active learning and enhance material covered during taught sessions. All modules are supported by Blackboard, an online learning resource. Individual and group tutorials enable a more focused teaching/learning experience. Practical imaging modules use studios, applied imaging laboratories, digital and conventional darkrooms. Practice of modules related to physiological systems takes place in biomedical laboratory facilities.

500 hours of work-based learning is also a very important element in the course. It is embedded in modules throughout the three years. Work placement are carried out in various forms such as: simulated work placement taking place in dedicated photographic studios and in the University's 'PolyClinic' and actual placement in selected hospitals and clinics, which have quality controlled imaging departments in various medical areas. Modules with a work placement component are led by a member of the academic staff team, who co-ordinates the process. Both theory and practice may be taught on placement by the relevant workplace tutor. Assessment of these modules may involve some practical assessment at the workplace, which will feed into the academic assessment by the staff team at the University.

Assessment methods of individual modules are based on:

- laboratory work and scientific reports
- written coursework and numerical problems
- dissertations
- portfolios of images
- written examinations
- group or individual oral presentations

Assessment methods of work-placement:

- demonstration of knowledge and practical skills (at work placement)
- written reports, from both student and tutors
- portfolio of images

Assessment of the major project is based on:

- preliminary project proposal
- literature survey
- final project report, workbook and practical work.

NOTE: For a student to pass the modules that incorporate a work placement component, they must at least achieve pass for this component.

The involvement of the peer group is valued as a dynamic contribution to the learning experience and use of the wide range of resources each student brings to the course. In individual tutorials the focus is on the student's experience of the course.

The major project can be in any area of interest related to clinical photography, biomedical imaging and imaging systems and techniques and is expected to have a high technical content. The project is predominantly self-defined and self-directed. It will consist of a large body of practical work, a project journal or log book and a written report (10,000 to 20,000 words). Projects based on 'portfolio' of visual material require both visual and technical excellence. Each student is assigned a personal project supervisor who is available for consultation on a regular basis and will agree the project topic with the student and monitor his/her progress.

6.2 Course Structure

This section shows all modules available as part of the course and their credit value. Full-time Undergraduate students study 120 credits or 8 modules per year. All modules in the course are *core modules*, to fulfil syllabus requirements of the Institute of Medical Illustrators (IMI), the professional body associated with the course, which co-deigned the syllabus with the University and offers accreditation to successful graduates.

Level 4 – Core modules to the value of 120 credits

Code	Title	Status	Value
	Photography Theory and Practice	Core	30
	Digital Image Management	Core	30
	CP Skills and Contextual Studies	Core	30
	Physiology and Anatomy	Core	30

Level 5 – Core modules to the value of 120 credits

Code	Title	Status	Value
	Imaging Practice & Production	Core	30
	Clinical Theory and Practice	Core	30
	Scientific & Biomedical Imaging	Core	15
	Imaging Technologies	Core	15
	Patient Centred Communication	Core	15
	CP Career Manag. & Prof. Practice	Core	15

Level 6 – Core modules to the value of 120 credits

Code	Title	Status	Value
	Work Placement	Core	45
	Major Project	Core	45
	Current Debates in Clinical Photo	Core	15
	Project Planning & Res. Methods	Core	15

Approximately **500 hours of work placement** incorporated in the course as: a) simulated placement in dedicated to the course photographic studios (Harrow Campus), b) simulated placement in Polyclinic (Cavendish Campus), c) placement in clinical environments. Work placement is part of the following modules:

L4 – Contextual studies (1 week simulated in photographic studios and 1 week in clinical environments)

L5 – Clinical Theory and Practice (1.5 weeks simulated in photographic studios and in PolyClinic)

L5 – Career Management Skills and Professional Practice (2 weeks in clinical environments)

L6 – Work Placement Module (1 week simulated in photographic studios, 6 weeks in clinical environments)

6.3 Awards

BSc (Hons) Clinical Photography

Mark

First

Average higher than 70% best 105 credits at L6
Average higher than 60% for next best 105 credits at L 5 and L6.

Upper Second

Average higher than 60% best 105 credits at L6
Average higher than 50% for next best 105 credits at L 5 and L6.

Lower Second

Average higher than 50% best 105 credits at L6
Average higher than 40% for next best 105 credits at L 5 and L6

Third

An average of 40% or above in the best 210 credits at Credit Levels 5 and 6.

Intermediate Awards

Conditions

BSc Clinical Photography

- a) Condoned credit for modules worth at least 300 credits at Credit Level 4 or above, including modules worth at least 180 credits at Credit Levels 5 and 6, of which at least 60 credits are at Credit Level 6;
- b) passed modules worth at least 270 credits at Credit Level 4 or above, including 165 credits at Credit Levels 5 and 6, of which at least 60 credits must be at Level 6; and
- c) met any specific subject or scheme requirements for the named award.

The University may award an unclassified Degree with distinction to a student whose marks average at least 60% across the best 150 credits passed at Credit Levels 5 and 6.

*Diploma of Higher Education
in Clinical Photography*

- a) Condoned modules worth at least 240 credits, at Credit Level 4 or above, including at least 120 credits at Credit Level 5 or 6 or both;
- b) passed modules worth at least 210 credits at Credit Level 4 or above, including at least 105 credits at Credit Levels 5 or 6 or both.

The University may award a Diploma of Higher Education with distinction to a student whose marks average at least 60% across the best 105 credits passed at Credit Levels 5 or 6 or both.

*Certificate of Higher
Education in Clinical
Photography*

- a) Condoned modules worth at least 120 credits at Credit Level 4 or above;
- b) passed modules worth at least 105 credits at Credit Level 4 or above.

The University may award a Certificate of Higher Education with distinction to a student whose marks average at least 60% across the best 105 credits passed.

6.4 Academic Regulations

The BSc (Hons) in Clinical photography and its intermediate awards operate in accordance with the University's Academic Regulations and the *Framework for Higher Education Qualifications in England, Wales and Northern Ireland* published by the Quality Assurance Agency for Higher Education (QAA) in 2008.

All students should make sure that they access a copy of the current edition of the general University handbook called **Essential Westminster 2012/13**, which is available at westminster.ac.uk/essential-westminster. The following regulations should be read in conjunction with the *Modular Framework for Undergraduate Courses* and relevant sections of the current *Handbook of Academic Regulations*.

A pass in a module is achieved when the overall mark is greater than or equal to 40%; with at least 30% in the final assessment and any qualifying marks and/or sets achieved as detailed in the module handbook.

Condoned Credits

A student may be awarded condoned credit at Levels 3 and 4 four only where he/she has achieved:

- a) an overall module mark of greater than or equal to 30% but less than 40%;
- b) an overall mark of 40% or greater but not reached the required qualifying mark(s) and/or qualifying set(s) as detailed in the module handbook; and
- c) attempted all referred assessment as offered by the Assessment Board.

Where a student following a referral opportunity is awarded condoned credit, the recorded module mark will be capped at 39%. Condoned credit will count towards any credit limits for specified awards. Where a student is awarded condoned credit in a module but subsequently achieves an overall pass within a re-take module, credit may contribute only once to an award.

Progression

To progress from Level 4 to Level 5 in full time study, a student must achieve an average of 40% across 120 credits; to progress from Level 5 to Level 6 full-time study, a student must pass at least 165 credits, including 75 credits at Level 5.

Award

To qualify for the award of the BSc (Hons) in Clinical Photography a student must:

- a) obtained at least 360 credits including:
 - passed 75 credits at Level 4 or higher and achieved at least a condoned credit in each of the remaining modules worth 45 credits at Level 4; and
 - passed a minimum of 120 Credits at Level 5 or higher; and
 - passed a minimum of 120 credits at Level 6 or higher.
- b) attempted modules with a maximum value of 330 credits at Levels 5 and 6; and
- c) pass the 'work placement' component in modules that incorporate work placement; and
- d) pass the 'Major Project' module.

The class of the Honours degree awarded is decided by two criteria: the average of the best 105 credits passed at Level 6 being in the range of the class to be awarded, and the average of the next best 105 credits passed at Levels 5 and 6 provided the next best 105 credits passed are no more than one classification below this.

7. Support for Students

On arrival, an induction programme will introduce students to the staff responsible for the course, the campus on which they will be studying, and facilities such as the Library, IT facilities and Campus Administration. Students will be provided with the Course Handbook, which provides detailed information about the course. Students are allocated a personal tutor who can provide advice and guidance on academic matters throughout their degree.

Learning support includes the Library, which, across its four sites, holds printed collections of 356,000 printed books, 29,000 printed and e-journals, 1,600 journal subscriptions and substantial audio visual collections. Access to over 45,000 electronic resources (databases, e-journals, e-books). Access to all resources is facilitated through LibrarySearch, a new on-line service.

There are over 3,500 computers spread over the four University campuses available for students use. The University uses a Virtual Learning Environment called Blackboard where students can access course materials and communicate with staff and other students via message boards.

At University level, Services for Students provide advice and guidance on accommodation, financial and legal matters, personal counselling, health and disability issues, careers and the chaplaincy providing multi-faith guidance. The International Education Office provides particular support for international students. The University of Westminster Students' Union also provides a range of facilities to support all students during their time at the University.

8. Reference Points for the course

Internally

- University Quality Assurance Handbook
- Academic regulations Handbook Modular Framework
- MAD School Teaching and Learning policy statement,
- MAD Assessment Strategy
- HE and Career Management Skills policies
- Educational Initiatives Centre and Careers and Student Employment
- Research by the Imaging Technology Research Group and other related research groups

Externally

- QAA Subject Benchmark statements
- University and SEEC (credit consortium) level descriptors
- National Occupational Standards (NOS) statements
- Institute of Medical Illustrators

9. Quality Management and Enhancement

9.1 Course Management

The course is managed by the course leader, Dr. Sophie Triantaphillidou, who is supported by the academic staff in the Imaging Science group, the head of the department of Photography and Film, Andy Golding and the Head of the School of Media, Arts and Design, Sally Feldman.

9.2 Course approval, monitoring and review

The course was initially approved by a University Validation Panel in 2008 and was reviewed in 2012. The Panel included internal peers from the University and external subject specialists from academia and industry to ensure the comparability of the course to those offered in other Universities and the relevance to employers. Periodic Course Review helps to ensure that the curriculum is up-to-date and that the skills gained on the course continue to be relevant to employers.

The course is monitored each year by School to ensure that it is running effectively and that issues that might affect the student experience have been appropriately addressed. Staff will consider the outcomes from each Course Committee, evidence of student progression and achievement and the reports from External Examiners to evaluate the effectiveness of the course. The Campus Academic Standards Group audits this process and the outcomes are reported to the Academic Council of the University, which has overall responsibility for the maintenance of quality and standards in the University.

9.3 Student involvement in Quality Assurance and Enhancement

Student feedback is important to the University and student views are taken seriously. The most formal mechanism for feedback on the course is the Course Committee. Student representatives will be elected to sit on the committee to represent the views of their peer group in the discussions held by the committee. The University and the Students' Union work together to provide a full induction to the role of the Course Committee.

All students are invited to complete a Module Feedback Questionnaire before the end of each module. The feedback form will inform the Module Leader on the effectiveness of the module and highlight areas that could be enhanced.

The University has also an annual Student Experience Survey which elicits feedback from students about their course and University experience.

Students meet with Review Panels when the periodic review of the course is conducted to provide oral feedback on their experience on the course. Student feedback from Course Committees are part of the Schools' quality assurance evidence base.

10. For more information about this course

Course Leader: Dr. Sophie Triantaphillidou (triants@wmin.ac.uk)

Admissions Tutor: John Smith (smithj29@westminster.ac.uk)

Admissions & Marketing Officer: Jyoti Parmar (parmarj@westminster.ac.uk), Harrow Campus.

Website: <http://westminsteruni.dev.squiz.co.uk/schools/media/undergraduate2/imaging/bsc-honours-clinical-photography2>