

Guidance on implementation of the 2015 Audiovestibular Medicine curriculum

Background

The 2015 Audiovestibular Medicine curriculum was approved by the GMC on 31 March, subject to a number of further amendments. The GMC requires trainees working towards a certificate of completion of training (CCT) to work towards the most current curriculum within two years of implementation.

The basic sciences content of the curriculum has been rationalised so the relevant content previously contained in the diploma syllabus as an appendix has been incorporated with the 2010 syllabus so the knowledge, skills and behaviours are clearly detailed in one place. The basic sciences knowledge content will be taught and assessed through MSc modules as part of a postgraduate certificate in one of three approved centres. The level descriptors for the basic sciences curriculum content have been updated to reflect the new material and assessment methods.

It is no longer a requirement to obtain a diploma in audiovestibular medicine (or equivalent) although trainees may wish to do so or go on to complete an MSc.

As for the 2010 curriculum, the SAC has identified national courses which deliver the theoretical knowledge needed for practice. The GMC require that specific courses are no longer included in the curriculum to allow a range of methods for meeting curricular outcomes and greater accessibility for trainees. The suggested methods for meeting specific outcomes, including regional and national courses are given in the courses section below.

Appendix 1 provides a detailed mapping of the changes in the 2015 curriculum.

Appendix 2 provides details of the approved MSc taught modules.

The 2015 curriculum and 2015 ARCP decision aid are available on the [JRCPTB website](#).

Transition of current trainees

Year 1 trainees (ST3)

- Immediate transfer to the updated curriculum with all competencies, workplace-based assessment (WPBA) and knowledge based assessment (KBA) requirements to be completed in line with the 2015 curriculum and ARCP decision aid.
- MSc taught modules and assessments to be completed as a postgraduate certificate at one of the three approved centres. Trainees should refer to the module curriculum mapping document [www.jrcptb.org.uk/specialties/audio-vestibular-medicine] and discuss their options with their Educational Supervisor.

Year 2 trainees (ST4)

- Immediate transfer to the updated curriculum with WBPA and KBA requirements for year 2 to be completed before completion of training in line with 2015 curriculum and ARCP decision aid.
- MSc taught modules and assessment to be completed as a PG certificate at one of the three approved centres. Trainees should refer to the module curriculum mapping document [www.jrcptb.org.uk/specialties/audio-vestibular-medicine] and discuss their options with their Educational Supervisor.

Year 3 trainees (ST5)

- Trainees who have completed the Diploma/MSc will have met the 2010 and 2015 taught modular components and will not be required to undertake any further modular teaching or assessment.
- Trainees may complete training on the 2010 curriculum providing their CCT date is within two years of implementation of the 2015 curriculum (ie by the end of May 2018).
- Trainees may choose to transfer to the 2015 curriculum and should discuss with their Educational Supervisor any additional training needs to meet the outcomes of the 2015 curriculum. Trainees who transfer will be required to sit the pilot KBA.

Year 4 trainee (ST6)

- All ST6 trainees have completed the Diploma or MSc and may remain on the 2010 curriculum for the remainder of their training providing they meet all the curriculum requirements and complete training by the end of May 2018. There will be no requirement to undertake any further modular teaching or assessment.
- Trainees can transfer to 2015 curriculum on request and additional training targets should be agreed with Educational Supervisor.
- Trainees are strongly recommended to attend the courses identified as meeting the outcomes in the 2015 curriculum (see below) and the KBA.

Eportfolio guidance

- Trainees who are transferring should contact curriculum@jrcptb.org.uk to request that the 2015 curriculum is added to their ePortfolio account.
- It is not mandated that trainees transferring to the new curriculum should mark off on the new 2015 curriculum competencies that have already been achieved for previous years, but trainees and educational supervisors may find it helpful to add ratings for these competencies and insert "see evidence on 2010 curriculum" in the comments section.
- The QIPAT assessment tool is available in the assessment section of the eportfolio and should be used to assess quality improvement projects.

Courses

Trainees need to demonstrate the required outcomes (knowledge, skills and competence) in:

- Cardio Pulmonary Resuscitation – adult and child
- Child Safeguarding level 3
- Safeguarding vulnerable adults
- Management skills
- Equality and Diversity or Equal Opportunity training

Courses that can deliver these outcomes are normally available at a local level and should be identified with the educational supervisor.

In addition, the following national courses deliver the curriculum outcomes for dizziness and aetiology and should be undertaken unless alternative methods can be identified with the educational supervisor and are endorsed by the SAC:

- Dizziness Course at the National Hospital for Neurology and Neurosurgery
- NHSP Aetiology Course

May 2016

Appendix 1: Mapping of 2010 to 2015 Audiovestibular Medicine curricula

Section	2010 Curriculum	2015 Curriculum	Rationale
2.1 Purpose of the curriculum: Links to Stages of Training (pages 3-4)	Trainees who have successfully completed basic training in otolaryngology will need to acquire certain core medical competences (CMT) prior to progression in Audiovestibular Medicine. Trainees from other disciplines will need to acquire and demonstrate competences in otorhinolaryngology and in paediatrics and developmental paediatrics if this training has not been covered during core training.	Trainees who have successfully completed basic training in otolaryngology will need to acquire certain core medical competencies. All trainees, regardless of their core training pathway, will need to demonstrate competencies in general medicine, in otorhinolaryngology and in paediatrics and developmental paediatrics as detailed in the content of learning section. If any of these competencies have not been covered during core training before entering Audiovestibular Medicine, the trainee will be expected to acquire them during appropriate secondments early in the training programme	This is for clarification and to ensure equal access to training
2.3 Entry requirements (page 5)	Trainees transferring from Otolaryngology (ENT surgery) require full MRCS plus DOHNS now known as MRCS(ENT) (MRCS parts A and B or parts 1 and 2 and also part 3, where this is part of the full MRCS examination, plus full DOHNS) or FRCS(ENT)	Trainees transferring from Otolaryngology (ENT surgery) require MRCS(ENT) or FRCS(ENT) and must have at least six months experience in ENT surgery	This section has been updated for accuracy and clarifies the clinical experience in ENT expected for trainees entering from this route
3.2 Programme Content: Knowledge base (page 9)	The diploma in Audiovestibular Medicine forms the knowledge based tuition and assessment of this specialty and is essential for the award of the CCT. Trainees usually complete the diploma on a part-time basis over the first two years of training. The syllabus for the diploma (Appendix 2) is appended	<p>The basic sciences of anatomy and physiology of the audiovestibular system; physics, acoustics and psychoacoustics; and clinical diagnostics (the theory of audiovestibular testing) – please see content of learning H.1, H.2 and H.3 - require specialist tuition and assessment which will be delivered via modules of an Audiology- themed MSc course. Trainees will usually complete these modules as part of a postgraduate certificate, which will normally be undertaken on a part-time basis in the first two years of training.</p> <p>The small size of the specialty means that it is not feasible to run a full specialty certificate examination to assess the knowledge base of</p>	This section has been altered to reflect that trainees no longer need to complete a full diploma and the taught knowledge base and assessment is described. References to the Dip as an assessment method have been removed and modular assessment has been added where appropriate (see

		the clinical aspects of the curriculum. The specialty is currently piloting a formative knowledge-based assessment method. The KBA has been mapped to the syllabus as a possible assessment method where appropriate. The KBA will be subject to a submission for future evaluation by the GMC	implementation guidance on JRCPTB website). The KBA is being piloted and has been mapped to the syllabus as a possible assessment method but will need to be approved by the GMC as a formal assessment method.
3.3 Good Medical Practice (page 9)	This section has been updated with a generic amendment in line with the 2013 edition of GMP and the content of learning has been mapped to the updated version		
3.4 Syllabus list H Additional Topics (page 11)	H Additional Topics 1 Basic sciences 2 Preventive Audiology 3 Hearing instruments	H Additional Topics 1. Basic sciences – Anatomy and Physiology 2. Basic Sciences – Physics, Acoustics, Psychoacoustics 3. Clinical Diagnostics 4. Radiological Investigation 5. Prevention of Audiovestibular Disorders 6. Hearing Instruments	This syllabus list has been revised to reflect the changes to section H of the content of learning
C. 11 Practical procedures in Paediatric Audiological Medicine (page 36)		Modular assessment indicated as a possible assessment method for the knowledge items: <ul style="list-style-type: none"> The anatomy and physiology of the ear and auditory pathways including central connections The theoretical basis of audiological testing including physics, acoustics and psychoacoustics 	Modular assessment replaces the diploma as the knowledge assessment method where appropriate (see implementation guidance on JRCPTB website)
D.1. Imbalance in children (page 38)		Additional knowledge: <ul style="list-style-type: none"> The detailed anatomy and physiology of the vestibular system and its central connections The embryology and development of the vestibular system Minor amendments made to wording of existing content in D.1 and D.2 Dizziness in children (p39) to include reference to locomotor skills,	To include relevant knowledge which was previously only detailed in the diploma syllabus with possible assessment methods (see implementation guidance on JRCPTB

		psychology/ psychologist and psychosocial development	website)
D.3 Practical Procedures in Paediatric Vestibular Medicine (p41)		<p>Modular assessment indicated as a possible assessment method for the knowledge items:</p> <ul style="list-style-type: none"> • The detailed anatomy and physiology of the vestibular system and the central vestibular pathways • The theoretical basis of vestibular testing 	Modular assessment replaces the diploma as a knowledge assessment method where appropriate (see implementation guidance on JRCPTB website)
F.9 Practical procedures in Adult Audiological Medicine (page 54)		<p>Modular assessment indicated as a possible assessment method for the knowledge items:</p> <ul style="list-style-type: none"> • The anatomy and physiology of the auditory pathway • The theoretical basis of audiological testing including physics, acoustics and psychoacoustics • The indications for the various audiological tests • The values, limitations and practical difficulties of audiological testing 	Modular assessment replaces Dip as knowledge assessment method where appropriate (see implementation guidance on JRCPTB website)
G.6. Practical Procedures in Vestibular Medicine (page 61)		<p>Modular assessment indicated as a possible assessment method for the knowledge items:</p> <ul style="list-style-type: none"> • The detailed anatomy and physiology of the vestibular system and its central connections • The theoretical basis of vestibular testing including recently developed tests which may only be used on a research basis e.g. off-axis rotation and subjective visual vertical and horizontal • The indications for vestibular testing • The values, limitations and practical difficulties of vestibular testing • Age-related changes in postural control and responses to visuo-vestibular stimulation • How eye movement disorders may interfere with vestibular testing procedures 	Modular assessment replaces the diploma as a knowledge assessment method where appropriate (see implementation guidance on JRCPTB website)

<p>H.1 Basic Sciences Anatomy and Physiology (page 63)</p>	<p>H.1 Basic Sciences</p> <p>To gain a comprehensive knowledge of the basic sciences related to the audiovestibular system and related organs To gain a knowledge of phonetics, speech reception and speech production To gain a knowledge of room acoustics To gain a detailed knowledge of British and International standards relating to audiology, Audiovestibular Medicine and calibration</p> <p>Level Descriptor</p> <ol style="list-style-type: none"> 1. Basic anatomy and physiology of the audiovestibular system 2. Detailed knowledge of anatomy, physiology and embryology of the audiovestibular system 3. Good understanding of acoustics 4. Shows evidence of a good understanding of room acoustics, standards of testing and maintenance of the testing environment in clinic <p>Plus syllabus for diploma module Anatomy and Physiology of the Audiovestibular System (appendix 2)</p>	<p>H.1 Basic Sciences – Anatomy and Physiology</p> <p>To gain a comprehensive knowledge of the detailed anatomy and physiology of the audiovestibular system and related organs To gain a knowledge of phonetics, speech reception and speech production</p> <p>Level Descriptor</p> <ol style="list-style-type: none"> 1. Shows evidence of good basic knowledge of the anatomy, physiology and embryology of the audiovestibular system. Evidence of satisfactory completion of a taught course at MSc level. 2. Shows evidence of understanding of basic science in everyday clinical practice with simple cases 3. Shows evidence of understanding basic sciences in everyday clinical practice with moderately complex cases. 	<p>The basic sciences content of the 2010 curriculum relating to anatomy and physiology and the diploma module Anatomy and Physiology of the Audiovestibular System have been amalgamated into the revised H.1 section: Basic Sciences - Anatomy and Physiology</p> <p>The knowledge content will be taught and assessed through the PGCert modules (see implementation guidance on JRCPTB website)</p> <p>The level descriptors have been updated to reflect the new material and assessment methods</p>
<p>H.2 Basic Sciences – Physics, Acoustics and Psychoacoustics Aims (page 64)</p>	<p>H.1 Basic Sciences</p> <p>To gain a comprehensive knowledge of the basic sciences related to the audiovestibular system and related organs To gain a knowledge of room acoustics To gain a detailed knowledge of British and International standards relating to audiology, Audiovestibular Medicine and calibration</p>	<p>H.2 Basic Sciences – Physics, Acoustics and Psychoacoustics</p> <ul style="list-style-type: none"> • To gain a comprehensive knowledge of the basic sciences related to the audiovestibular system and related organs • To gain a knowledge of room acoustics • To gain a detailed knowledge of British and International standards relating to audiology, audiovestibular medicine and 	<p>The basic sciences content of the 2010 curriculum relating to Physics, Acoustics and Psychoacoustics and the diploma module Audiovestibular Physics have been amalgamated into the revised H.2 section:</p>

	<p>Level Descriptor</p> <ol style="list-style-type: none"> 1. Basic anatomy and physiology of the audiovestibular system 2. Detailed knowledge of anatomy, physiology and embryology of the audiovestibular system 3. Good understanding of acoustics 4. Shows evidence of a good understanding of room acoustics, standards of testing and maintenance of the testing environment in clinic <p>Plus syllabus for diploma module Audiovestibular Physics (appendix 2)</p>	<p>calibration</p> <p>Level descriptor</p> <ol style="list-style-type: none"> 1. Evidence of satisfactory completion of a taught course in basic sciences at MSc level. 2. Shows evidence of a good understanding of acoustics in clinical practice. 3. Shows evidence of a good understanding of room acoustics, standards of testing and maintenance of the testing environment in clinic. Shows evidence of a good understanding of psychoacoustics. 	<p>Basic Sciences - Physics, Acoustics and Psychoacoustics</p> <p>The knowledge content will be taught and assessed through the PGCert modules (see implementation guidance on JRCPTB website)</p> <p>The level descriptors have been updated to reflect the new material and assessment methods</p>
<p>H.3 Clinical Diagnostics (page 65)</p>	<p>Syllabus for diploma module Clinical Diagnostics for Audiovestibular Medicine (appendix 2)</p>	<p>H.3 Clinical Diagnostics</p> <p>To understand and have a comprehensive knowledge of the theory, methodology, interpretation and applications of audiovestibular tests</p> <p>To understand the strengths and limitations of audiovestibular tests</p> <p>To be aware of new developments in audiovestibular testing</p> <p>To be able to choose the appropriate test battery for site of lesion testing in patients with audiovestibular presentations</p> <p>To understand the value of radiological investigation</p> <p>To be able to request appropriate imaging and interpret the results in the light of the clinical picture.</p> <p>Level descriptor</p> <ol style="list-style-type: none"> 1. Evidence of successful completion of taught programme of basic audiological science at MSc level 	<p>This section incorporates the knowledge previously contained in the diploma syllabus into the main curriculum.</p> <p>The knowledge content will be taught and assessed through the PGCert modules (see implementation guidance on JRCPTB website)</p>

		<p>2. Demonstrates good clinical application of audiological test battery to simple clinical cases in both adult and paediatric practice. Demonstrates appropriate requests for imaging across a range of simple cases.</p> <p>3. Demonstrates good clinical application of audiological test battery to moderately complex clinical cases in both adult and paediatric practice. Demonstrates appropriate requests for imaging across a range of moderately complex cases.</p>	
H.4 Radiological Investigation (page 66)	Syllabus for diploma module Clinical Science Allied to Audiovestibular Medicine (appendix 2)	<p>H.4. Radiological Investigation</p> <p>To understand the value of radiological investigation in audiovestibular pathology</p> <p>To be able to request appropriate imaging and interpret the results in the light of the clinical picture.</p>	This section incorporates the knowledge outlined in the diploma syllabus into the main curriculum and defines the knowledge, skills and behaviours required
H.5. Prevention of Audiovestibular Disorders (page 67)	<p>H.2 Preventive Audiology</p> <ul style="list-style-type: none"> • To know the general principles of primary, secondary and tertiary prevention • To gain a comprehensive knowledge of noise and its effect on the audio-vestibular system • To gain a detailed knowledge of ototoxicity and its effect on the audiovestibular system • To understand the epidemiology of audiovestibular pathologies and their prevention • To develop a comprehensive knowledge of screening for hearing loss • Basis of current interventions and strategies to prevent or ameliorate damage in the auditory system 	<p>H.5. Prevention of Audiovestibular Disorders</p> <ul style="list-style-type: none"> • To know the general principles of primary, secondary and tertiary prevention • To gain a comprehensive knowledge of noise and its effect on the audiovestibular system • To gain a detailed knowledge of ototoxicity and its effect on the audiovestibular system • To understand current interventions and strategies to prevent or ameliorate damage to the auditory system • To understand the epidemiology of audiovestibular pathologies and their prevention • To develop a comprehensive knowledge of screening for hearing loss 	Elements of H.2 Preventive Audiology in the previous curriculum have been combined with relevant content in the diploma module Anatomy and Physiology of the Audiovestibular System to create a new section which defines the knowledge, skills and behaviours required for prevention of audiovestibular disorders

	Plus diploma syllabus for module Anatomy and Physiology of the Audiovestibular System		
H.6. Hearing Instruments (page 69)	<p>Level Descriptor</p> <ol style="list-style-type: none"> 1. Some experience of managing patients with hearing aids 2. Good theoretical understanding of hearing aid and ear mould technology 3. Practice of hearing aid fitting, use of test box, RECD and insertion gain 4. Good understanding and experience of measuring the benefit of amplification 5. Understanding and experience of cochlear implant and BAHA use and fitting 	<p>Level Descriptor</p> <ol style="list-style-type: none"> 1. Some experience of managing patients with hearing aids 2. Good understanding of the theory of hearing aid and ear mould technology 3. Understanding of hearing aid fitting, use of test box, RECD and insertion gain 4. Good understanding of measuring the benefit of amplification 5. Understanding and experience of cochlear implant and BAHA use and fitting 	The level descriptor has been revised to reflect that in practice an AVM doctor no longer fits hearing aids but are required to know the relevant theory and benefits
I.13 Genetics Knowledge (page 79)	<p>To demonstrate knowledge of: The inheritance patterns of hearing loss Common syndromes associated with hearing loss and how these can be identified Tests available for genetic conditions associated with audiovestibular disorders The psychological impact of genetic disorders</p> <p>Diploma syllabus for module Anatomy and Physiology of the Audiovestibular System: 2.7 Molecular Genetics</p>	<p>To demonstrate knowledge of: The inheritance patterns of hearing loss The molecular basis of genetic deafness Common syndromes associated with hearing loss and how these can be identified Tests available for genetic conditions associated with audiovestibular disorders The psychological impact of genetic disorders</p>	The molecular basis of genetic deafness has been added to 2010 content from the diploma syllabus to reflect significant advances in this area of genetics. Trainees will cover this content during a secondment in Clinical Genetics which remains unchanged
J.3. Audit and Research (page 87)		<p>The value of quality improvement projects to improve patient care Model the change expected through service improvement as a consequence of audit or quality improvement projects Participate actively in a research project or clinical trial</p> <p>Quality Improvement Project Assessment Tool (QIPAT) added to section 5.3 Assessment Methods</p>	<p>Additional reference to reflect the value of quality improvement projects and the option to use the QIPAT</p> <p>This section also reflects where the knowledge content can be taught and assessed through the</p>

			PGCert module (see implementation guidance on JRCPTB website)
4.1 The training programme (page 94)	<p>The curriculum recommends, as an approximate guide only, across the 5 year programme with 30 days study leave each year:</p> <ol style="list-style-type: none"> 1. 60 days study leave for a diploma in Audiovestibular Medicine. This is taken part time over a 2 to 5 year period. 2. 90 days study leave for appropriate off-the-job education 	<p>The curriculum recommends, as an approximate guide only, across the 5 year programme with 30 days study leave each year:</p> <ol style="list-style-type: none"> 1. 20 to 30 days study leave for taught modules in Basic Sciences taken part-time over 2 years. 2. 120 -130 days study leave for appropriate off-the-job education 	<p>The number of study days required for the taught element of the curriculum has been reduced from 60 to 20-30 to reflect the reduction in the number of modules to be completed. The number of days study leave remaining for other education has increased</p>
4.2 Teaching and Learning Methods (pages 95-96)	<p>Specific Teacher Inputs These include:</p> <ul style="list-style-type: none"> • The diploma in Audiovestibular Medicine which provides a taught theoretical course that covers the knowledge base for the specialty 	<p>Specific Teacher Inputs These include:</p> <ul style="list-style-type: none"> • Taught theoretical modules that cover the knowledge base for the specialty 	<p>To reflect the change to the taught component</p>
4.2 Teaching and Learning Methods (page 96)	<p>Essential Courses The STCs maintain current lists of other recommended courses, both local and national, which the trainee may attend</p>	<p>Courses Trainees need to demonstrate the required outcomes (knowledge, skills and competence) in:</p> <ul style="list-style-type: none"> • Cardio Pulmonary Resuscitation – adult and child • Child Safeguarding level 3 • Safeguarding vulnerable adults • Dizziness • Aetiology • Management skills • Equality and Diversity or Equal Opportunity training <p>Please refer to the JRCPTB specialty webpage (www.jrcptb.org.uk/specialties/audio-vestibular-</p>	<p>This section has been changed in line with GMC requirements that curricula articulate intended outcomes rather than mandate any specific courses or providers.</p> <p>SAC approved suggested methods to meet these outcomes are included in the implementation guidance on JRCPTB website</p>

		medicine) for suggested methods for demonstrating these outcomes (eg national and trust/regional courses)	
5.3 Assessment Methods (page 99)	<p>Examinations and Certificates</p> <p>The Diploma in Audiovestibular Medicine from University College London</p> <p>Advanced Life Support Certificate (ALS) for adults and children</p> <p>British Sign Language Stage 1</p> <p>The Diploma in Audiovestibular Medicine forms the knowledge based tuition and assessment of this specialty and is essential for the award of CCT. Trainees complete the diploma on a part-time basis over the first two years of training. A description and outline of the objectives of the diploma and the syllabus for the diploma (Appendix 2) are appended.</p> <p>The diploma is awarded following successful completion of 8 separate modules:</p> <ol style="list-style-type: none"> 1. Audiovestibular Physics (<i>AUDLGAV1</i>) 2. Anatomy and Physiology of the Audiovestibular System for Audiovestibular Physicians (<i>AUDLGAV2</i>) 3. Clinical Diagnostics for Audiovestibular Medicine (<i>AUDLGAV3</i>) 4. Clinical Sciences Allied to Audiovestibular Medicine (<i>AUDLGAV4</i>) 5. Vestibular Medicine and Rehabilitation (<i>AUDLGAV5</i>) 6. Adult Audiological Medicine and Rehabilitation (<i>AUDLGAV6</i>) 7. Paediatric Audiological Medicine and Rehabilitation (<i>AUDLGAV7</i>) 8. Research Methods and Statistics (<i>EARIGA01</i>) 	<p>Examinations and Certificates</p> <p>Taught modules in basic science at MSc level</p> <p>Advanced Life Support Certificate (ALS) for adults and children</p> <p>British Sign Language Stage 1</p> <p>Child safeguarding Level 3</p> <p>Trainees are required to attend taught modules in basic sciences at MSc level as identified in the syllabus and to provide evidence of satisfactory attainment in assessment of the material learnt. Suitable modules offered as part of MSc courses have been identified and mapped to the curriculum (see syllabus and appendix 2).The basic scientific knowledge needed to practise Audiovestibular Medicine is not covered at any other point in medical training to the degree required.</p> <p>Trainees will normally complete the modules as part of a postgraduate certificate (60 credits) and can complete additional module(s) which will be of relevance to Audiovestibular Medicine and can be used to demonstrate knowledge in other areas of the curriculum (eg Research Methods). Trainees may opt to undertake a diploma or MSc but this is not compulsory.</p> <p>A specialty knowledge-based assessment (KBA) is currently being piloted in Audiovestibular Medicine and has been mapped to the curriculum as a possible assessment method. The KBA is formative and trainees will be expected to demonstrate satisfactory progress throughout training.</p>	This section has been revised to reflect the changes to the taught component and knowledge assessment

	<p>The diploma covers the subject matter needed to practise in Audiovestibular Medicine. It is a theoretical course intended to provide knowledge that underpins and complements speciality training in the field. It is designed to be delivered within 60 days over 2 years on the basis of one day a week and therefore does not impact on the clinical component of ST3 – ST7 but ensures that solid theoretical knowledge accompanies and enhances clinical training. The knowledge needed to practice Audiovestibular Medicine is not covered at any other point in medical training and the depth of comprehension needed requires a taught degree. The course involves taught components or lectures, individual study and tutorials; learning is assessed through prepared essays, presentations and unseen written examinations (see Appendix for the syllabus)</p>		
<p>5.5 ARCP Decision Aid (page 102)</p>	<p>The ARCP decision aid has been updated to reflect:</p> <ul style="list-style-type: none"> • Diploma no longer required but taught modules in basic sciences to be completed • QIPAT added as an assessment requirement • Knowledge based assessment added with footnote to clarify arrangements during the pilot phase. This will be updated when the pilot is completed and a submission will be made for GMC approval • Outcomes requiring attendance on courses • Footnotes have been updated for clarity 		

Appendix 2: MSc taught modules mapping to 2015 Audiovestibular Medicine curriculum

Key information

Cardiff Metropolitan University MSc Advanced Practice Programme – Audiology pathway	University of Manchester MSc Audiology or MSc Clinical Sciences (Neurosensory Science)	University College London MSc Otology and Audiology
<p>PG Cert comprising 4 modules (60 credits), can be studied part-time</p> <p>Estimated fees: £600 per module, £2400 for PGCert (March 2016)</p> <p>Modules:</p> <ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation • Applied Research methods (optional) • Fourth module is flexible <p>The MSc Advanced Practice a generic programme with seven specific pathways, one of which leads to MSc Advanced Practice (Audiology). The audiology modules focus on diagnosis and assessment in several specific areas of clinical audiology by providing advanced theoretical knowledge and training.</p> <p>Module delivery will vary according to specific learning needs but will include lectures, tutorial and seminars, as well as extensive use virtual learning. Each module is assessed by coursework; portfolio, presentations, reflections, reports and case studies. All modules are externally moderated.</p>	<p>PG Cert comprising 4 modules (60 credits), can be studied part-time</p> <p>Estimated fees: £1000 per module, £4000 for PGCert (March 2016)</p> <p>Modules:</p> <ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences • Vestibular Assessment and Management • Research Methods (optional) or clinical module <p>Trainees will have a choice between modules delivered in the MSc Audiology and the MSc Clinical Sciences (Neurosensory Sciences). Both programmes provide the theoretical, practical and clinical basis of neurosensory science, which includes audiological science.</p> <p>Students participate in a range of teaching and learning methods including lectures, small group work, seminars, problem-based learning and online learning. Assessment methods include: essays, case studies, assessed seminar presentations, literature reviews, OSCEs and reports.</p>	<p>PG Cert comprising 4 modules (60 credits), can be studied part-time</p> <p>Estimated fees: £955 per module, £3820 for PGCert (March 2016)</p> <p>Modules</p> <ul style="list-style-type: none"> • Anatomy and Physiology of the Audiovestibular System • Audiovestibular Physics • Clinical Diagnostics • Research Methods (optional) or clinical module <p>The Otology and Audiology MSc is structured to provide the theoretical, scientific, clinical, research and vocational skills necessary to practice enhanced otology, audiovestibular medicine and audiology.</p> <p>The programme is delivered through a combination of lectures, seminars and observation at accredited clinical placements. Assessment is through a combination of methods including unseen examinations, written assignments (essays and a dissertation), case presentations, clinical portfolios and vivas.</p>

Mapping of modules to syllabus content

	Cardiff Metropolitan University MSc Advanced Practice Programme – Audiology pathway	University of Manchester MSc Audiology or MSc Clinical Sciences (Neurosensory Science)	University College London MSc Otology and Audiology
<p>C.11. Practical Procedures in Paediatric Audiological Medicine</p> <ul style="list-style-type: none"> • The anatomy and physiology of the ear and auditory pathways including central connections • The theoretical basis of audiological testing including physics, acoustics and psychoacoustics 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences • Vestibular Assessment and Management 	<ul style="list-style-type: none"> • Anatomy and Physiology of the Audiovestibular System • Audiovestibular Physics • Clinical Diagnostics
<p>D.1. Imbalance in Children</p> <ul style="list-style-type: none"> • The detailed anatomy and physiology of the vestibular system and its central connections • The embryology and development of the vestibular system 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science 	<ul style="list-style-type: none"> • Anatomy and Physiology of the Audiovestibular System
<p>D.3. Practical Procedures in Paediatric Vestibular Medicine</p> <ul style="list-style-type: none"> • The detailed anatomy and physiology of the vestibular system and the central vestibular pathways • The theoretical basis of vestibular testing 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences 	<ul style="list-style-type: none"> • Anatomy and Physiology of the Audiovestibular System • Audiovestibular Physics • Clinical Diagnostics
<p>F.9. Practical Procedures in Adult Audiological Medicine</p> <ul style="list-style-type: none"> • The anatomy and physiology of the auditory pathway • The theoretical basis of audiological testing including physics, acoustics and psychoacoustics • The indications for the various audiological tests • The values, limitations and practical difficulties of audiological testing 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences 	<ul style="list-style-type: none"> • Anatomy and Physiology of the Audiovestibular System • Audiovestibular Physics • Clinical Diagnostics

	Cardiff Metropolitan University MSc Advanced Practice Programme – Audiology pathway	University of Manchester MSc Audiology or MSc Clinical Sciences (Neurosensory Science)	University College London MSc Otology and Audiology
<p>G.6. Practical Procedures in Vestibular Medicine</p> <ul style="list-style-type: none"> • The detailed anatomy and physiology of the vestibular system and its central connections • The theoretical basis of vestibular testing including recently developed tests which may only be used on a research basis e.g. off-axis rotation and subjective visual vertical and horizontal • The indications for vestibular testing • The values, limitations and practical difficulties of vestibular testing • Age-related changes in postural control and responses to visuo-vestibular stimulation • How eye movement disorders may interfere with vestibular testing procedures 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences • Vestibular Assessment and Management 	<ul style="list-style-type: none"> • Anatomy and Physiology of the Audiovestibular System • Audiovestibular Physics • Clinical Diagnostics
<p>H.1. Basic Sciences – Anatomy and Physiology</p> <p>Knowledge of:</p> <ul style="list-style-type: none"> • Basic cell biology as it pertains to the inner ear and central connections • The detailed anatomy, physiology and biochemistry of the audiovestibular system and related organs, including central pathways and connections • The anatomy and physiology of the speech production system • The embryological development of the ear, central nervous system and speech production system • Recent advances in molecular biology, repair and regeneration in relation to the cochlea and vestibular system • The effect of loss of sensory input on the 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences • Vestibular Assessment and Management 	<ul style="list-style-type: none"> • Anatomy and Physiology of the Audiovestibular System • Audiovestibular Physics • Clinical Diagnostics

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auditory pathway during development and in the adult			
<p>H.2. Basic Sciences – Physics, Acoustics, Psychoacoustics</p> <ul style="list-style-type: none"> • Signals and systems • The physics of sound and its measurement • The transfer function of the middle ear and the general concept of impedance • Biophysics and physiological signals in the inner ear • Measurement of hearing function • Basic psychoacoustics • The working principles of audiovestibular testing equipment • Standards and calibration of audiovestibular equipment • Basic acoustics including room acoustics and the requirements for sound proofing 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences • Vestibular Assessment and Management 	<ul style="list-style-type: none"> • Audiovestibular Physics • Clinical Diagnostics
<p>H.3. Clinical Diagnostics</p> <p>The theory and methodology of audiovestibular tests</p> <ul style="list-style-type: none"> • Interpretation of audiovestibular tests • The strengths and limitations of audiovestibular tests. Identification of potential problems, pitfalls and artefacts • The value of a battery of tests in patients with audiovestibular presentations • New developments in audiovestibular testing and their value 	<ul style="list-style-type: none"> • Advanced Diagnostic Audiology and Rehabilitation • Balance Disorders and Rehabilitation 	<ul style="list-style-type: none"> • Neurosensory Science • Clinical applications of neurosensory sciences • Vestibular Assessment and Management 	<ul style="list-style-type: none"> • Audiovestibular Physics • Clinical Diagnostics
<p>J.3. Audit and Research</p> <p>To understand the principles and value of audit and research</p>	<ul style="list-style-type: none"> • Applied Research methods 	<ul style="list-style-type: none"> • Research Methods 	<ul style="list-style-type: none"> • Research Methods