

Key:

Common competency framework competences Medical leadership framework competences



ROYAL COLLEGE OF OBSTETRICIANS & GYNAECOLOGISTS: ACADEMIC CURRICULUM

1. This Academic Curriculum is to be used by all academic trainees and their Academic Supervisors to determine achievable goals for their training which will be assessed annually at the Annual Academic Review and used to inform the combined clinical/academic Annual Review of Competence Progression (ARCP).
2. The rate of progress will vary from one trainee to another according to the amount of time they have for academic activity and the type of research being undertaken.
3. The Curriculum is also flexible to allow for trainees where there is discrepancy between clinical and academic experience, e.g. those who have undertaken an undergraduate PhD programme.
4. Assessment is principally based on academic outputs that are subject to peer review by other academic colleagues.
5. All assessments will form part of a portfolio that will be kept by the trainee.

GLOSSARY OF TERMS

AAR – Annual Academic Review

ACF – Academic Clinical Fellowship

ACL – Academic Clinical Lecturer

AMS – Academy of Medical Sciences

ARCP – Annual Review of Competence Progression

AS – Academic Supervisor

CTA – Clinical Trial Authorisation

CV – Curriculum Vitae

GMC – General Medical Council

IRAS – Integrated Research Application System

MHRA – Medicines and Healthcare products Regulatory Agency

MRC – Medical Research Council

NHS – National Health Service

NIHR – National Institute for Health Research

O&G – Obstetrics and Gynaecology

PDP – Personal Development Plan

RCOG – Royal College of Obstetricians and Gynaecologists

R&D requirements – Research and Development requirements

OOPR – Out of Programme for Research

R&E – Research and Enterprise

R&I – Research and Innovation

SOPs – Standard Operating Procedures

ST – Specialty Trainee

Module 1 - Generic and Applied Research

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Learning outcomes:

- Develop and undertake a research project.
- Obtain funding to undertake research
- Develop collaborative working practices

Training pathway	Knowledge criteria	GMP	Academic competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/ assessment
Starting out in research								
	Knowledge of proposed research area Local research strengths National research strengths Research fellowship opportunities	1	Identify research question	1	Respect for scholarship Attention to detail and accuracy Sensitivity to ethical issues	1,2,4	University departments Academic/Educational/Clinical Supervisors RCOG Website http://www.rcog.org.uk Access to electronic libraries and relevant journals	Draft protocol for research project assessed by future Academic Supervisor
	Availability of academic expertise (locally and nationally) in area of interest	3	Identify research supervisor	3	Multidisciplinary approach	3	University departments Academic/ Educational/ Clinical Supervisors RCOG Website http://www.rcog.org.uk Mentor	Academic Supervisor identified
	Topic area Methodology Statistics	1	Critical appraisal of paper or research proposal Evaluation of the published literature Awareness of strength of evidence	1,2	Ability to obtain, receive and incorporate advice	1	Journal clubs Research meetings Taught courses	Presentation of paper at a journal club (AS or other senior academic) Presentation of research proposal at research meeting (AS or other senior academic) Contributing to a review article for a peer-reviewed publication or writing literature review



Training pathway	Knowledge criteria	GMP	Academic competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/ assessment
Carrying out research								
Develop research proposal	Literature review and appraisal relating to topic and methodology Experimental design and research methodologies e.g. observational and experimental research design Statistical tests	1	Define the hypothesis Define research questions and aims Knowledge of relevant literature Define appropriate methods Perform a sample size calculation Pre-determine statistical analysis to be performed Identify funding streams	1,2,	Desire for new knowledge and excellence	1	Supervisors Graduate School Statistician	Contribution to a submission for a funding application (AS)
Development of study/trial protocol	Previously published research regarding topic and methodology	1	Explain justification for study Awareness of potential risks and risk minimisation Justification of participants/animals/ data/tissues Develop database/data management strategy Devise statistical analysis plan Develop operating procedures	1,2,3	Appreciation of the need for high quality proposals Knowledge of regulations governing research	1,2	Supervisors Clinical Trials Unit Statistician Health and Safety Support from local R&D office or equivalent	Devise a protocol for research(AS)
Application for appropriate project approvals e.g. Sponsorship, Research and Development , Clinical Trial Authority, Home Office, Caldicott Guardian, NIHR Portfolio Adoption	Application process (IRAS system) Understanding of project Local and national research governance bodies	1,4	Completion of IRAS submission (incorporating ethics) R&D Submission Home office personal or project licence-CTA application Data access application	2,4	Respect for patient's rights Awareness of cultural diversity Ability to communicate the rationale of the research and ethical considerations Patience	2,4	R&D Office Academic Supervisors Research Councils for example: MRC Clinical Trials Toolkit (http://www.ct-toolkit.ac.uk/) NIHR http://www.nihr.ac.uk	Acknowledgement of approval to carry out research from the ethics committee and R&D



Training pathway	Knowledge criteria	GMP	Academic competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/assessment
Develop study documents	Ethical Committee regulations and requirements. Good Clinical Practice	2,4	Development of appropriate study documentation (e.g. patient information leaflet/ consent forms/case report form/data collection Adverse incident reporting Site files (SOPs)	2,3,4	Performing of ethical research	2,3,4	MRC Data and Tissues Toolkit (http://www.dt-toolkit.ac.uk/home.cfm) MRC Experimental Medicine Toolkit (http://www.em-toolkit.ac.uk/home.cfm) Home office (http://www.homeoffice.gov.uk/science-research/animal-research)	Forms approved by Ethics Committee including: Study consent form Patient information leaflet Data collection form
Carry out research study e.g. laboratory project, clinical trial, educational project	Knowledge of relevant research techniques Health and Safety aspects Refinement of method Analysis methods	1,2	Completion of experiment Analysis of findings	1	Seek help when necessary Time management	3	Academic Supervisor Research methodologies course	Documentation of experiments in lab book/log
Research techniques and technologies	Knowledge of relevant research techniques e.g. laboratory, clinical trials, epidemiology or educational methodologies Knowledge of emerging techniques and technologies and advances in field	1	Ability to design and carry out experiments, trials and analysis Identification of relevant techniques to advance research	1	Logical thinking	1	Academic Supervisors and colleagues Scientific and medical publications Research methodology course Journal club Seminars	Documentation of work – lab book/log/analysis/ participant records (AS)



Training pathway	Knowledge criteria	GMP	Academic competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/ assessment
Writing a fellowship or grant application	Understand requirements of funding body Evidence previous research experience Publication record Understanding of proposed research project Available training opportunities	1,3	Compiling a CV Literature reviewing Understanding requirements of different funding bodies	3, 1	Determination to succeed Attention to detail Enthusiasm for continued enquiry	2	Academic Supervisors Funding bodies	Evidence of application for external funding e.g. travel fellowship, grant
Study closure	Responsibility for end of study procedures Ethical, R&D , CTA requirements for end of study	1,2,4	Archiving of consent, data and tissues Reports and notifications Anonymisation of data and samples	1,2,4	Attention to detail	2	R&D Office Supervisors MRC Clinical Trials Toolkit (http://www.ct-toolkit.ac.uk/) MRC Data and Tissues Toolkit (http://www.dt-toolkit.ac.uk/home.cfm) MRC Experimental Medicine Toolkit (http://www.em-toolkit.ac.uk/home.cfm) Home office (http://www.homeoffice.gov.uk/science-research/animal-research)	Documents demonstrating appropriate closure of study Archiving of data Lab book/study log
Managing a grant	Understand the process for ordering consumables Planning how the research will be undertaken Costing the research Ability to write a report	1,3	Financial management	1	Time management Supervision of other research and administrative staff	1,3	Academic Supervisors Courses (often held by the University) aimed at teaching management skills Department/ centre management	Letters confirming the following: A progress report(s) that is/ are acceptable to the funding body(s) A final report acceptable to the funding body Feedback from funding body

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Academic career development and progression	Research experience Publication record Available training opportunities Appropriate funding streams	1,3	Developing CV <i>Application for fellowship/ senior lectureship</i> Planning academic skill acquisition	3, 1	<i>Ambition to further the profession</i>	1	Academic Supervisors Funding bodies Opportunity to rehearse interviews/ presentations etc	<i>Successful application for fellowship/ post</i> Personal development Plan (PDP) Annual Academic Assessment and ARCP



Module 2 – Research Governance

Learning outcomes:

- Perform ethical research within the frame work of the appropriate governance structures
- Understand legislation relevant to undertaking research
- Understand implications of legislation for research in both animals and humans

Training pathway	Knowledge criteria	GMP	Academic competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/assessment
Research legislation	Relevant legislation and ethics surrounding research e.g.: Home Office and Animal Licences Storage of human tissue Data protection and patient data legislation	1,2,4	Maintain appropriate licences and approvals for research	1,2,4	Awareness of the requirements of clinical governance especially probity	2,4	Research methodology course Local Research Network course MRC online resources Supervisor Caldicott Guardian Home Office Inspector MHRA	Adherence to appropriate standards and legislation Evidence of course attendance
Research infrastructure	NIHR structure and function - local - national - clinical study groups	1	Utilisation of research networks and support	3	Not applicable		University department/graduate school Research Councils NIHR http://www.nihr.ac.uk	Record of attendance at local specialty group or clinical study group
Research integrity	Issues surrounding fraud/scientific misconduct Awareness of complex dilemmas in scientific research Plagiarism	1,2,4	Knowledge of issues around misuse of research How to report concerns about research conduct Following Good Clinical Practice	4	Desire to develop ethical research practice	4	GMC Research methodology course Local Research Network course MRC online resources Academic Supervisor Home Office Inspector MHRA	Record of attendance at an appropriate course Ability to use appropriate plagiarism software



Module 3 – Communication and Teaching

Learning outcomes:

- Communicate research both verbally and written.
- Communicate with both professional and lay audiences.
- Learn the skills of peer review
- Acquire teaching skills in academic areas additional to those required by clinical specialist trainees.

Training pathway	Knowledge criteria	GMP	Academic competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/ assessment
Research presentation	Ability to put together a presentation Use of presentation software (e.g. PowerPoint/ Keynote)	3	Communicate research project and results	3	Ability to present data clearly Ability to answer challenging questions	3,1	IT department Academic Supervisor Graduate School Presentation practice	Presentation given to academics/ doctors - local - national - <i>international</i> (Presentations are assessed by senior academics for content, delivery and scientific merit)
Writing a paper/ abstract	Understanding of topic Interpretation of data Synthesis of data	1,3	Succinctly describe research/ audit project	1,3	Good written communication skills	3	Academic Supervisor Postgraduate skills courses	Response to reviewer's comments. (This is achieved by amending the paper and responding to each of the comments made and would be validated by the other authors on the paper) Published paper in peer-review journal
Write a thesis	Understanding of submission and examination process	1,3	Writing skills Timely completion of thesis i.e. within the time allocated by the University	2	Clarity of thought Ability to write logically and incisively Attention to detail Coping with disappointing results Analytical and writing skills Engagement with audience/ public	1,3	Supervisor Courses on writing a thesis given by the University	Award of higher degree

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<i>Dissemination of research to the public</i>	Understanding of topic Communication skills Public Engagement	1,3,4	<i>Liaison with patient groups</i> <i>Write a press release</i> <i>Give a press interview</i> <i>Develop web page/personal profile</i>	3	Communication of science to lay audience	3	Academic Supervisor Postgraduate skills courses Media Training (from University or other professional body)	<i>Personal profile</i> <i>Comment in media</i> <i>Public engagement lecture</i>
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Training pathway	Knowledge criteria	GMP	Academic competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/ assessment
<i>Knowledge transfer</i>	<i>Interaction with industry</i> <i>Interaction with patients</i> <i>Commercialisation of research</i>	3	<i>Understanding Intellectual Property (IP)</i> <i>Contracts</i>	1,2	<i>Not applicable</i>		<i>R&E/ R&I/R&D</i>	<i>Commercialisation of research idea</i>
Collaboration	Knowledge of what is required for authorship Planning research applications	3	Knowledge of implications of Intellectual Property issues Clinical Research Networks.	1,2,3	Ability to reach compromise	3	Networking courses Participation in conferences RCOG Academic Committee Mentor	Report of participation in collaboration -local -national -international e.g. peer-reviewed paper or grant application
<i>Peer review</i>	<i>Grants</i> <i>Papers</i>	<i>1,2,3</i>	<i>Writing commentary</i> <i>Write a review (grant or paper)</i> <i>Understanding research evaluation (REF)</i>	3	<i>Provide fair criticism</i>	3	<i>Courses</i> <i>Supervisor</i> <i>Mentor</i>	<i>Publication of commentary</i> <i>Grant or paper review</i>
Teaching (Also addressed generically in Clinical Curriculum)	Understanding of research topic Teaching methods	1,3	Teach a research skill Teach about research topic	3	Ability to communicate specialist topic clearly	3	'Training the trainers' course (For consultants and experienced academic and clinical staff)	Evidence of delivery of educational seminar/lecture
Academic Leadership and Management (REFERENCE CLINICAL CURRICULUM MODULE 19)	How an academic departmental team works effectively Understand the management structure of the laboratory/ clinical research unit/ medical education Unit	3,4	<i>Lead a team project</i> <i>Conflict resolution</i> <i>Chair a meeting</i> <i>Development of research group</i> <i>Management of research staff</i>	3,4	<i>Academic Leadership</i> <i>Diplomacy</i>	1,3,4	Observation of large committees	<i>Chair of group or committee</i>

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	Becoming an academic consultant (either clinical academic or consultant with an ongoing academic interest)	1,3,4						
Teaching (reference Clinical Curriculum Module 2)	Understanding of research topic Teaching methods Assessment of research students and undergraduate medical students Understand undergraduate O&G curriculum Understand undergraduate assessment	1,2,3	Teach a research skill Teach about research topic Appraise progress e.g. of medical student Organise medical student teaching Use different formats to deliver teaching Participate in undergraduate assessments	3	Demonstrate willingness and ability to teach different training levels and the academic team members	2	'Training the Trainers' course University senior staff Academic Supervisor	Deliver educational seminar/lecture Perform assessment of research student

Notes

- The curriculum is aimed to facilitate goal-setting
- Not all outputs will be 'compulsory' but should be seen as examples
- Audit is omitted as it is included in clinical training