Academic Skills and Outputs

Academic skills can be broadly divided into three domains and examples of each of these domains are given below. It is the responsibility of the academic supervisor to determine which of these generic academic skills are relevant to an individual trainee during the training period and to develop a training programme accordingly.

1. Generic and applied research skills

Examples include:
Identifying a research supervisor
Identifying a research topic
Defining a research question
Observational and experimental research design
Developing a research proposal
Writing a grant application
Critical appraisal of a paper or topic
Carrying out an experiment
Data interpretation and statistical analysis
Writing a research paper or thesis
Commercialisation of research outputs

2. Research Governance

Examples include:
Research ethics and how it is monitored (including COREC processes)
Information storage and retrieval
Patent and Intellectual Property issues
Laboratory safety
Clinical trials / clinical trials legislation
Home Office and Animal Licences
Animal husbandry
Storage of human tissue
NHS structure and regulations
Fraud/Scientific misconduct
Knowledge of issues around misuse of research
Research and Integrity (awareness of complex dilemmas in scientific research).

3. Communication/Education

Examples include:
Writing skills
Verbal presentation skills
Electronic media / audio-visual presentation skills
Poster presentations
Teaching skills/experience
Supervision skills/experience
Science and the Media
Effective networking and collaboration
Collegiality/ability to work co-operatively and creatively with colleagues
Assertiveness skills