Higher Specialist Scientific (HSS) Training

My journey so far…

Graham Henderson – Lead Clinical Scientist

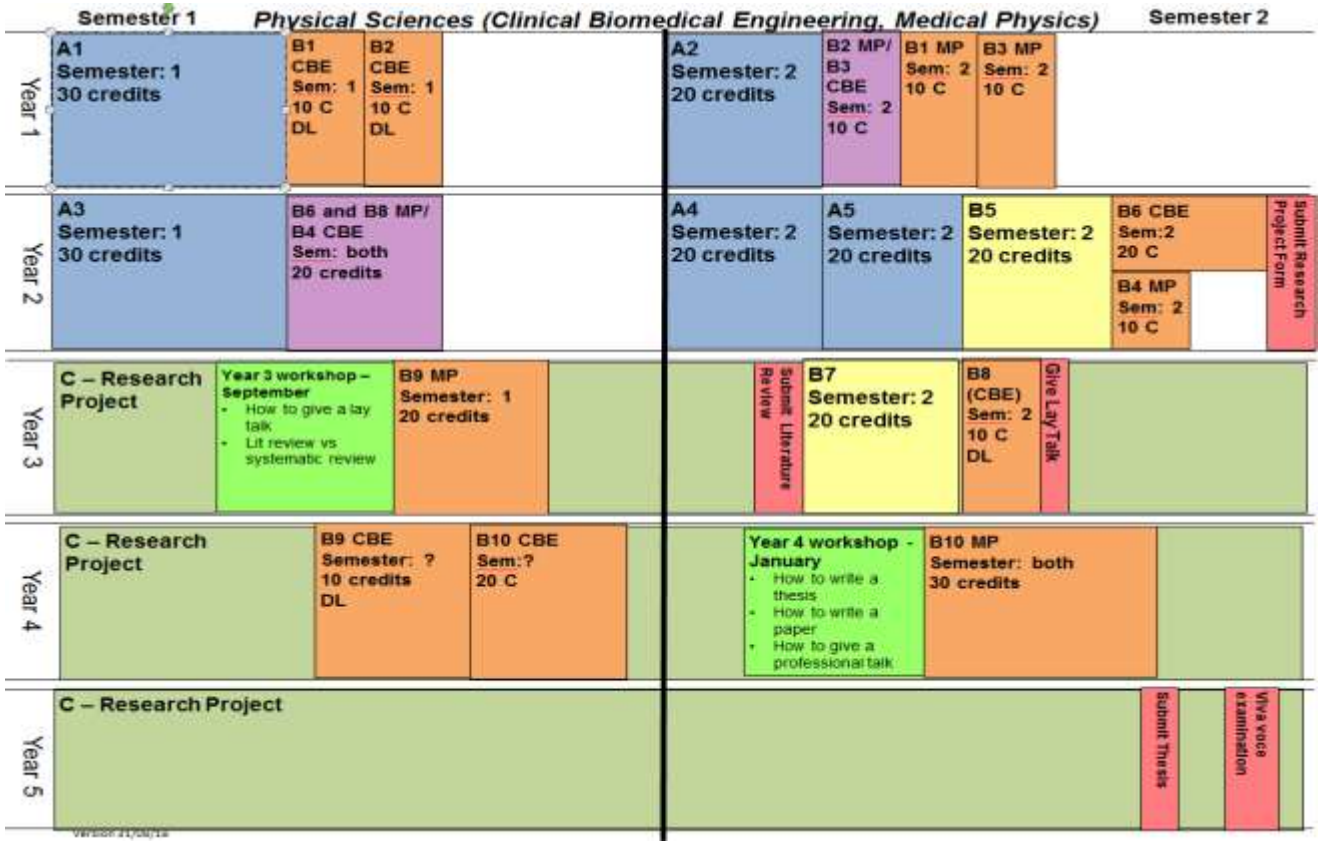
My career before HSS training

- Undergraduate Honours degree in Mechanical Design Engineering.
- Scottish Medical Physics and Clinical Engineering Training scheme.
- MSc in Bioengineering.
- Completed the training scheme at the SMART Centre and worked as a qualified Clinical Scientist in gait analysis and environmental controls.
- Moved to Newcastle to take up a role as a Lead Clinical Scientist working in Custom Design Service and Gait Analysis Service.
- Started HSST.

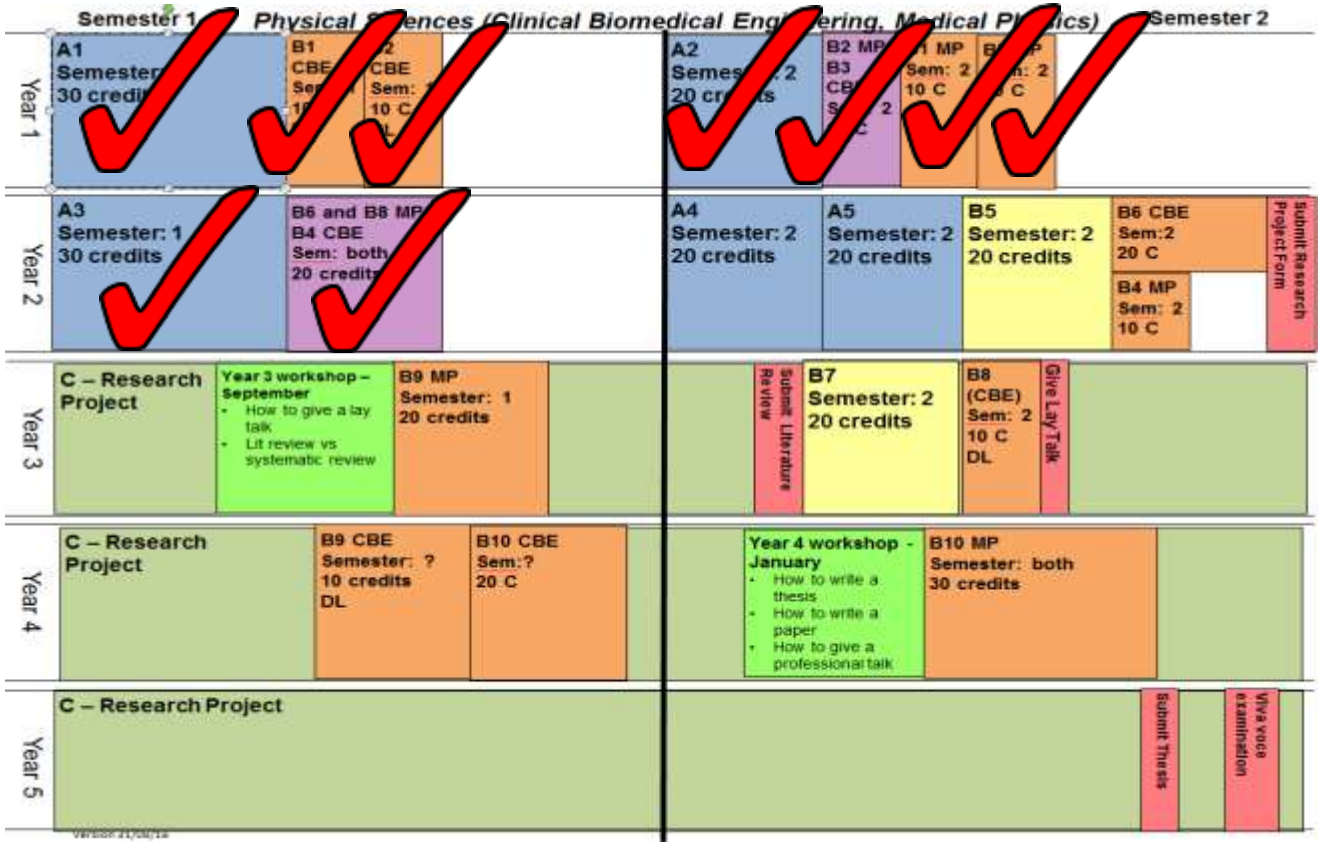
Why HSS training?

- Two main reasons:
  - To develop Leadership and Management skills
  - To continue working on research themes

HSS overview



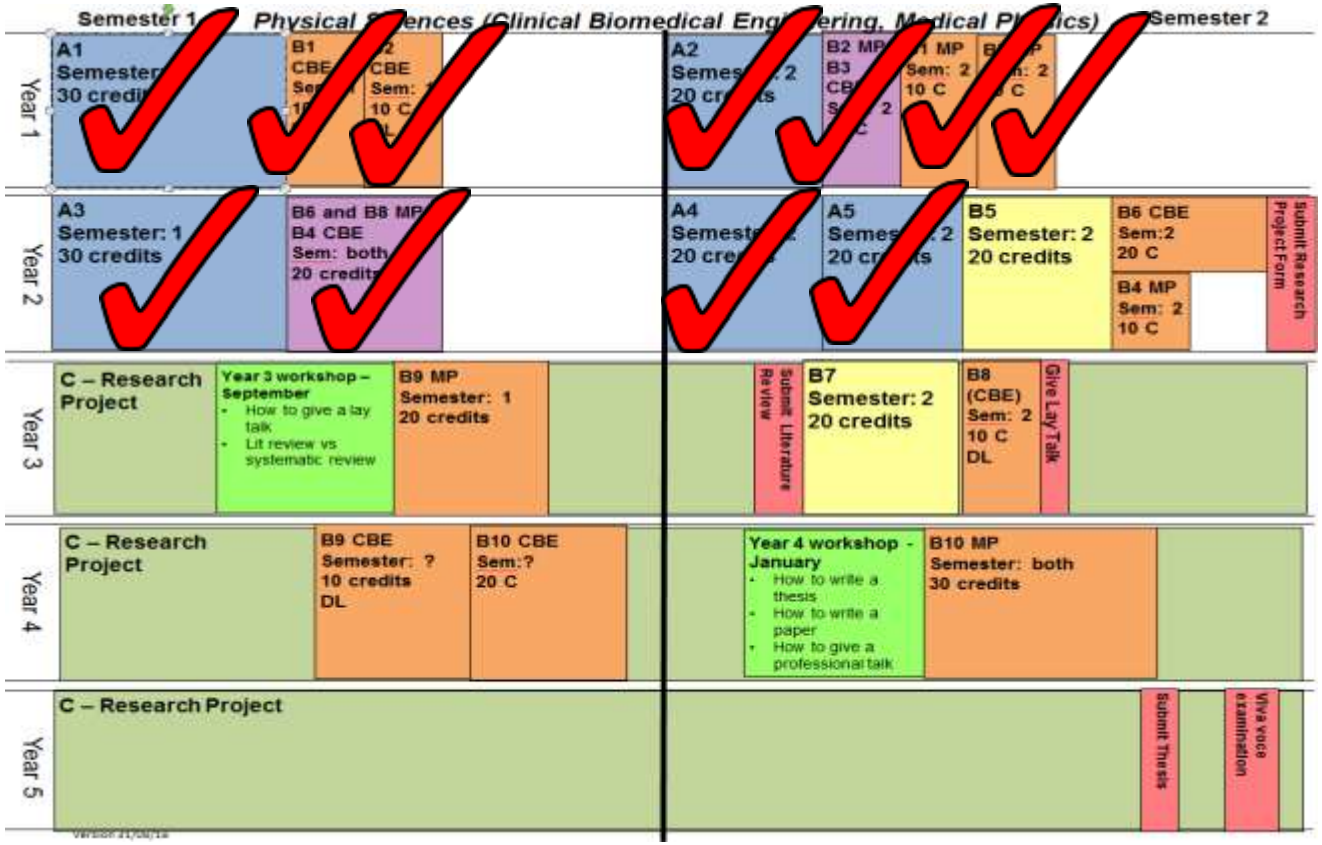
HSS progress up to February 2020



Obstacles…

- Moved from Newcastle back to Edinburgh.
- Global Pandemic.
- Working on stock control for a face visor manufacturing unit.

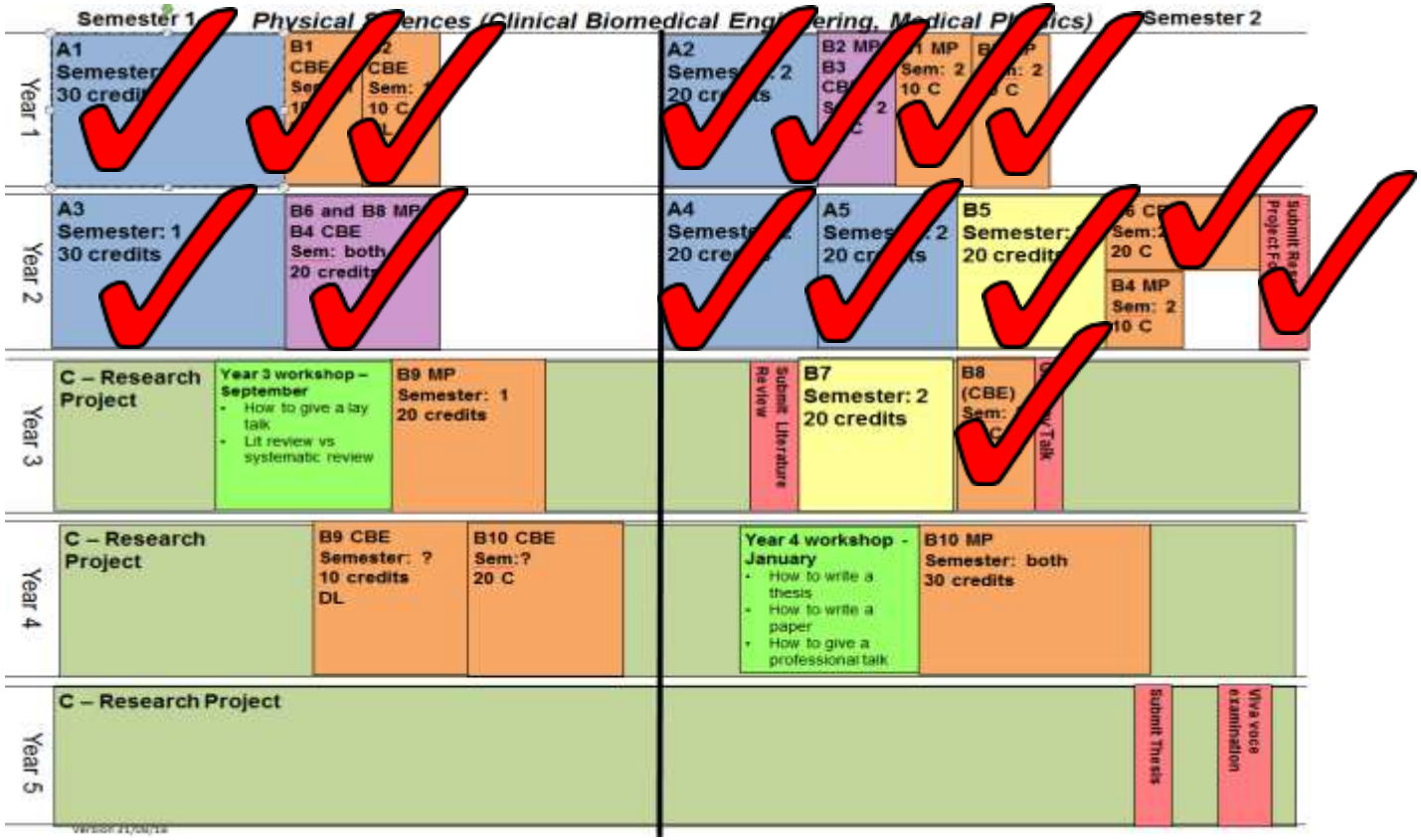
HSS progress up to September 2020



NES HSS training support

- In Autumn 2020 I was successful in obtaining support from NES to complete my programme.
- My application form explained how I would meet the 3 pillars both via the DClinSci and through on the job training.

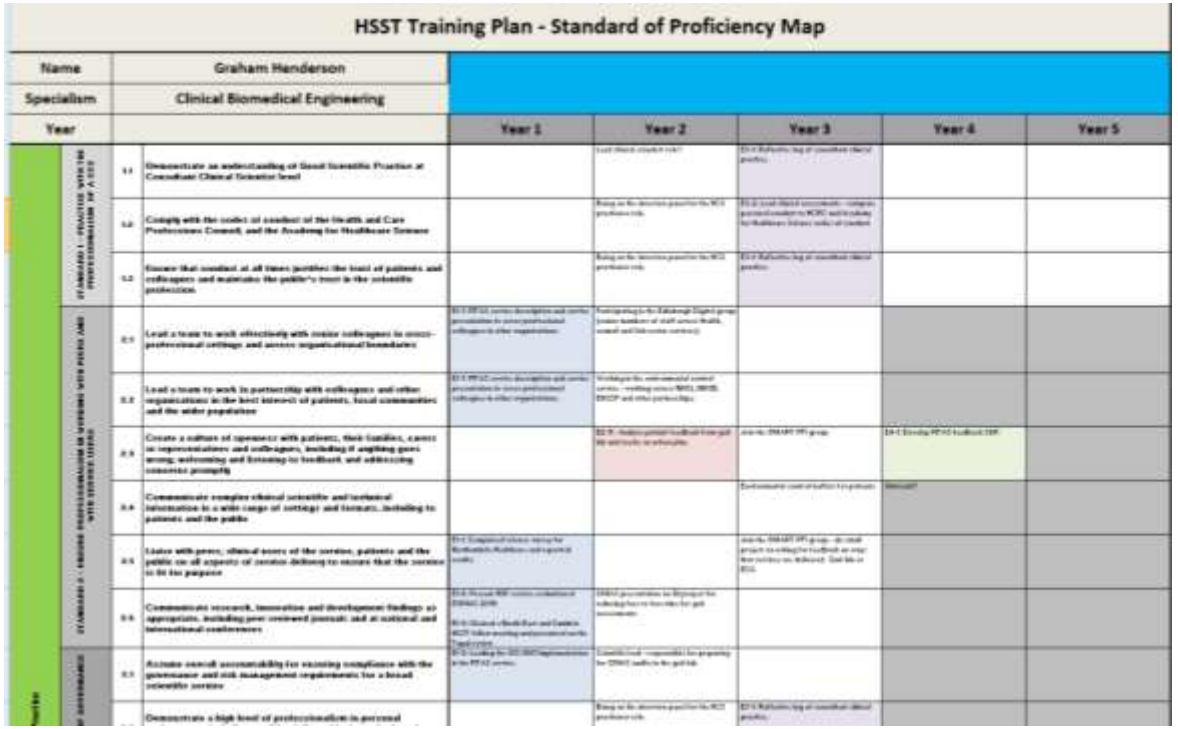
HSS progress to date



HSS research project

- To investigate the effectiveness of existing environmental control systems. Exploring whether these devices are meeting peoples' needs and having a positive impact on their lives.
- To investigate the potential of using smart glasses for interacting with assistive technology.

HSS training plan



HSST Training Plan - Standard of Proficiency Map

Name	Graham Henderson					
Specialism	Clinical Biomedical Engineering					
Year		Year 1	Year 2	Year 3	Year 4	Year 5
STANDARD 1 - PRACTISE WITH THE PROFESSIONAL KNOWLEDGE OF A CCE	1.1 Demonstrate an understanding of Good Scientific Practice at Consultant Clinical Scientist level					
	1.2 Comply with the codes of conduct of the Health and Care Professions Council, and the Academy for Healthcare Science					
	1.3 Ensure that conduct at all times justifies the trust of patients and colleagues and maintains the public's trust in the scientific profession					
STANDARD 2 - ENSURE PROFESSIONAL RELATIONSHIPS WITH PEERS AND WITH SERVICE USERS	2.1 Lead a team to work effectively with senior colleagues in cross-professional settings and across organisational boundaries					
	2.2 Lead a team to work in partnership with colleagues and other organisations in the best interest of patients, local communities and the wider population					
	2.3 Create a culture of openness with patients, their families, carers or representatives and colleagues, including if anything goes wrong, welcoming and listening to feedback and addressing concerns promptly					
	2.4 Communicate complex clinical scientific and technical information to a wide range of settings and formats...including to patients and the public					
	2.5 Liaise with peers, clinical users of the service, patients and the public on all aspects of service delivery to ensure that the service is fit for purpose					
	2.6 Communicate research, innovation and development findings as appropriate, including peer reviewed journals and at national and international conferences					
STANDARD 3 - ENSURE GOVERNANCE	3.1 Assume overall accountability for ensuring compliance with the governance and risk management requirements for a broad scientific service					
	Demonstrate a high level of professionalism in personal					

HSS training plan

Year 2 (2021-2022)	Continuation of academic component of HSST scheme *(£6,300)*	*NHS Lothian*	Sep 2021	August 2022	12 months	Michael Dolan	Michael.dolan@nhslothian.scot.nhs.uk
Year 2	Research project (no cost)	*NHS Lothian*	Sep 2021	August 2022	12 months	Michael Dolan and academic supervisor TBC	Michael.dolan@nhslothian.scot.nhs.uk and academic supervisor TBC
Year 2	Review and implementation of new biomechanical models (no cost)	*NHS Lothian*	March 2022	August 2022	6 months	Michael Dolan	Michael.dolan@nhslothian.scot.nhs.uk
Year 2	Review of public engagement within the department (no cost)	*NHS Lothian*	March 2022	April 2022	2 months	Michael Dolan	Michael.dolan@nhslothian.scot.nhs.uk

Year 3 (2022-2023)	Continuation of academic component of HSST scheme *(£6,300)*	*NHS Lothian*	Sep 2022	August 2023	12 months	Michael Dolan	Michael.dolan@nhslothian.scot.nhs.uk
Year 3	Research project (no cost)	*NHS Lothian*	Sep 2022	August 2023	12 months	Michael Dolan and academic supervisor TBC	Michael.dolan@nhslothian.scot.nhs.uk and academic supervisor TBC

Future plans

- Recently taken up a more senior position within the SMART centre and I want to further develop in this role by utilising the leadership and management skills that I have gained.
- I would like to use my research project as a vehicle to develop academic links with Universities and to look at applying for grants to undertake more research.
- Continue implementing new technologies within the services that I lead and to work with colleagues to develop new services within the assistive technology field.

Reflections on HSS training

- Important to emphasise the amount of work undertaken in your own time.
- Need to have a supportive department and scope to use projects that you are already working to form the basis of your assignments.
- Some of the modules could be more focused on clinical engineering.
- Ultimately worthwhile and the skills and knowledge you learn and can have a real impact on the services that you work in.