

SACIDS Africa Centre of Excellence (SACIDS-ACE)

MPhil/MRes/MRes Student Log 2017/18



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Acknowledgement

This document, which has been prepared by the SACIDS-ACE Research and Training Team, taking into account the baseline requirements and practices by the Sokoine University of Agriculture (SUA) and Muhimbili University of Health and Allied Sciences (MUHAS), has benefited from similar documents from the Royal Veterinary College University of London, the London School of Hygiene and Tropical Medicine, University of London and The Pirbright Institute. We thank these UK institutions for their support and permission for us to adopt aspects that we judged to be relevant to the needs of Africa.

This forms an integral part of the Smart Partnership arrangements between SACIDS and these institutions, efforts towards benchmarking the SACIDS-ACE MPhil/MRes/MRes programme to the UK research development framework.

1. Key Contacts

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2. Welcome Letter

The SACIDS Africa Centre of Excellence (SACIDS ACE) is justifiably proud to be judged excellent at delivering both high quality MPhil/MRes/MRes education and high quality research. The Centre supports a rigorous MPhil/MRes programme offered by the Sokoine University of Agriculture (SUA) and Muhimbili University of Health and Allied Sciences (MUHAS). This has a threefold purpose namely to produce excellent research scientists, to make our unique facilities more widely available to other institutions in the region through collaboration and co-supervision and lastly to strengthen the links between the Centre and universities.

The SACIDS ACE staff are committed to supporting the training and education of all MPhil/MRes/MRes students under the support of the Centre. This MPhil/MRes/MRes Student Logbook has been developed purposely to assist you in developing and advancing your academic, discipline-specific and transferable (professional, generic) skills leading to a successful completion of your MPhil/MRes/MRes studies.

We wish you all the best in your studies.

Prof Gerald Misinzo
Centre Leader

If found

This log forms an important part of the student's development. If found, please return it to the SACIDS ACE Secretariat/ DRPGS - SUA or DRPGS - MUHAS and it will be forwarded to the student.

Alternatively you can post it to:

The SACIDS ACE Secretariat
Sokoine University of Agriculture
P. O. Box 3297 Chuo Kikuu
Morogoro
TANZANIA

Student's name:

Department:

Campus:

Important Contacts

- 1.
- 2.
- 3.

3. Rationale and how to use the log

Purpose of the Log

This log has been prepared to assist you throughout your degree programme at the SACIDS ACE. It provides a framework for recording details related to your research programme, scheduled supervisory meetings and activities associated with skills development. The log will also help you to assess your progress and to plan and chart evidence of the development of the academic and discipline specific skills and key skills you will need to become an effective researcher.

In education and employment there is an increasing emphasis on an individual's transferable (professional; generic) skills. It is important to be able to demonstrate that these skills have been actively developed over time. The skills development self assessment referred to in the log will help you to identify the skills that you possess and assist you in planning a personal development programme as part of your academic studies.

You are therefore asked to assess your skills in a more formal, reflective, way before the first formal supervisory session and again at the end of each year of study.

How to use the log

You are asked to document 'formal' **supervisory meetings** in Section 4. It is not intended that you use it to record the (far) more frequent 'informal' meetings that will typically take place several times per week/month. You and your supervisor(s) will agree how the records of those meetings should be kept. However it is recommended that students email a short summary of the main points discussed to their supervisor(s) immediately after the meeting. The log is for you to retain but **certain pages, which are clearly marked, must be copied and sent to the SACIDS ACE Research and Training Officer for records. In addition, at each appraisal scheduled annually, the completed log should be shown to your appraisers.**

The **self assessment process (Learning Needs Analysis - LNA)** referred to in this log may not be familiar to you but it is quite simple and flexible in its design. Evidence of the development of skills does not necessarily take the form of a certificate or award; rather it is a measure of your accomplishment whether you were acting alone or as part of a team. Feedback from others, especially supervisors, also constitutes useful evidence. It will strengthen your claim to have mastered a variety of situations, personal as well as professional, in which you may have demonstrated your skills. Increasingly, employers are asking for such examples at interview and in continuing professional development.

Having carried out the initial assessment, you should be able to identify those skills that you may need to develop further. You can then monitor how you are progressing with developing your skills set by repeating the LNA questions during the course of your study.

Student's Summary Record

Surname:		
Forenames(s):		
Department:		
Research CoP:		
Degree:		
Student location		
Room no:	Floor:	Building:
Tel:	E-mail:	Campus:
Student Assessment		
Departmental assessor:		
Non departmental assessor:		
Student Funding		
Is the student in receipt of a SACIDS ACE studentship?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If No, state major source of funding:		
Is funding received from any other source?		
SUPERVISORS		
Supervisor 1:	E-mail:	Department:
Supervisor 2:	E-mail:	Department:

Additional supervisors or change of supervisor [if change of supervisor, indicate date(s)]

Date	Period	Main Observation	Supervisor's recommendation(s)
	Year 1 appraisal:		
	Completing research student status:		
	Thesis submission:		
	Degree awarded:		

To be copied to the SACIDS ACE Research and Training Officer

The SACIDS ACE MPhil/MRes/MRes Programme: the student journey and the role of the supervisor

The table below is intended for MPhil/MRes/MRes supervisors, members of Communities of Practice (CoPs), students and other stakeholders in the programme. It describes the key requirements that students have to fulfil with approximate timescales.

Student action	Timescale	Supervisor action	Others involved
Selected for the ACE programme, thematic area agreed and supervisor allocated	Before start of ACE MPhil/MRes/MRes programme		
SS1 <ul style="list-style-type: none"> • Initial discussion about concept (Preliminary research concept) • Agree core training courses to attend and enter in training plan in Student Log • Notes of meeting in Student Log 	Month 1	Initiate meeting	
Attend student induction programme	Month 1	Some supervisors will help deliver the induction programme	ACE induction team
<ul style="list-style-type: none"> • Carry out learning needs analysis for transferable skills • Make additions to training plan 	Month 1 at induction	Discuss training plan at next quarterly meeting/provide encouragement for student to attend training	Induction team
Submit concept note (preliminary research proposal)	By end of month 1	Help student to develop concept note	To be reviewed and approved by registering university
SS2 <ul style="list-style-type: none"> • Attend supervision meeting • Prepare progress report using ACE template in Student Log 	• Month 3	<ul style="list-style-type: none"> • Hold formal supervision meeting • Discuss progress report 	CoP members

Student action		Timescale	Supervisor action	Others involved
	<ul style="list-style-type: none"> Send progress report to ACE Training and Research Officer via the primary supervisor 			
	Attend core courses: Biostatistics, Research Methodology, Bioethics, Epidemiology	October – December	Encourage/facilitate student to attend training	ACE Research and Training Officer, host departments
	<ul style="list-style-type: none"> Conduct literature review and draft research proposal (including plan and budget) Submit proposal to primary supervisor for sharing within the CoP 	Within first 6 months	Advise on literature review, read and comment on draft research proposal	CoP members
	Submit progress report to university using form provided for this purpose	Month 6 and every 6 months	Provide guidance	
SS3	<ul style="list-style-type: none"> Prepare progress report for ACE and discuss with supervisor Send quarterly report to Centre Research and Training Officer through primary supervisor Identify specific training needs in relation to the research project and make additions to the training plan 	Month 6	<ul style="list-style-type: none"> Hold formal supervision meeting Discuss student's progress report to ACE Help student to identify specific training needs related to the research project 	Research and Training Officer, CoP members
	Submit full research proposal for approval by university Postgraduate committee	Month 7	Intensive support to ensure student develops robust proposal	Research and Training Officer, CoP members
	Finalise full registration at university once research proposal has been approved	Month 7-8		Postgraduate Director signs off
	<ul style="list-style-type: none"> Implement research project Attend specialist training 	Ongoing	Intensive guidance from supervisor	Other members of the supervisory team, Research and Training Officer, Finance Officer,

Student action		Timescale	Supervisor action	Others involved
				Procurement Officer
SS4	Meet supervisor, discuss progress and send quarterly report to Centre Research and Training Officer through the primary supervisor	Month 9	Review progress, provide guidance	Research and Training Officer, CoP members
	Seminar presentation on research progress	Month 8-9	<ul style="list-style-type: none"> Attend seminar. Give verbal feedback on presentation skills. 	
SS5	Participate in annual appraisal process, submit: <ul style="list-style-type: none"> Peer reviewed review paper arising from literature review Quarterly progress report against research plan Update on training plan Attend appraisal meeting 	Month 11-12	<ul style="list-style-type: none"> Hold formal supervision meeting. Review the student's submissions and offer advice. Attend the appraisal meeting 	2 external assessors
	Submit progress report to university using form provided for this purpose	Month 12		
SS6	<ul style="list-style-type: none"> Attend meeting with supervisor and discuss research progress (including preparation of manuscripts) and prepare quarterly report to ACE and submit report to Centre Research and Training Officer through your primary supervisor 	Month 15	Hold formal meeting with student to review progress, advice and support	CoP members
	Pre-submission to ACE: presentation of complete results and manuscripts for publication (1 submitted, 1 in preparation)	By Month 18	Intensive support	Hosting department and other members of the supervisory team, Research and Training Officer, CoP members
	Submission of dissertation to university	By Month 18 - 19	Facilitate submission	Head of department, Dean/Principal and

Student action	Timescale	Supervisor action	Others involved
			Director of postgraduate studies
Viva Voce	By Month 21 - 22	Liaise with university management	Head of department, Dean/Principal and Director of postgraduate studies
MPhil/MRes/MRes Award	By Month 24		Registering university

4. Record of meetings with supervisor

Initial Supervisory Session

*To be filled in by the student **before** the first Supervisory Session.*

SACIDS email account	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Student supervisor assigned?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Working title of research project		
First Learning Needs Analysis completed?	Yes <input type="checkbox"/>	No <input type="checkbox"/> Date:

A. SS1: First formal meeting with supervisor

- Initial discussion about concept (Preliminary research concept), Agree core training courses to attend and enter in training plan in Student Log, Notes of meeting in Student Log. Attend student induction programme, Carry out learning needs analysis for transferable skills, Make additions to training plan, Submit concept note (preliminary research proposal).

*To be completed **during** the Supervisory Session.*

Have you attended induction programme?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Did you carry out learning needs analysis for transferable skills?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you had initial discussion about concept with your supervisor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you agreed on core training courses to attend?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you entered the agreed training courses in training plan?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Notes of the meeting:		
Have you submitted your research concept note to your supervisor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Confirmation (sign below)		
Date:		
Supervisor:		
Student:		
(Second Supervisor):		

To be copied to the SACIDS ACE Research and Training Officer

B. SS2: Three months supervisory session ~ 3

Attend supervision meeting, prepare progress report using Centre quarterly reporting template, attend core courses

*To be completed by the student **before** supervisory session.*

Have you attended supervision meeting?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Notes of the meeting:		
Have you prepared and submitted your quarterly report to the Centre Research and Training Officer through your primary supervisor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you attended core courses?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If your answer is yes please list them.		
Supervisor and Student		
Have you read the University Guidelines for Good Practice in Research, attended the compulsory training session during induction programme	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you attended the compulsory Biosafety training session?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you read and completed the SACIDS ACE Code of Practice document?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you attended the appropriate training courses e.g. Biostatistics, Bioethics, Research Leadership and Management course, etc?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you conducted literature review and drafted research proposal (including plan and budget)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you submitted proposal to primary supervisor for sharing within the CoP?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you submitted progress report to university using form provided for this purpose?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Particular academic needs identified	Yes <input type="checkbox"/>	No <input type="checkbox"/>

To be copied to the SACIDS ACE Research and Training Officer

C. SS3: Six months supervisory session ~ 6

Prepare progress report for ACE and discuss with supervisor, Send quarterly report to Centre Research and Training Officer through primary supervisor, Identify specific training needs in relation to the research project and make additions to the training plan

To be completed by the student **before** supervisory session

Have you prepared a progress report for ACE and discuss with supervisor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Have you sent your quarterly report to Centre Research and Training Officer through primary supervisor?			
Have you identified specific training needs in relation to the research project and make additions to the training plan			
Supervisor and Student			
Are there other skills you want to develop?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
If yes, which ones?			
Any agreed changes to direction of research?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Notes of the meeting:			
Particular academic needs identified	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Agreed research proposal and activities	Time frame		
•			
•			
•			
•			
Confirmation (sign below)			
Date:			
Supervisor:			
Student:			
(Second Supervisor):			

To be copied to the SACIDS ACE Research and Training Officer

D. SS4: Nine months supervisory session ~ 9

Submit full research proposal for approval by university postgraduate committee, Finalise registration at university once research proposal has been approved, Implement research project, attend specialist training, meet supervisor, discuss progress and send quarterly report to Centre Research and Training Officer through the primary supervisor, Seminar – present research proposal.

Have you submitted your full research proposal for approval by university postgraduate committee?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Did you finalise registration at university once research proposal has been approved?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Have you prepared and submitted your quarterly report to the Centre Research and Training Officer through your primary supervisor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Have you attended any specialist training?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If your answer is yes, please mention			
Did you attend seminar presentation about your research proposal?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Supervisor and Student			
Particular academic needs identified?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
If yes, which ones?			
Confirmation (sign below)			
Date:			
Supervisor:			
Student:			
(Second Supervisor):			

To be copied to the SACIDS ACE Research and Training Officer

E. SS5: Eleven to Twelve months supervisory session ~ 11-12

Participate in annual appraisal process, submit: Peer reviewed review paper arising from literature review, Quarterly progress report against research plan, Submit progress report to university using form provided for this purpose Update on training plan and credits gained, attend appraisal meeting.

Have you participated in the annual appraisal process?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If no, give details			
Have you submitted a peer reviewed paper arising from literature review?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Have your submitted progress report to university using form provided for this purpose	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Have you prepared and submitted your quarterly report to the Centre Research and Training Officer through your primary supervisor?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Have you attended appraisal meeting?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is there any update on your training plan?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Supervisor and Student			
Particular academic needs identified?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
If yes, which ones?			
Proposed research plan and activities for year 2	Time frame		
•			
•			
•			
•			
Confirmation (sign below)			
Date:			
Supervisor:			
Student:			
(Second Supervisor):			

To be copied to the SACIDS ACE Research and Training Officer

*Reminder: The LNA and review of action points should be completed **before** the appraisal meeting.*

Supervisory Session after Appraisal (Supervisor and Student) <i>End of year 1</i>
<i>To be completed immediately after the first year appraisal</i>

Additional needs identified during the appraisal	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes, please summaries below		
Agreed research plan for year 2 and recommendations originating from the appraisal	Time frame	
•		
•		
•		
•		
•		
•		
Notes of the Meeting:		
Confirmation (sign below)		
Date:		
Supervisor:		
Student:		
(Second Supervisor):		
Discuss Interdisciplinary MPhil/MRes/MRes Seminar 1 (IPS1) presentation and agree principle content		
Notes of the Meeting:		
Confirmation (sign below)		
Date:		
Supervisor:		
Student:		
(Second Supervisor):		

To be copied to the SACIDS ACE Research and Training Officer

F. SS6: Thirty six months supervisory session ~ 15

Attend meeting with supervisor and discuss research progress (including preparation of manuscripts) and prepare quarterly report to ACE and submit report to Centre Research and Training Officer through your primary supervisor.

Have you had a meeting with your supervisor immediately after the appraisal meeting?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you prepared and submitted your quarterly report to the Centre Research and Training Officer through your primary supervisor?		
Have you submitted your thirty six monthly progress report to the university using relevant form?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you had a meeting with your supervisor immediately after the appraisal meeting?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Have you prepared and submitted your quarterly report to the Centre Research and Training Officer through your primary supervisor?		
Have you submitted your thirty six monthly progress report to the university using relevant form?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Supervisor and Student	Month	Yes or No
Pre-submission to ACE: presentation of complete results and manuscripts for publication (1 submitted, 1 in preparation)	By Month 18	
Submission of dissertation to university	By Month 18 - 19	
Viva Voce	By Month 21 - 22	
MPhil/MRes Award	By Month 24	

SUMMARY OF TRAINING COURSES ATTENDED, PRESENTATIONS AND PUBLICATIONS

Courses attended

Title	Date	Internal (SACIDS ACE):	Skills developed:	Other:	Development Area:

Presentations given						
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Presenter	<i>List of presentations given</i>				Stakeholders	Other
	Other	Title	Year	Scientific		

						Meetings

Publications					
Indicate type of publication (e.g. original research paper, research abstract, review article, case report) <i>List of presentations given</i>					
First Author	Other Authors	Title	Journal	Impact Factor	Comments

5. Competence Framework

The SACIDS ACE Competence Framework has been designed to help you think about your current skills, pinpoint gaps in your knowledge, and identify areas for future development. The framework articulates the knowledge, behaviours and attitudes of MPhil/MRes students, from postgraduate studentship to established academic leaders. The framework is divided into four main Development Areas which include Core Skills, Research management skills, transferable skills, and Specific research related skills needed for good research, leadership, management and career development

Development Areas	Skills, Knowledge, Behaviours and Abilities	
Core Skills	Apply principles of Biosafety in conducting multidisciplinary research	<ul style="list-style-type: none"> Understand the principles for Biosafety levels I-IV Properly address Biosafety issues when preparing research project proposals. Develop and recommend Biosafety practices in multidisciplinary research Interpret Biosafety regulations, guidelines, resources and reference information. Conduct risk assessments to determine how to work safely with biohazardous agents and materials and mitigate Biosafety and Biosecurity risks Prepare biohazardous agents and materials for shipping/receiving in accordance with import/export regulations.
	Understand and apply concepts and principles of One Health	<ul style="list-style-type: none"> Be familiar with the concepts and principles of One Health Be able to apply the concepts and principles of one health in multidisciplinary research Identify One Health issues that could benefit from research Be able to work effectively in a multidisciplinary research team focused on One Health
	Develop research concept notes and proposals	<ul style="list-style-type: none"> Define and validate research problems based on a literature review and a coherent analysis of gaps in existing knowledge Write a concept note based on research ideas and problems. Write a research proposal describing research questions, contexts, design, methodologies and address ethical issues
	Able to convey research ideas in English in writing using appropriate scientific language	<ul style="list-style-type: none"> Produce well structured papers and other dissemination materials (posters, leaflets, policy briefs, etc) that convey information clearly and present coherent ideas and arguments
	Able to perform literature search: and critically review relevant literature	<ul style="list-style-type: none"> Use a wide range of methods, tools, techniques and information software to collect and organise information from various primary and secondary sources

		<ul style="list-style-type: none"> ○ Be aware of appropriate software and know how to use them. e.g. Windows, word, excel, power point ○ Use IT to research manage the information • Critically assess the reliability, reputation and relevance of sources of information and recognise the importance of bibliometrics and citations • Manage and work within a context of limited availability of research literature and unreliable internet access.
	Apply Biostatistics in research	<ul style="list-style-type: none"> • Apply appropriate statistical techniques to different types of data • Use statistical software for data analysis • Interpret appropriately the results of statistical analyses • Critically appraise published articles • Package analysed data into disseminable scientific results.
Research management skills	Adhere to professional research code of conduct	<ul style="list-style-type: none"> • Be familiar with the relevant codes of conduct • Understand how research within own field is organised nationally in terms of institutions (e.g. research institutions, ministries, ethics committees, policy making bodies), publications, funding sources • Understand research legislation within own context and internationally.
	Apply ethical principles in research management	<ul style="list-style-type: none"> • Take account of the issues relating to the rights of other researchers, research subjects and others affected by the research.
	Manage research projects	<ul style="list-style-type: none"> • Recruit and manage research team • Manage the administration and the logistics of a research project • Able to set, justify and manage budgets
	Acquire skills necessary for research grant applications	<ul style="list-style-type: none"> • Able to write successful grant applications in future
	Engage effectively with community, professionals and policy makers	<ul style="list-style-type: none"> • Able to identify key people in relation to research. • Create opportunities for interactions • Consult and communicate effectively with different stakeholders
	Establish and maintain effective relationship with supervisors	<ul style="list-style-type: none"> • Able to create a rapport with supervisor(s) and to share information about background and aspirations • Display honesty and self-awareness about strengths and weaknesses and be open to advice and suggestions • Carry out and document the actions agreed in supervision meetings

		<ul style="list-style-type: none"> Communicate clearly what support is needed from supervisor(s)
Transferable skills	Able to work effectively in and to lead teams	<ul style="list-style-type: none"> Understand what makes an effective team Contribute to the overall goals of the team and not only to own personal goals As team leader, communicate the goals and success indicators for the team Motivate team members to perform to a high standard Help the team to review their progress, celebrate success and overcome problems Able to resolve conflicts that may arise among team members
	Able to manage innovation and intellectual property (IP)	<ul style="list-style-type: none"> Understand data ownership rules as they apply to their own research Appropriately manage the deposit of research outputs Able to safeguard intellectual property
	Develop independent and critical thinking	<ul style="list-style-type: none"> Understand arguments and assumptions in scientific papers and assess validity Able to critically analyse and evaluate own scientific findings and those of others.
	Effective written communication	<ul style="list-style-type: none"> Produce concise progress reports Produce high quality scientific papers for publication in a range of media Able to plan and write MPhil/MRes thesis Able to write successful grant applications in future
	Effective oral communication	<ul style="list-style-type: none"> Able to make effective formal presentation to a range of audiences Able to communicate ideas clearly in meetings and other forums
	Public engagement	<ul style="list-style-type: none"> Able to devise appropriate public engagement activities
	Networking	<ul style="list-style-type: none"> Able to develop effective professional networks Able to identify and attend relevant seminars and conferences
	Time management	<ul style="list-style-type: none"> Take responsibility for own time management and personal organisation
	Thinking skills	Able to think creatively and solve problems
	Leadership	<ul style="list-style-type: none"> Able to reflect on own leadership skills and take steps to further develop as a leader Communicate and engage with peers
	Career Management	Able to plan and develop own career
	Individual students will agree these competences with their supervisors	Able to identify specific research skills essential in own work.
Specific research related skills		

In developing this framework we have consulted SACIDS-ACE faculty on what skills are needed for good research and we have also drawn from other frameworks such as the Vitae Researcher Development Framework and the Malaria Consortium Career Development Framework for African Researchers.

6. Learning Needs Analysis

Using the Learning Needs Analysis (LNA) Questionnaire to record Your skills attainment and progress.

The LNA is comprised of a set of questions mapped to the SACIDS ACE Competence Framework, grouped into four development areas namely Core Skills, Research management skills, transferable skills and Specific research related skills.

Directions for use

Please complete the table below to help you understand your strengths and areas where you need to further develop your skills. You can discuss the table with fellow students, SACIDS faculty and your supervisor(s) to help you produce an accurate self-assessment.

Completing the questionnaire should not take you very long. Start by looking at each of the skills listed on the left column of the table. Mark the point on the 1-5 scale that you think best describes your current competence. In this scale, 1 is the lowest and 5 is the highest score*.

This is a simple number selection on a scale, but later you can add free comments as you identify evidence to support your ability or achievement, and actions you might take to improve your skill(s) in that area.

At the end, look at your scores, identify your strengths and weaknesses, and use these as a basis for identifying your immediate learning needs. Then consider how to address those needs. Perhaps you will attend selected training courses, but remember many important career and life skills are learnt experientially – so whatever you do, you can expect to acquire and develop your skills over a period of time.

Remember to repeat the LNA at the end of each year of study in order to monitor your skills development.

KEY:

*** 5 = Excellent; 4 = Very Good; 3 = Average; 2 = Poor; 1 = Very Poor**

Knowledge and intellectual abilities

S/N	Skills		Description	Scale	Examples as evidence of my skill	How to improve my skill in this area
1.	Principles of Biosafety in conducting multidisciplinary research	i.	I understand the principles of Biosafety required in the conduct of multidisciplinary research	1 2 3 4 5		
		ii.	I can conduct risk assessments to determine how to work safely with biohazardous agents and materials and mitigate Biosafety and Biosecurity risk	1 2 3 4 5		
		iii.	I am able to apply Biosafety measures in the conduct of multidisciplinary research	1 2 3 4 5		
		iv.	I can prepare biohazardous agents and materials for shipping/receiving in accordance with import/export regulations.	1 2 3 4 5		
2.	Concepts and principles of One Health	i.	I am familiar with the concepts and principles of one health	1 2 3 4 5		
		ii.	I am able to apply the concepts and principles of One Health in multidisciplinary research	1 2 3 4 5		
		iii.	I am able to work effectively in a multidisciplinary research team focused on One Health	1 2 3 4 5		
3.	Research concept notes and proposals	i.	I am familiar with the One Health Research Framework that identifies gaps in current knowledge	1 2 3 4 5		
		ii.	I am able to define and validate research problems based on a literature review and a coherent analysis of gaps in existing knowledge	1 2 3 4 5		
		iii.	I can write a concept note based on research ideas and problems.	1 2 3 4 5		
		iv.	I can write a research proposal describing research questions, contexts, design, methodologies and address ethical issues	1 2 3 4 5		
4.	Convey research ideas in English in writing using appropriate scientific language	i.	I am sufficiently competent in written English to express ideas and information in scientific language for different audiences	1 2 3 4 5		
5.	Appropriate Software programmes (e.g. Windows, Word, Excel, PowerPoint,	i.	I am fully familiar with the software packages that I need for my thesis (e.g. Windows, Word, Excel, PowerPoint, End Note etc.)	1 2 3 4 5		

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	Endnote)					
6.	Literature review skills	i.	I can use a range of methods and software to retrieve and organise information from a range of primary and secondary sources	1 2 3 4 5		
		ii.	I can critically assess the reliability, reputation and relevance of resources of information and I recognise the importance of bibliometrics and citations	1 2 3 4 5		
7.	Apply Biostatistics in research	i.	I am familiar with essential principles of biostatistics required in management of data generated from scientific research	1 2 3 4 5		
		ii.	I am able to apply biostatistics principles in collection, summarizing, analysing and interpreting data generated from scientific research	1 2 3 4 5		
		iii.	I am able to package analysed data into disseminable scientific outputs	1 2 3 4 5		
8.	A thorough understanding of bioethics and how to apply the principles in research	i.	I am familiar with the principles of bioethics required in conduct of biomedical research	1 2 3 4 5		
		ii.	I can apply the principles of bioethics for moral reasoning in developing and conducting research	1 2 3 4 5		
9.	Understand and adhere to professional research code of conduct	i.	I am familiar with the SACIDS ACE Code of Practice (CP) and I understand research legislation within local context and internationally	1 2 3 4 5		
		ii.	I understand how research within my field is regulated by various bodies e.g. ministries, academic and research institutions, ethics committees, policy making bodies, publication approval committees, funding agencies			

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		iii.	I am familiar with all aspects of this and have practical experience of authorship, copyright and the CP.	1 2 3 4 5		
10.	Apply ethical principles in designing and conducting research	i.	I can take account of issues relating to the rights of other researchers, research participants and others affected by the research	1 2 3 4 5		
		ii.	I understand the IPR principles and have a working knowledge or firsthand experience of them	1 2 3 4 5		
		iii.	I understand the principles involving informed consent for participating in research	1 2 3 4 5		
		iv.	I understand the workings of my local ethical committee and have made a successful application for ethical clearance	1 2 3 4 5		
11.	Research management	i.	I am familiar with the procedures for recruiting and managing research teams	1 2 3 4 5		
		ii.	I can manage the administration and the logistics of a research project	1 2 3 4 5		
		iii.	I am able to set, justify and manage budgets	1 2 3 4 5		
12.	Documentation and record keeping	i.	I keep up to date records of all I do in a logical manner that is easily understood by anyone who reads them	1 2 3 4 5		
13.	Able to mobilize and manage resources for research projects	i.	I understand how grant applications are assessed and have contributed to the drafting or assessment of grant applications	1 2 3 4 5		
14.	Able to engage effectively with community, professionals and policy makers	i.	I am able to identify key people in relation to my research	1 2 3 4 5		
		ii.	I can consult and communicate effectively with different stakeholders	1 2 3 4 5		
15.	Establishing and maintaining effective relationship with supervisors	i.	I set time to get to know my supervisor(s) and to share information about my background and aspirations	1 2 3 4 5		
		ii.	I am honest about my strengths and weaknesses and am open to advice and suggestions	1 2 3 4 5		
		iii.	I fulfil the commitments that I make in supervision meetings	1 2 3 4 5		

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		iv.	I communicate clearly what support I need from my supervisor(s)	1 2 3 4 5		
16.	Able to work effectively in and to lead teams	i.	I understand and can describe what makes an effective team	1 2 3 4 5		
		ii.	I can contribute to the overall goals of the team and not only to my personal goals	1 2 3 4 5		
		iii.	As team leader, I can communicate the goals and success indicators for the team	1 2 3 4 5		
		iv.	I am able to motivate team members to perform to a high standard	1 2 3 4 5		
		v.	I can help the team to review their progress, celebrate success and overcome problems	1 2 3 4 5		
17.	Able to manage innovation and intellectual property (IP)	i.	I understand data ownership rules as they apply to my own research	1 2 3 4 5		
		ii.	I know how to manage the deposit of research outputs	1 2 3 4 5		
		iii.	I am able to safeguard intellectual property	1 2 3 4 5		
18.	Independent and critical thinking	i.	I am able to critically analyse and evaluate own scientific findings and those of others.	1 2 3 4 5		
19.	Originality and innovation in approaches to research	i.	I can use innovative strategies and the best technology available for my research	1 2 3 4 5		
20.	Effective written communication	i.	I am able to produce concise progress reports	1 2 3 4 5		
		ii.	I am able to produce high quality scientific papers for publication in a range of media	1 2 3 4 5		
		iii.	I understand how articles are assessed for publication and I have some experience of contributing to the assessment of manuscripts	1 2 3 4 5		
		iv.	I am able to plan and write a MPhil/MRes thesis	1 2 3 4 5		

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21.	Effective oral communication	i.	I am able to make effective formal presentation and communicate ideas clearly to a range of audiences, in meetings and other forums	1 2 3 4 5		
22.	Assessment of personal attributes	i.	I regularly assess my own competence in many skills areas and successfully improve deficiencies through courses, experience etc	1 2 3 4 5		
		ii.	I can work efficiently and am strongly self-motivated	1 2 3 4 5		
		iii.	I know the limits of my abilities and can ask for help and use it successfully	1 2 3 4 5		
		iv.	I willingly and effectively take constructive criticism from supervisors and colleagues to incorporate it in planning and execution of my research	1 2 3 4 5		
23.	Public engagement	i.	I know how to devise appropriate public engagement activities	1 2 3 4 5		
24.	Networking	i.	I am able to develop effective professional networks	1 2 3 4 5		
		ii.	I can identify, apply and Endeavour to participate in relevant seminars and conferences	1 2 3 4 5		
25.	Time management	i.	I can set research goals for the next six month period. I can organise intermediate milestones and I can prioritize my day-to-day activities so that I meet these goals	1 2 3 4 5		
26.	Thinking Skills	i.	I am able to think creatively and solve problems related to my research	1 2 3 4 5		
27.	Leadership	i.	I have a good understanding of my own personality and values	1 2 3 4 5		
		ii.	I am able to reflect on my own leadership skills and take steps to further develop as a leader	1 2 3 4 5		
		iii.	I can communicate and engage with my peers	1 2 3 4 5		
28.	Career Management	i.	I have a comprehensive understanding of academic and non-academic career options that are open to me	1 2 3 4 5		
		ii.	I can set realistic goals and identify action that I can take to improve my employability and competitiveness	1 2 3 4 5		

7. Learning and Development Plan

Once you have completed your learning needs analysis, you should transfer the learning need you have identified into the left hand column of this plan. Once you have discussed your specific research related learning needs with your supervisor please also add them in the learning needs column. Then please complete the rest of the plan showing how you will address each of the learning needs.

Year	Learning Need	Training Course	Date of Training Course	Other methods e.g. reading, peer support, study visits	Date completed	Supervisor's Comment	
Year 1							
	Specific research-related learning needs						
		Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment

Year	Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment
Year 2						
Specific research-related learning needs						
Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment	

Year	Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment	
Year 3							
	Specific research-related learning needs						
	Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment	

Year	Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment	
Year	Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment	
Year 4							
	Specific research-related learning needs						
	Learning Need	Training Courses	Date of Training Course	Other methods e.g. reading, peer support, Study visits	Date completed	Supervisor's Comment	

