

Experiences of IAT training in South Africa

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Based on a presentation to the South African Association for Laboratory Animal Science (SAALAS)

Background

- The Institute of Animal Technology as it is known today was founded in 1950 by a group of Animal Technicians.
- Animal Technology is a specialist profession responsible for the care and Welfare of laboratory animals.
- The IAT Career Pathway was developed to ensure that the UK continues to lead the way when it comes to standards for laboratory animal care and welfare.
- The Career Pathway is designed to promote the highest standards of training and development for Animal Technologists.
- A career in Animal Technology allows you to work with animals every single day and be part of crucial advances in science and medicines.



If you love animals, have an interest in scientific research and would enjoy working in a laboratory, the IAT's Career Pathway can help develop your career from a trainee to a Facility Manager or Specialist, read on:

Careers for Animal Technologists

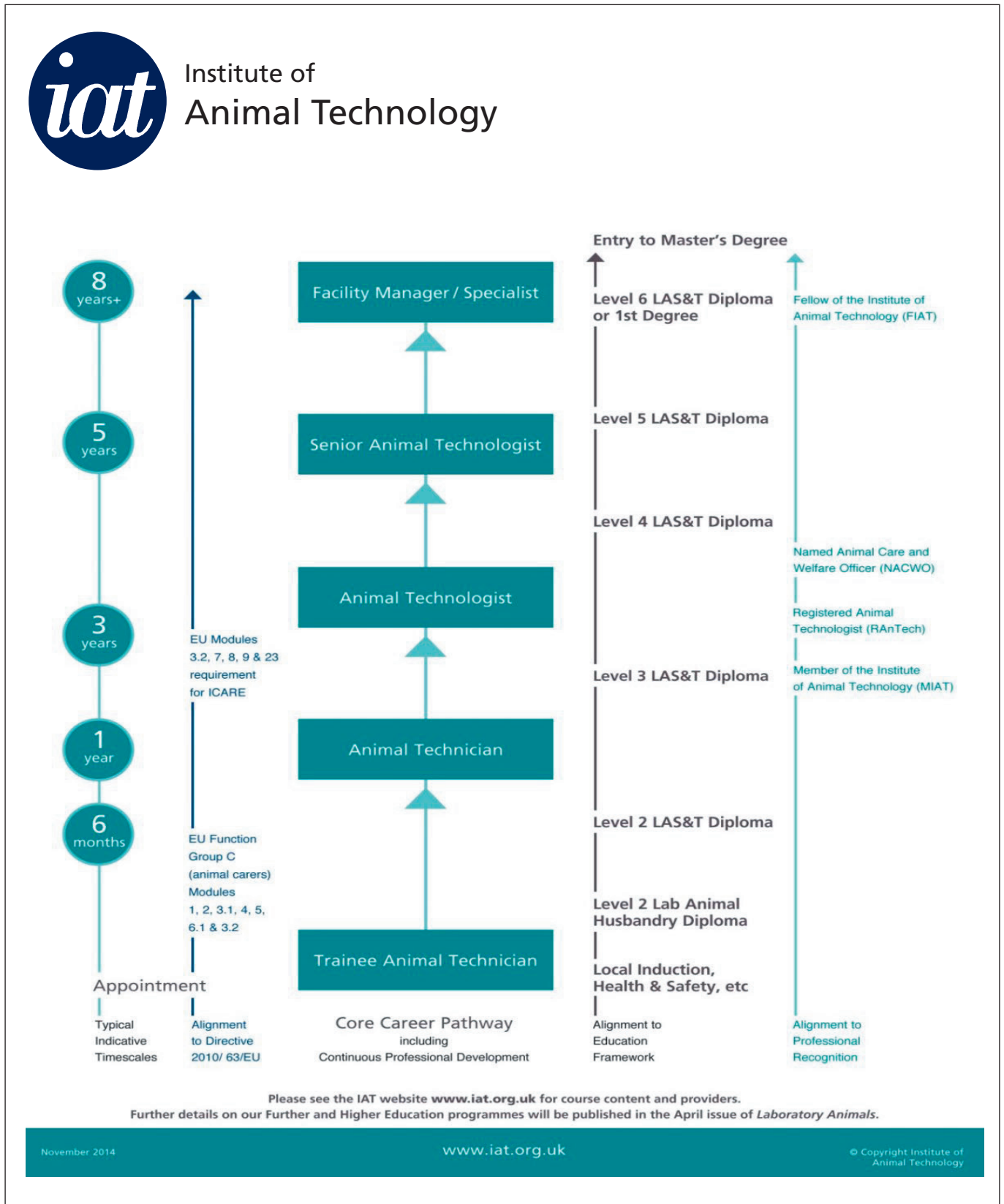
- The raison d'être for Animal Technologists, is the animals and ensuring that the highest standards for their care and welfare are upheld.
- Animal Technology helps scientific research to be carried out, new treatments for diseases to be developed and new methods of diagnosis be identified.
- Animal Technology is an essential and integral part of our science sector.
- Laboratory Animal Technologists (LAT) are responsible for: teaching researchers/scientists to perform procedures on laboratory animals used in research.
- The day-to-day needs of laboratory animals.
- Ensuring good Animal Welfare.
- Assisting researchers/scientists.
- Where can one find employment in South Africa? Universities, Teaching Hospital, Veterinary College or Pharmaceutical companies.

Laboratory Animal Technologists (LAT) training in South Africa

Currently there is no formal training for LATs in the Republic of South Africa.

- Aspiring LATs have made use of the IAT online course.
- The IAT training programme culminates in a diploma in Laboratory Animal Science and Technology.
- The programme is divided into 5 levels (level 2 - 6).
- Level 2 focusses on the importance of high standards of routine care, animal husbandry and legal responsibilities.
- Level 3 equips experienced LATs with a thorough understanding of the principles and practices of good animal welfare and scientific practice.

Career Pathway for Animal Technologists



“This Laboratory Animal Science and Technology Career Pathway will importantly enable animal facility staff, both in industry and academia, to achieve high standards of competence and professionalism within Home Office licensed establishments.”

Dr Judy MacArthur Clark CBE FRCVS Head, Animals in Science Regulation Unit, December 2014

IAT LEVEL 2 Diploma in Laboratory Animal Husbandry

Qualification	Unit title	Credit No:	Guidance on assessment methodology
IAT Level2 Diploma in Laboratory Animal Husbandry 600/0558/0	Laboratory animal housing and routines	12	Competency or written assessment
	The production of Laboratory animals	8	Unit test
	Laboratory animal nutrition	4	Competency or written assessment
	Introduction to laboratory animal facility ethics	4	Written assessment
	Introduction to laboratory animal facility legislation	8	Unit test
	Laboratory animal health and husbandry	12	Competency or written assessment

IAT LEVEL 2 Diploma in Laboratory Animal Science and Technology

IAT LEVEL 2 Diploma in Laboratory Animal Science and Technology	Credit Value 1 credit = 10hrs of learning	Guidance on assessment methodology
Laboratory animal housing and routines	12	Competency or written assessment
The production of laboratory animals	8	Unit test
Laboratory animal nutrition	4	Competency or written assessment
Introduction to laboratory animal facility ethics	4	Written assessment
Introduction to laboratory animal facility legislation	8	Unit test
Laboratory animal health and husbandry	12	Competency or written assessment

IAT LEVEL 2 Diploma in Laboratory Animal Science and Technology

IAT LEVEL 3 Diploma in Laboratory Animal Science and Technology	Credit Value 1 credit = 10hrs of learning	Guidance on assessment methodology
Housing and biosecurity barriers in laboratory animal facilities	8	Written assessment
Disease control	12	Written assessment
Laboratory animal welfare	8	Unit test
Management of breeding colonies	12	Written assessment
The use of genetically altered animals in research	8	Written assessment
Scientific procedures	12	Written assessment
Ethics	4	Written assessment
Laboratory animal facility legislation	8	Unit test
Animal transport	8	Written assessment
Animal cell biology	8	Written assessment
Laboratory animal physiology	12	Unit test

IAT LEVEL 3 Diploma in Laboratory Animal Science and Technology

Learning Outcomes Management of Breeding Colonies

	Pass	Merit	Distinction
1. Devise appropriate breeding programmes for laboratory animals given specified conditions	1.1 Summarise the basic breeding data of common laboratory animals 1.2 Describe in detail suitable breeding programmes for named species under specified conditions	Discuss the options available when breeding laboratory animals	Justify the choice of the most appropriate method given specified conditions

IAT Level 4 – 6

IAT Level 4

LEVEL 4 Diploma in Laboratory Animal Science and Technology	
Typical admission criteria full qualification	IAT Level 3 Diploma Laboratory Animal Science and Technology Relevant work experience
Units	<ul style="list-style-type: none"> Applied learning and development skills for science Animal Facility Supervisory management skills Biological Sciences Control and identification of disease
Credit points	Level 4 120
Exit qualification	IAT Level 4 Diploma in Laboratory Animal Science and Technology (601/4151/7)

IAT Level 5

LEVEL 5 Diploma in Laboratory Animal Science and Technology	
Typical admission criteria full qualification	IAT Level 4 Diploma in Laboratory Animal Science and Technology
Units	<ul style="list-style-type: none"> Animal law and Ethics Experimental design Toxicology Reproduction and GA
Credit points	Level 4 (120) Level 5 (120)
Exit qualification	IAT Level 5 Diploma in Laboratory Animal Science and Technology (601/4156/6)

IAT Level 6

LEVEL 6 Diploma in Laboratory Animal Science and Technology	
Typical admission criteria full qualification	IAT Level 5 Diploma in Laboratory Animal Science and Technology
Units	<ul style="list-style-type: none"> Project planning Project Animal facility management and design Physiology stress and pain
Credit points	Level 4 (120) Level 5 (120) Level 6 (120)
Exit qualification	IAT Level 6 Diploma in Laboratory Animal Science and Technology (601/4157/8)

IAT challenges in the Republic of South Africa

LAT training in South Africa

- National Diploma in Laboratory Animal Technology was offered by Technikon RSA.
- Initiated in 1981.
 - Diploma qualified for automatic registration South African Veterinary Council (SAVC) to practice as an LAT.
 - LAT was discontinued in 1996.
 - 1998 – 2002: South African Association for Laboratory Animal Sciences (SAALAS) and South African Qualification Authority (SAQA) attempted to form a Standard Generating Body responsible for drafting standards for outcome-based training of LATs at TUT but was not successful.

National shortage and training

- LAT was listed as a scarce skill: by the Department of Higher Education and Training (DHET) classified (2015) as an Occupation in High Demand.
- Currently Only ~ 14 registered LATs remain in South Africa today from the former training institution as a result we have (many authorised personnel) from other professions e.g. Veterinary Nurses; Veterinary Technologist and Animal Health Technicians occupying the jobs of LATs.

- LAT training/registration needs expanding nationwide: > 50 laboratory animal facilities; > 100,000 animals p.a.
- Major mismatch in supply and demand for profession which is a ethical and scientific concern
- In RSA, IAT has helped many students interested in starting a career in LAT.
- Currently there are +25 students enrolled for IAT level 3 and many more on other levels.

These students face a lot of challenges ranging from:

- financial
- internet access
- balancing work and study
- lack of facilities with all laboratory animal species they will be studying

The major challenge is that on completion, the IAT course is not recognised by the South African Veterinary Council (SAVC) the Regulatory Body and Custodian of the Veterinary and Para -Veterinary professions for automatic registration as an LAT.

Training solution found (SAALAS and SAVC)

- UK-based Institute for Animal Technology (IAT) 3-year diploma (distance learning).
- Followed by education in South African jurisprudence, pharmacology (UNISA).
- Practical training: Work-Integrated Learnership (day 1 skills) in South African facilities.
- SAVC registration examination (theory and practical).
- SAVC registration thereafter.
- and identifying animal research facilities willing to offer practical training e.g., University of Cape Town-Research Animal Facility (UCT-RAF).

Conclusion

- Linda Howells LAT Working group chairperson: linda.Howells@uct.ac.za
- SAALAS website: www.saalas.org
- Students with relevant HNC, HND or degrees should contact brian@venture4ward.com for advice on any exemptions they may be eligible for.
- Contact admin@clast.org or progdir@clast.org for details on Level 4, 5 and 6 registration
- To enrol for any of the qualifications or units you need to complete the form at <http://www.iatforms.org.uk/view.php?id=7159>:
- Bursary information: contact@as-et.org.uk

Editors note. There is a new website dedicated to IAT Education <https://iateducation.co.uk/> or if you go to education on the IAT main website www.iat.org.uk it will take you to the education site. Revised Level 2 and Level 3 syllabuses were circulated in 2021 and can be found on the new website under qualifications.