Academic Promotion Discipline Statement

Discipline area: Animal Production (FoR 300306 Animal welfare & 5202 Biological Psychology)

Discipline: Equine Science

Sub-Discipline: Equine welfare, Equitation Science, equine anatomy and physiology, equine behaviour, equine biomechanics, equine health, equine nutrition, equine performance, training and rehabilitation, equine theriogenology, equine psychology & neurobiology, horse-human interaction, equestrian practice, rider performance.

Centre: Agricultural, Environmental and Veterinary Sciences

Discipline Overview

Equine Science is the discipline area that covers all aspects of equine biology, their management and use under a range of conditions, including domesticated, feral and wild populations. It is concerned with the health and welfare of equids used for recreational, sport, work, production and companion purposes. In the last decade the equine industry has undergone rapid growth and significant changes in how it operates. Unlike other animal-based industries, there is a very strong focus on close physical interaction with humans in the equine industry. Specifically, the equine industry relies on a number of traditional practices that may be detrimental to equine wellbeing that are carried out by practitioners with strong beliefs who are resistant to change. As a discipline Equine Science provides the means by which evidence-based practice can be developed, evaluated and implemented in the equine industry. Public concern about equine use has led to the development of the sub discipline of Equitation Science whose purpose is to understand the impacts of associations with humans on horses in a wide range of practical contexts.

Academics in this discipline may follow a traditional academic career path, either studying animal science or equine science prior to taking up academic positions. Others enter academia following several years of professional practice or other industry work. While some academics in this discipline undertake teaching and research, others with strong industry links may focus on practice, and combine teaching with their industry-based professional activity. All staff working in this area must maintain strong industry connections, employing appropriate communication and social skills, whilst equipping the next generation of equine graduates with evidence-based knowledge and skills.

Doctoral qualifications are increasing amongst Equine Science academics although progress has been slow compared to other animal-based disciplines. This is likely due to previous lack of industry interest in research as a career pathway and/or lack of funding opportunities. A large proportion of industry participants do not currently hold qualifications beyond training licences and coaching qualifications, although increasing numbers are educated to Bachelor level.

Gender Profile

Profession/Industry	25% male / 75% female
Higher Education Sector	42% male / 58% female
University	1% male / 99% female

Discipline Context and Expectations

This section provides a promotion committee with a broad understanding of the discipline environment, including expectations of performance and contribution peculiar to the discipline.

INDUSTRY ACCREDITATION	There is no accreditation for undergraduate or master level courses in this discipline. Industry-based accreditation exists in specific areas such as racing and coaching, but these are at sub-tertiary level and delivered by registered training organisations.
DISCIPLINE PEDAGOGIES	Undergraduate equine science is a three-year full-time degree. Teaching includes lectures, tutorials, practicals and research investigations, complemented with industry professional practice. All pedagogies use content derived from contemporary real-life industry scenarios and published research where available.
STUDENT PROFILE	Students are predominantly domestic with a small number of international applicants. Approximately one third are on-campus and mostly school leavers with the remaining studying part-time by distance and attending intensive schools each session. Distance students are usually in full-time employment in the equine industry or in allied industries. Some are career changers; others are career enhancers. Students range widely in age from 18 to 76 years of age. Increasing numbers of students are progressing to Bachelor level Honours courses on completing their 3-year Bachelor degree, with a view to post-graduate study.
STUDENT FEEDBACK/PERFORMANCE	Student performance is comparable to other animal-focussed science disciplines. Student progression and completion rates in Equine Science are similar to those in other animal-based degrees. Students appreciate both their sound scientific grounding and the opportunity to gain and implement contemporary industry knowledge. Many graduates are employed in other animal industries such as State and Federal Departments of Agriculture, livestock industry organisations or Local Land Service as knowledge and skills brokers.
RESEARCH APPROACH	Despite the equine industry being worth several billion dollars to the Australian economy, with the exception of the thoroughbred racing industry, the larger equine industry has generally been slower to uptake recent research directions. Equine science research may be undertaken individually but is extremely resource intensive and expensive. Usually, equine science research is

	applied and designed to address current and emerging industry issues and needs. At the current time there is a strong focus on fundamental research in equine behaviour and biology particularly with regards to equine welfare. Funding, outside the thoroughbred racing industry, is hard to access therefore industry collaboration (mostly in terms of access to resources) is critically important to deliver ongoing research outcomes for the broader equine industry.
PUBLICATION	Research in this discipline can be quantitative, multidisciplinary or mixedmethods. The primary forms of output are traditional peer reviewed abstracts, journal articles (including, but not limited to, hypothesis-driven investigations, Systematic Reviews, short communications, point-counterpoint discussions), book chapters and complete books. Often publications are targeted where they can have the best impact and this may not necessarily be in high impact factor journals, as publications aimed at national profession participants may often be preferable. Owing to the emerging nature of this discipline area, the profile of the target journals for publication is characterised by lower impact factors than other more established publication disciplines (particularly those that have global interest). Whilst the Equine Science discipline is continuing to grow, its audience remains specialist but important for those readers operating in this area both in industry and academia. An impact factor of 2.0 is therefore considered high within this discipline. As in other traditional sciences, conventions for authorship are followed in Equine Science; the lead researcher is the first author while the last author is usually the senior researcher. Industry-facing publications and media are also critically important; technical reports and advisory documents are common. A primary focus for Equine Science outputs is therefore delivery at conferences, particularly those attended by academics and professionals/ practitioners. Conference presentations and proceedings are therefore particularly highly regarded outputs in Equine Science, due to their role in extension to industry, compared to other traditional science disciplines. These often lead to academic publications in addition to dissemination via industry forums, newsletters and media releases.
CONFERENCES	There are limited Equine Science-specific conferences although some presentations may be applicable to broader animal-focussed conferences. One organisation that develops an equitation-focussed conference in this area The International Society for Equitation Science (ISES) organises an annual conference that takes place in a different country each year following a competitive application process to host. Other international conferences, which may be biennial, have sections of the programme devoted to Equitation Science e.g., International Conference of Equine Exercise and Physiology (ICEEP) and the Equine Science Society (ESS). The inclusion of equitation science in industry forums and gatherings is beginning to occur.

GRANTS	Funding for Equine Science, as a single discipline, is hard to access. Funding opportunities around horses are generally focussed on veterinary interventions and drug discovery, or very fundamental science such as equine genomics. Applied equine science is generally limited to the area of equine reproduction. Although equids are emerging as an area of 'companion animal' funding, again these opportunities tend to be targeted and of small scale (<$10,000). As such, external funding availability for equitation science particularly, can be very hard to access. At Charles Sturt funding is generally sourced from industry, and it is highly competitive. Within Australia *Agrifutures Australia* is the only source of funding for equine science research, but this is limited specifically to Thoroughbred horses and the racing industry. Opportunities for commercial/privately funded research for equine science are emerging with 'EqTech' an area for potential future growth.
HDR SUPERVISION	HDR students may be domestic or international. HDR students may be recruited from outside of the discipline and are likely to study part-time whilst retaining their existing professional industry commitments. Equine Science academics may be primary, secondary or co-supervisors, and may collaborate with colleagues overseas.
RECOGNITION	Very few industry awards and fellowships exist for Equine Science where awards are more commonly associated with Industry including the veterinary professions. International Society for Equitation Science Fellowships confer recognition on holders for specific achievements in the field of equitation science.
EXTERNAL ENGAGEMENT	External engagement is a high priority in this discipline. Developing educational opportunities and maintaining effective industry partnerships and relationships is integral to the purpose of the Equine Science discipline.
PROFESSIONAL REGISTRATION	There are no registration/accreditation requirements for the Equine Science discipline in Australia. This is not the case internationally where those working in certain areas, including veterinary physiotherapy, and farriery have specific training and qualification requirements to practice.

Prepared by	Reviewed by Professor Jane Quinn, Charles Sturt University Content has been externally validated by Professor Hilary Clayton as an internationally recognised Equine Science academic and practicing professional.	
Authorisation	**Name**	**Approval Date**
Discipline Adviser	Prof. Hilary Clayton 	01/08/2022
Head of School/Faculty	Prof. Megan Smith	10/08/2022