PRIFYSGOL glyndŵr UNIVERSITY

MODULE SPECIFICATION FORM

Module Title: Applied Research Skills and Professional Development	Level: 6	Credit Value: 20

Module code: ANM606 (if known)	Cost Centre: GAAN	JACS2 code: X210
Semester(s) in which to be offered: 1	With effect from: September 2012	

Office use only: To be completed by AQSU:	Date approved: August 2013 Date revised: - Version no: 1

Existing/New: Existing	Title of module being replaced (if any):

Originating Academic area:	Biology and Environment	Module Leader:	Tamsin Young

Module duration (total hours)	200	Status: core/option/elective (identify programme where appropriate): Core
Scheduled learning & teaching hours	50	
Independent study hours	150	
Placement hours	0	

Percentage taught by Subjects other than originating Subject (please name other Subjects):

Programme(s) in which to be offered: BSc (Hons) Equine Science and Welfare Management BSc (Hons) Equestrian	Pre-requisites per programme (between levels): None

Psychology BSc (Hons) Animal Studies BSc Wildlife and Plant Biology	

Module Aims:

1. To critically evaluate research design as applicable to equine science and welfare management. .
2. To select and justify appropriate methods for data collection and analysis.
3. To critically reflect on personal development over the duration of the programme of study, and to link scholarship and practice through reflection on specific professional development activities.

Expected Learning Outcomes

At the end of this module, students should be able to:

Knowledge and Understanding:

1. Critically review relevant literature to present a research proposal that forms an appropriate and ethically sound basis for a research project.
2. Critically evaluate methods of data collection and analysis to address the research proposal and justify choice.
3. Critically reflect on personal and professional development throughout the programme, and identify opportunities for ongoing engagement with personal and professional development.

Transferable/Key Skills and other attributes:

Writing skills, information finding, communications skills, IT skills, reading skills, active participation in class and small group work, thinking creatively, problem-solving, numerical skills, identifying and working towards targets for personal, academic and career development; developing an adaptable and flexible approach to study and work; developing the skills necessary for self-managed and lifelong learning (e.g. working independently, time management and organisation skills); displaying the potential for competence, behaviour and attitudes required in a professional working life.

Assessment:

100% coursework

Coursework one.
Research Proposal. The research proposal should outline a specific research topic and question(s) (relevant to their degree programme), provide a justification or rationale for the research, highlight an appropriate research strategy (based in literature), and consider issues which may impact on the feasibility of conducting the research. Appropriate methods of data collection, data manipulation and analysis must also be included in the proposal. Students will submit the proposal using the Ethics form template. The Ethics form will also considered by an Ethics Committee, but their feedback will not impact on the student's grade (Learning outcomes 1,2).

Coursework two.
Viva voce. Students will undertake a viva voce based on their research proposal. They will be required to explain their project rationale, and justify methods of data collection, and analysis chosen (Learning outcomes 1,2).

Coursework three.
Students will critically appraise their personal and professional development throughout the duration of their programme via a portfolio of evidence. The portfolio will reflect on their progression in relation to: intellectual skills; practical skills; numeracy skills; communication skills; information and communication technology (ICT) skills; self management and professional development. It will also include two reflective reports on professional development undertaken outside of their programme of study, but clearly linked to it. These will be generated from negotiated activities / events that may include: attainment of practical competences / awards / qualifications; attendance at a generic research conference; attendance at a lecture demonstration; development of work-related skills and competencies; or evidence of competitive participation and success (Learning outcome 3).

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting	Duration (if exam)	Word count (or equivalent if appropriate)
1	1,2	Research Proposal	30%		1,200
2	1,2	Oral Assessment	20%		800
3	3	Portfolio	50%		2,000

Learning and Teaching Strategies:

Lead lectures introduce the major concepts relating to all aspects of the curricula with small group tutorials used to explore key topics further.

For the research aspect to the module, lectures and workshops will be held to cover qualitative and quantitative data analysis. Statistics classes will be held in a computer laboratory to aid teaching of statistical methods making use of Excel and SPSS. Use of self-directed statistical worksheets will be used to reinforce the formal lecture sessions. Tutorials will be timetabled to give small groups opportunities to discuss and debate ethical and other issues in relation to their area of research.

Personal and professional development will be explored through lectures, individual tutorials, seminars, and guided study. Lectures may include topics such as critical appraisal, and reflective practice, and workshops will provide students with opportunity to explore career ideas and professional development opportunities.

Students will undertake the professional development activities in their own time. They will be encouraged to provide suggestions for suitable professional development activities appropriate to their named degree. Small group tutorials will be used, however, to stimulate ideas. Students will meet their Supervisor / Personal Tutor regularly to plan, implement and evaluate their research and personal and professional development during their programme of study.

Syllabus outline:

- Research process.
  Evaluating significance of published research.
  Devising research questions, aims, hypotheses.
  Research designs: behavioural observation, field investigations, questionnaire survey and interview.
- Ethical considerations, principles and codes, ethical and Animal Care Committees, the Local Research and Ethics Committee (LREC) and its role.
- Management of risk.

- Statistics and experimental design: probability theory, properties of normal distribution and presenting data.
- Measures of variation
- Inferential statistics
- Tests of association
- Testing the difference between two samples
- Testing the difference between more than two samples
- Use of data analysis packages e.g. SPSS, Excel.
- Overview of behavioural analysis software e.g. The Observer (Noldus).
- Qualitative methods and approaches to qualitative data analysis.

- Reflective theory – frameworks to aid evaluation

- Use of practice to inform personal / professional development

- Writing a research proposal.
- Portfolio building
- Critiquing of events and activities
- Transferable skills: practical, numerical, communication, ICT, self-management skills.

Bibliography

Essential reading:

Cottrell, S. (2003). *The study skills handbook*. Basingstoke: Palgrave Macmillan.

Ennos, R. (2007) *Statistical and data handling skills in biology. 2nd Edition*. Essex: Pearson Education Limited.

Kumar, R. (2005). *Research methodology: A step-by-step guide for beginners*. (2nd ed.) London: Sage.

Moon, J. (2004). *A Handbook of Reflective and Experiential Learning: Theory and Practice*. London: Routledge.

Pallant, J. (2010). *SPSS Survival Manual. 4th Edition*. Maidenhead: Open University Press.

Recommended reading:

Fowler, J., and Cohen, L. (1995) *Practical Statistics for Field Biology.* Chichester: John Wiley & Sons.

Denzin, N.K., and Lincoln, Y.S. (2000). (Eds) *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Festing, M., Overend, P., Das, R., Borja M., and Berdoy, M. (2002) *The Design of Animal Experiments; Reducing the use of animals in research through better experimental design*. London: The Royal Society of Medicine Press Ltd.

Martin, P., and Bateson, P. (1986). *Measuring Behaviour: An introductory Guide.* Cambridge: Cambridge University Press.

Reference will be made to contemporary research articles from journals such as:

- Applied Animal Behaviour Science
- Animal Welfare
- Equine Veterinary Journal

Indicative web based materials:

http://www.learnerassociates.net/dissthes/
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4005727