Nottingham Vet School

Staff on students on “Day 1”
September 2006

An introduction

School of Veterinary Medicine and Science
Sutton Bonington Campus

- Two Schools
- Superb facilities:
  - Commercial Farm
  - Large Dairy
  - Pig Unit
  - Poultry Unit
  - Abattoir
  - Excellent Research
  - Library
Educational Vision

- Plan the course with the aim of producing excellent clinical veterinary scientists
  - Clinical integration from Day One
  - “Hands-on” animal experience from Day One
  - Diverse teaching methods
  - Integrated research degree
  - Use of relevant clinical cases
Academic Structure

School of Veterinary Medicine and Science

Veterinary Medicine

Veterinary Surgery

Animal Health and Welfare

Three clinical divisions only – no pre-clinical/clinical division – for example anatomy is a surgical subject
Curriculum development

- Begin with the end in mind
- Start with the skills, behaviours and knowledge required on Day 1 of graduation
  - Dictated to some extent by RCVS – day 1 competences, also EAEVE requirements
- Work back to Year 4, then years 1 and 2
- Basic science teaching is therefore determined by clinical need
Curriculum Framework

1. Clinical Science Modules
2. Clinical Science Modules
3. Clinical Modules
4. Clinical Modules
5. Clinical Rotations

RCVS, QAA, EAEVE

School of Veterinary Medicine and Science
Curriculum Framework

- Start with the end in mind
  - No referral hospital
  - Lecture-free final year
  - Rotations in first opinion practices
  - We build on site if necessary
    - Proportion re-paid if relationship ends
- Place our staff in the facilities
  - Practice keeps revenue
  - Compensation for presence of students
Curriculum Framework

- Outline curriculum developed
  - Significant consultation
    - Undergraduate students
    - Practising veterinary surgeons
    - Specialist divisions of the profession
  - “Textured” the curriculum
Outcome

- Systems-based modules
- Systems covered twice
  - Clinical science
  - Clinical
- Long modules run all year
  - Animal Health and Welfare
  - Personal and Professional Skills – all 4 years
    - Includes communication and business skills
- 12 week research project in Year 3

School of Veterinary Medicine and Science
Systems-based modules

Cardiovascular 1
Clinical Problem
Knowledge required
Integrated basic sciences
- Anatomy
- Physiology
- Cell and molecular biology

Cardiovascular 2
Clinical Problem
Application
Disease processes
Pathology
Diagnosis
Treatment

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The outcome

1. MS ClinSci Module 1
2. Joints
   - Fore leg dog
   - Hind leg dog
   - Housing
3. Horse legs
   - Cow legs
4. Principles x-rays
   - Clinical exam
5. Reading x-rays
   - Lameness

Nottingham

Somewhere else

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Module Delivery

- Facilitated clinical relevance
  - clinical cases from Year 1 illustrate the importance of the basic science
- Lectures
  - signposting
- Practicals
  - traditional (dissection, microbiology)
  - clinical – clinical exam, radiography and ultrasound from week 1
- Directed / facilitated learning
  - tasks and resources provided
  - encourages independent learning
A typical week

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<tbody>
<tr>
<td>9am – 10am</td>
<td>Veterinary Personal and Professional Skills Tutorial</td>
<td>Cardiorespiratory System SGTR (DGL)</td>
<td>Cardiorespiratory System SGTR</td>
<td>Cardiorespiratory System Dissection Lab, Clinical Skills Lab 1 and Clinical Lab 2</td>
<td>Cardiorespiratory System Lecture theatre</td>
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<tr>
<td>10am – 11am</td>
<td>Veterinary Personal and Professional Skills Tutorial</td>
<td>Cardiorespiratory System SGTR (DGL)</td>
<td>Cardiorespiratory System SGTR (QBL)</td>
<td>Cardiorespiratory System Dissection Lab, Clinical Skills Lab 1 and Clinical Lab 2</td>
<td>Cardiorespiratory System Lecture theatre</td>
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<td>11.15am – 12.15pm</td>
<td>Cardiorespiratory System Lecture theatre</td>
<td>Cardiorespiratory System SGTR (DGL)</td>
<td>Cardiorespiratory System Lecture theatre</td>
<td>Cardiorespiratory System Dissection Lab, Clinical Skills Lab 1 and Clinical Lab 2</td>
<td>Cardiorespiratory System SGTR (QBL)</td>
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<tr>
<td>12.15pm – 1.15pm</td>
<td>Molecular Basis of Veterinary Medicine Lecture theatre</td>
<td>Cardiorespiratory System SGTR (DGL)</td>
<td>Cardiorespiratory System Lecture theatre</td>
<td>Cardiorespiratory System Dissection Lab, Clinical Skills Lab 1 and Clinical Lab 2</td>
<td>Cardiorespiratory System SGTR (DGL)</td>
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<td>1pm – 2pm</td>
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<tr>
<td>2pm – 3pm</td>
<td>Cardiorespiratory System SGTR (QBL)</td>
<td>Molecular Basis of Veterinary Medicine Clinical Lab 1 and Clinical Lab 2</td>
<td>Animal Health and Welfare A29</td>
<td>Cardiorespiratory System SGTR (DGL)</td>
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<td>3pm – 4pm</td>
<td>Cardiorespiratory System Lecture theatre</td>
<td>Molecular Basis of Veterinary Medicine Clinical Lab 1 and Clinical Lab 2</td>
<td>Animal Health and Welfare A29</td>
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<td>4pm – 5pm</td>
<td>Cardiorespiratory System Lecture theatre</td>
<td>Molecular Basis of Veterinary Medicine Clinical Lab 1 and Clinical Lab 2</td>
<td>Animal Health and Welfare A29</td>
<td>Cardiorespiratory System SGTR (DGL)</td>
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Session colours represent delivery method as previous slide

School of Veterinary Medicine and Science
Full five year curriculum

Graduate here with BVM BVS

Graduate here with BVMedSci

School of Veterinary Medicine and Science
Embrace opportunities offered by IT and AV

- Admissions are IT-enabled
- Laptops provided to all students
- All teaching material delivered online
- Computer-based portfolio for personal development
- Use of IT in assessment
- Virtual learning laboratories
What did we deliver?

• Module One – musculoskeletal 1
  – Weeks 3 – 10 of year 1
  – 63 practical sessions
    • 18 hands-on live animal sessions
    • 26 hands-on dissection sessions
    • Remainder have been procedures, imaging, histology

  – 17 different clinical relevance scenarios
What did we deliver?

Module One – musculoskeletal 1
- 50 radiographs
- 25 ultrasound images
- 44 lectures (average of 6.3/week)
- Use of University Farm
What did we deliver?

• Module One – musculoskeletal 1
  – External visits
    • Defence Animal Centre (military animal training facility)
    • Poultry farm
    • Alpaca farm
    • Twycross Zoo
    • Greyhound stadium
Clinical training

- Identify appropriate caseload
  - Clinical Associates
- Ensure appropriate facilities
- Employ and place university staff
- Train clinical associate staff
  - As educators
- Place students
Veterinary School

• School development:
  – Academic building
  – Clinical teaching building
  – Learning resources
  – Small holding
  – Stables and ménage
  – Student accommodation
  – Pathology building
  – Hospital developments at Clinical Associates
How do we select the best students for this course?
Admissions process

Students complete our own on-line questionnaire

Supplementary information from this on:
- Communication
- Dexterity
- Motivation
- Self confidence
- Organisational skills
- Teamwork
- Responsibility
- Initiative
- Understanding of veterinary profession
- Reasons for wanting to come to Nottingham

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Admissions process

- Practical aptitude test
  - Dexterity
  - Enthusiasm
  - Communication
  - NOT knowledge

- Group task
  - Ability to work in a group!
  - NOT knowledge
Admissions process

- On-line questionnaire
  - 30 minute interview
    - Motivation towards a career as a vet
    - Understanding of implications of career choice
    - Potential to acquire personal skills of a vet
    - Animal in the room
    - Role play

- Practical aptitude test

- Group working task

Interview

School of Veterinary Medicine and Science
Research

March 2005

- External/Internal Advisory Group

Research Themes:
- Comparative Clinical Science
- Reproduction & Integrated Food Chain Research
- Veterinary Education

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Research groups

• Animal infection and immunity
• Animal population health and welfare
• Comparative medicine
• Reproductive biology
• Veterinary education
Research Strategy

Axiom:
- Current Clinical Practice is derived from advances in Research

Clinical Practice = Diagnosis
                Treatment
                Monitoring
                Prophylaxis

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Integration of Research Themes with Clinical Requirement and Outcome

**Problem Identified**
Diagnostics, Pathology, Treatment etc

**SVMS**
Multidisciplinary Research Teams

**Clinic Associates**

**Deliverables**
New techniques, virulence markers, immune correlates, new vaccines etc

Outcome: Improved Clinical Practice