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# Engaging students through embedded Ethics: The Keele Experience

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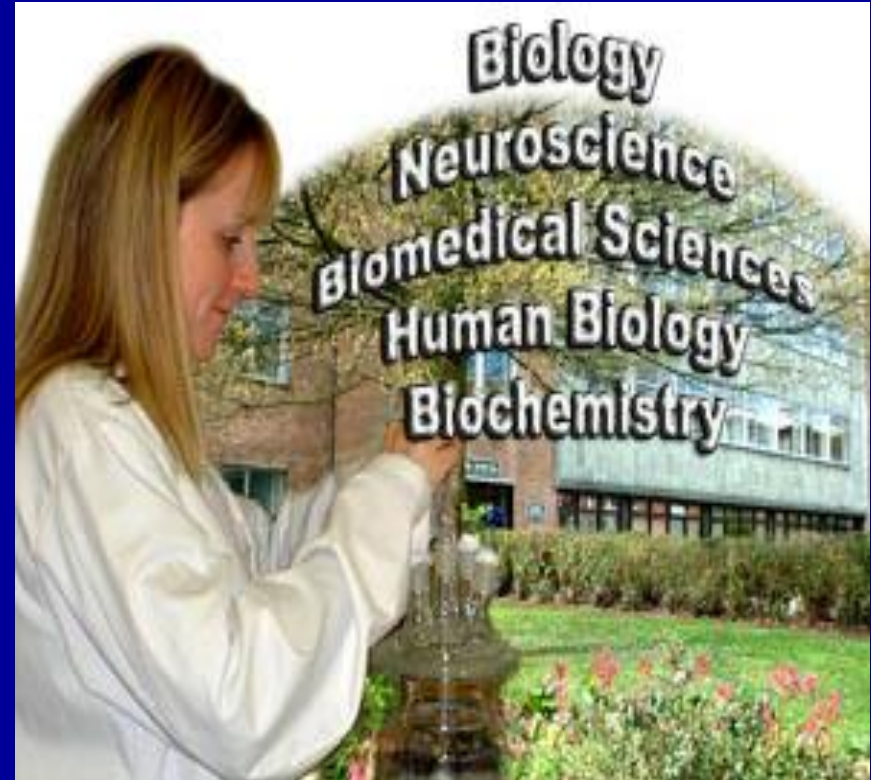
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- ❑ Large (~250) student cohort(s)
- ❑ Integrated Bioscience-Ethics teaching
- ❑ Keele Experience
  - Year 1 Ethics Module
    - (2003-2009)
    - PEAK-Life Sciences
  - Years 1 & 2 Embedded Ethics
    - (2009-date)
    - Life Sciences





# Strategy

## □ Student engagement

- Topics of interest for all courses
- Compulsory Workshops
- Staff engagement

## □ Support

- Lectures, Workshops, Core-text books, On line electronic support



# Learning Outcomes

## □ Ethical awareness and engagement

- Replicated Tutor-directed workshops in usual laboratory venues
  - 1 Tutor per ~12-14 students
  - Groups of 4-7 students each

## □ Ethical analysis

## □ Legal issues

- Human Tissue, Data Protection, Scientific Procedures (1986) Acts

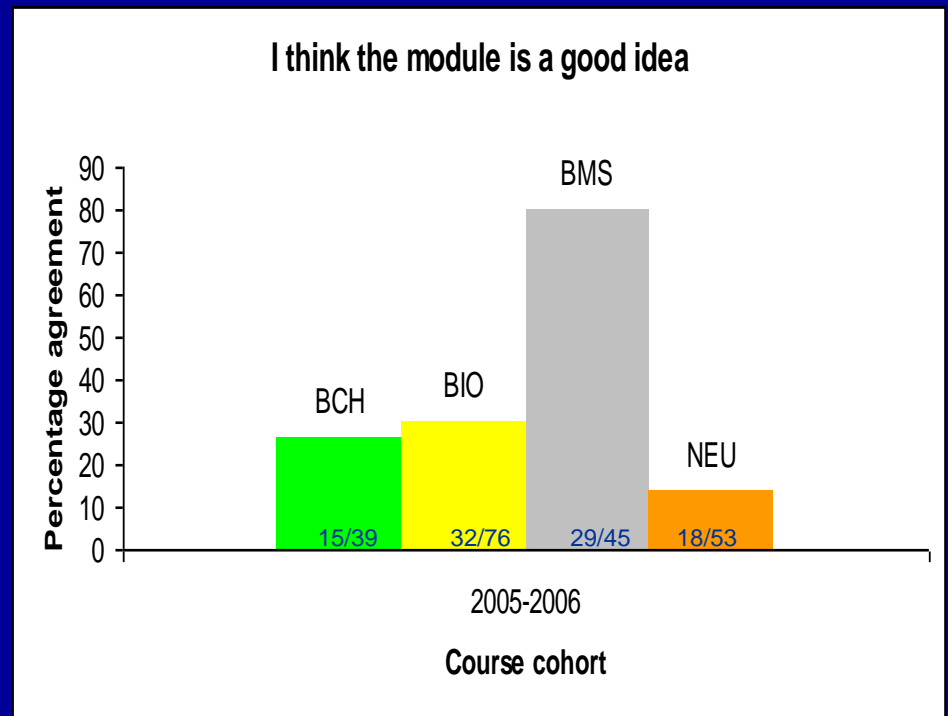
## □ Professional governance

## □ Good practice in academic writing



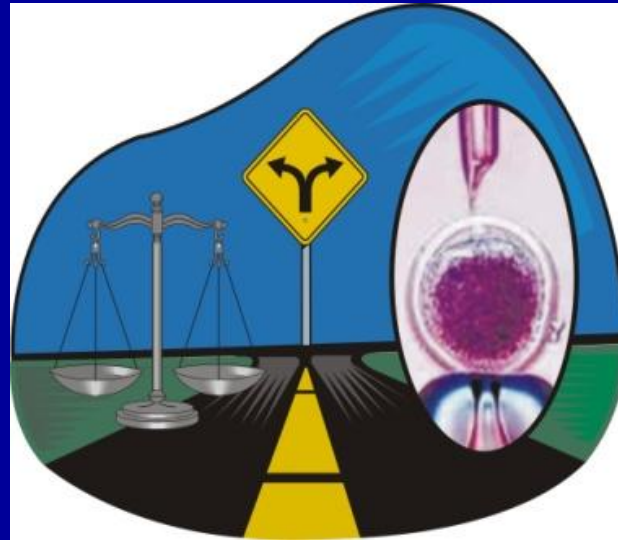
# Student engagement

- Attendance
- Participation
- Teaching Evaluation
- Quality of essays





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# Embedded Ethics Teaching



# YEAR 1

Course	Sem	Topic	Assessment
BMS	1	Hum. Tissue & Confidentiality	300w Form. essay
BCH	2	Animal Experimentation	MCQ CT (10%w)
BIOL HUMBIOL NEUR	2		300w Form. essay



# YEAR 2

Course	Sem	Topic	Assessment
BCH BMS	1	Therap. & Reprod. Cloning	800w Sum. Essay (10%w)
BMS BIOL HUMBIOL NEUR	2	Research Ethics	MCQ CT (10%w)





# Research Ethics

## □ Scientific research

- Arguing well and hypothesis testing
- Risk assessment

## □ Ethical (and legal) issues in a research study in the biosciences

- The Nolan principles and Mertonian norms
- Ethical Committees

## □ Research funding and administration



# Further UG Ethics Teaching

Course	Level	Modules	Topics
BMS	1	Med. Sci.	Health Care governance
	2	Med. Lab. Sci.	
		Prof. Relationships	
1 & 3	Case Studies in BMS	Health Inequal.	
BIOL/HUMBIOL/BMS	2	Hum. Gen.	HGP issues
HUMBIOL	2	Nutrition	Anorexia
NEUR	3	Honours Dissertation	Animal Experiments



# Student engagement

## □ The Dos

- Small (4-7) discussion groups
- Structured and intellectually challenging case discussions
- 'Reflective equilibrium'
- Different scenarios with escalated trade-offs
- Due scientific consideration
- Updated support
  - The Centre for Bioscience Ethics Resources

## □ The Don'ts

- Large discussion groups (>8)
- Stand alone moral theory discussions
- Role playing on its own
  - Research Committee
  - Theatre of Debate
- On line threaded discussion



# Perspectives

## □ Ethical thinking and Learning Outcomes

- Essential Ethics LOs in HE Biosciences teaching?
- Course dependent - Ethics LOs?
  - Neuroethics

## □ Emphasis on ethical analysis & communication

- Research Ethics

## □ Tutor engagement and recruitment



# Ethics Teaching at Keele: The Tutors

## □ 2003-2009 Module

- P Chevins, R. Maingon, G. Dent, M. Jonas, S. Oultram, N. Athannossoulis, R. Fricker-Gates, M. Gates, W. Kirk, J. Mills, N. Cooper, J. Paterson, M. Lawton

## □ Core embedded ethics

- R. Maingon, G. Dent, J. Paterson, J. Moran, D. Watson, P. Austin, D. Paton, N. Hopcroft, G. Knight, M. Nicosia.

## □ Further embedded Ethics teaching

- S. Hope, P. Chevins, N. Cooper, M. M. Maarabouni, P. Deaville, J. Paterson.