

Report of the APS Task Force on Ethics Education

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OUTLINE

1. Introduction
2. Central Recommendations
3. The Web Site
4. Demonstration of the proposed Site

INTRODUCTION

The charge to the committee was:

to advise APS on how it can best encourage physics departments to do a better job of educating their students, postdocs and faculty about scientific ethics.

to investigate what materials are available for ethics education

to develop materials or adapt existing materials to aid physics departments in their efforts

CENTRAL RECOMMENDATIONS

The APS should create and maintain a web site as a resource for Ethics Education

A central feature of the site would be a set of ethics case studies relevant to physics that would be supplied by the task force.

The site would include such topics as:

Publication Practices, Human Subjects Research, Conflict of Interest, Data Acquisition, Mentoring, Health and Safety, Issues of Bias, and Undergraduate Concerns

The site should be dynamic with users being able to add case studies. It would be monitored by staff together with volunteers.

The site would contain links to other materials and courses around the country on scientific ethics.

The site would be a resource for part of the orientation program for new graduate students.

Group discussions of ethics issues discussed in case studies have been found to be an effective way to deliver ethics education.

The case studies have been selected to illustrate ethical issues that are not easily resolved.

Many case studies are based on real events with the names removed and some details changed to conceal the identities of the original participants.

The APS should consider ways to regularly remind APS membership of the APS professional conduct guidelines.

The APS should consider a site oversight committee composed of both APS staff and APS members. The function of the committee would be (1) to vet new case studies (2) to plan ethics activities at APS meetings.

Proposed Web Site

Opening Page

Topics Page

Publication Practices

Human Subjects Research

Conflict of Interest

Data Acquisition

Mentoring

Health and Safety

Issues of Bias

Undergraduate Concerns

Case Studies (accessed from topics page)

Contribute a Case Study (clickable)

Comments and Suggestions (clickable)

Links to other ethics education web sites

LINKS

Responsible Conduct in Research Instruction:

www.rcr.emich.edu/,

Marshall Thomsen's Collection of Ethics Resources:

www.physics.emich.edu/mthomsen/ethtaboc.htm

Sigma Xi, "The Responsible Researcher: Paths & Pitfalls

www.sigmaxi.org/programs/ethics/ResResearcher.pdf

Sigma Xi: "Ethical Challenges and Practical Solutions for Managers in Research"

Sigma Xi: "Honor in Science"

"On Being a Scientist"

<http://www.nap.edu/readingroom/books/obas/>

National Academy Press, Washington, D. C., 1995

Science Ethics Resources (before 1997)

<http://www.chem.vt.edu/chem-ed/ethics/index.html>

Patricia Bolton's Chapter on Scientific Ethics

<http://64.233.167.104/search?q=cache:tN2HEOdYti8J:www.sc.doe.gov/sc-5/benchmark/Ch%252016%2520Scientific%2520Ethics%252006.10.02.pdf+scientific+ethics&hl=en&client=safari>

Responsible Conduct of Research, UCSD

<http://ethics.ucsd.edu/courses/ethics/resources.html>

Scientific Ethics UCSD

<http://ethics.ucsd.edu/courses/ethics/syllabus.htm>

UNC Responsible Conduct of Research

<http://www.med.unc.edu/wrkunits/2depts/biochem/ethics/>

Yale Medical School

<http://info.med.yale.edu/neurosci/courses/ethics.html>

Duke University, Chemical Ethics

<http://www.lib.duke.edu/chem/ethics/long.html>

UIUC Research Ethics in Life Sciences

<http://www.life.uiuc.edu/mcb/580/>

APS Ethics and Values Statements

http://www.aps.org/statements/02_2.cfm

"Ethics and the Welfare of the Physics Profession,"

Kate Kirby and Frances A. Houle, *Physics Today* **57** (11) 42-49, 2004

"Report of the Investigation Committee on the Possibility of Scientific Fraud in the Work of Hendrik Schön and Coauthors"

http://www.lucent.com/news_events/pdf/summary.pdf

Case Studies Templates

The template we suggest for the case study page is the following:

Title

Keywords:

Description of Problem:

Questions:

Discussion:

Useful Links

Contact us with a comment (Clickable)

CASE STUDIES

Human subjects research
Publication Practices and Authorship
Conflict of Interest
Data Acquisition
Peer Review
Publication and Data Ownership
Publication
Errata in Previous Research
Authorship
Intellectual Property 1
Health and Safety
Research Misconduct
Data Acquisition
Interface with the Public: Petition Signing

Authorship
Reaction to Bias
Collaborative Research
Reporting Violations
Refereeing
Financial Responsibility
Intellectual Property 2
Research Management
Mentoring Scenarios 1 -6
Whistle Blowing

Sample Ethics Site at Minnesota, it is just an example:

<http://www.physics.umn.edu/resources/ethics/>

Also: Ethics report itself is on the APS web site, which has all of the case studies.

<http://www.aps.org>