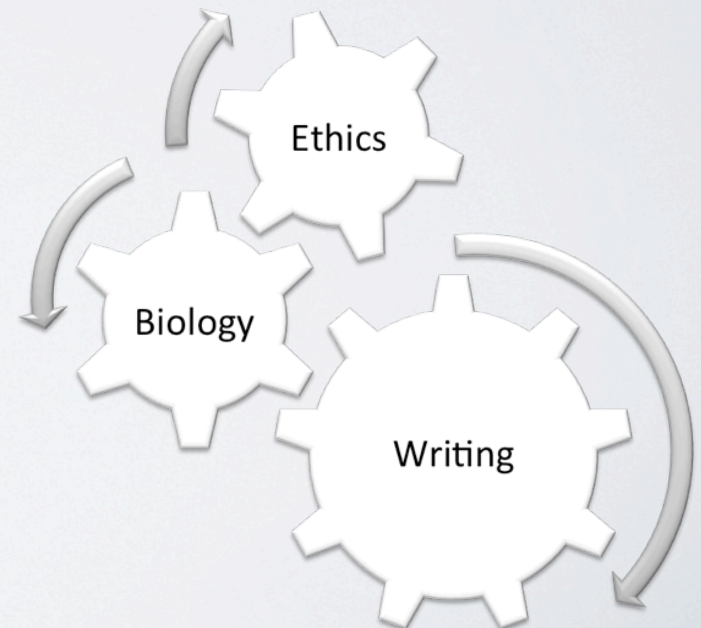




Design and implementation of a multidisciplinary, collaborative research and writing project for first-year students

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B.S. in Health Sciences At UMR

- Integrated across disciplines
- Learner-centered
- Concept-based
- Assessment-driven
- Technology-enhanced
- *Writing-integrated*
- Community-integrated
- High-contact faculty model

Bachelor of Science in
Health Sciences
BSHS
Innovative. Challenging. Professional.

Writing Integrated Curriculum at UMR

This course participates in the UMR Writing Integrated Curriculum.

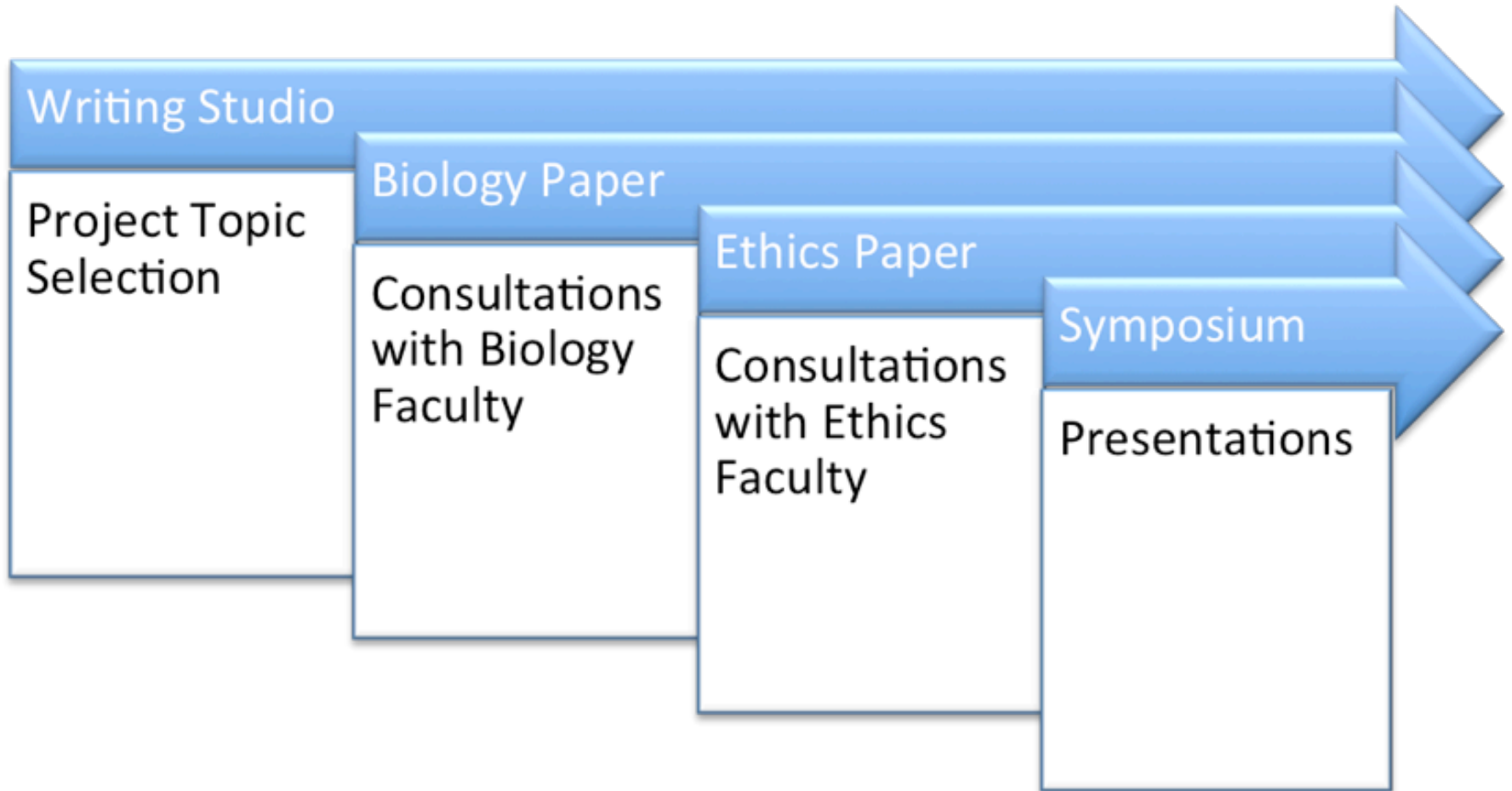
As a part of the Writing Integrated Curriculum (WIC), writing is incorporated into the instruction of all courses in the BSHS program.

The BSHS program identifies effective communication and writing as extremely important for academic and professional success. The WIC implements innovative strategies to enhance student learning and writing and to deepen their understanding of literacy and the writing process. The goal is for students to recognize the power of effective writing and communication, develop these skills throughout the BSHS program, and continue to cultivate these skills as lifelong learners.

First-Year Research Symposium Project: Goals

1. Read and understand a contemporary area of scientific research
2. Critically reflect upon the ethical implications of this area of scientific research
3. Practice and improve writing skills through a scaffolded iterative writing process
4. Improve research literacy and professional presentation skills

Structure of Project



List of Possible Topics for Research Symposium

1. Ethics of gene sequence and pharmaceutical patenting
2. Ethics of stem cell research (many subtopics possible, must be *specifically* defined by group)
3. Ethics of genetic/neural/physical enhancement
4. Neuroscience (fMRI) and free will/responsibility
5. Addiction and responsibility
6. Neuroscience (fMRI) and lie detection
7. Organ Trafficking: The right to sell organs
8. Organ transplants for addicts or convicted felons
9. Amputation of Limbs of Healthy Patients (Body Integrity Identity Disorder)
10. Use of animals in biological research; use of primates specifically
11. The social responsibility of pharmaceutical companies to develop specific drugs
12. The ethics of human cloning (somatic cell nuclear transfer)
13. Genetic counseling: Privacy and confidentiality
14. Genetic screening/testing of newborns or minors
15. Abortion: When does life begin?
16. Euthanasia: What constitutes a terminal illness?
17. Definitions of death (Cardiac vs. Whole Brain) and their implications for organ transplantation
18. Detecting consciousness in PVS patients and the removal of life-sustaining treatment
19. The use of chemical and biological agents in warfare
20. Involuntary civil commitment/castration of sex offenders
21. The biomedical model of disease and mental illness
22. Neuroscience (fMRI) and pain perception
23. Implications of genetically modified crops, other species in the wild
24. Ethics of Direct-to-Consumer genetic testing
25. Ethics of predictive genetic testing for highly heritable traits, role of familial consent
26. Vaccination
27. Genetically modified organisms as pets: e.g. GFP glow fish, hypoallergenic cats

...

Timeline: Biology Paper

(Collaborative)

Week 2	Scientific Writing / Purpose & Audience / Form Groups
Week 3	Topic Proposal and Resources
Week 4	Biology: Outline and Writing Plan
Week 5	Biology: Methods & Results
Week 6	Biology: Discussion & Conclusions
Week 7	Biology: Introduction, Background and Significance; <i>Self and Peer Evaluation</i>

Timeline: Ethics Paper

(Individual)

Week 8	Ethics: Outline and Writing Plan
Week 9	[Spring Break]
Week 10	Ethics: Structuring Arguments
Week 11	Ethics: Supporting Arguments

Timeline: Research Symposium

Week 12	Bridging Biological and Ethical Content: Abstract
Week 13	Bridging Biological and Ethical Content: Abstract
Week 14	Poster Preparation
Week 16	Research Symposium Presentations

Faculty Consultations

Consultation Rubric

Group:

Paper copy of current outline (10 points) Yes/No

Copy of the group self-check list FILLED OUT (5 points) Yes/No

General organization/preparation for meeting, timeliness (5 points) Yes/No

(Bring copy of any primary literature article for questions re: specific methods in literature, etc.)

Any issues re: group work, contributions of members as outlined by your Writing Plan

Score:

Comments:



UNIVERSITY OF MINNESOTA | ROCHESTER

Sampling of
2013 UMR Research & Education
Symposium Posters

2014 UMR Research &
Education Symposium
May 5 – 9, 2014



Thursday, June 12, 14

Challenges

- **Administrative organization/management**
 - Departmental/Institutional; staff support
- **Communication among faculty during project**
 - Domain of inquiry, core concepts, and methods of instruction, assessment strategies
- **Communication with students during project**
 - Cohort enrollment model
- **Level of difficulty for first year students**
 - Clear expectations, instructions, avenues of support

Strengths of this approach

- Authentic multidisciplinary perspectives and investigations
- Rigor in first year project
- Level of faculty support across disciplines, in multiple courses

Questions?



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Self and Peer Evaluation Questions

- What grade (%) would you assign this group member for the Research Symposium Project?
- How would you **rate the effort of this group member** in terms of preparedness, attendance at group meetings and communicating with other group members?
- How would you **rate the quality of contributions of this group member** in terms of contributing writing to the project and providing feedback for other group members' contributions?

5 - very good

4 - good

3 - adequate

2 - somewhat poor

1 - very poor