

Appendix A

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Appendix B

Preliminary Guidelines for Program Development

The development of the "new" program in medical education should take into account present characteristics of the curriculum at the University of Delaware and Jefferson Medical College. A sample outline of such factors is offered below.

Current Curricula Characteristics

1. JMC admission requirements: one year of general biology; organic chemistry; inorganic chemistry; general physics.
2. University, College and Departmental requirements for the baccalaureate degree.
3. a series of well established and relevant courses some of which provide a less than desirable grounding of course work in the practice of various medical settings.

Alternative Arrangements for "New" Program

1. development of new course sequences at Delaware which would provide prerequisite knowledge in more integrated and efficient manner (particularly inorganic chemistry and physics).
2. model the development of the "new" program on selected elements of the five-year Arts and Science-Engineering Curricula and the interdepartmental area studies major.
3. (a) the development of a sequence of four honors colloquia to be offered during Winter term (January) designed to integrate material across multiple courses (e.g. anatomy, biochemistry, neurosciences, literature, philosophy, etc) and to illustrate conceptual material in various practice settings and to develop reflective self-directed learning behaviors;
(b) the development of seminars designed to integrate course material within the context of practice settings and to develop reflective, self-directed learning behaviors.
(c) redesigning the non-basic science hours in the first two-years at JMC to provide curricular time for medical humanities and social science, information science, health politics and economics, etc.

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SAMPLE

Possible Course Offerings within Departments

Biology

B 207	Introductory Biology I	(4)	
B 208	Introductory Biology II	(4)	
B 306	General Physiology	(4)	+B3xx Seminar (1)*
B 314	Brain & Behavior	(3)	+B3xx Seminar (1)*
B 401	Human Anatomy	(6)	+CSC 4xx Seminar (Body in Lit & Social Science)* (1)
B 406/416			
	Human Physiology & Lab	(4)	+B4xx Seminar* (1)
B 402	Neuroanatomy & Neurophysiology	(4)	+B4xx Seminar* (1)
B 626	Neuroscience	(5)	+B6xx Seminar* (1)
B 626	Neuroscience II	(5)	+B6xx Seminar* (1)
A 101	Histology	(4)	<u>New course offering during Winter term of 4th year taught by Jefferson faculty at Delaware campus</u>
6xx	Honors Colloquium: The Human Body	(5)	<u>New course offering - multidisciplinary course integrating key concepts and principles from anatomy, physiology, neuroscience, biochemistry, humanities and social science.</u>

* Seminar (new) - integrated course content illustrated in practice setting and/or with typical health problems and issues----small group, problem based format.

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Chemistry

C 103	General Chemistry	(4)
C 104	General Chemistry	(4)
C 321/325	Organic Chemistry & Lab	(4)
C 322/326	Organic Chemistry & Lab	(4)
C 641	Biochemistry +C6xx Seminar*	(3) (1)
C 642	Biochemistry +C6xx Seminar*	(3) (1)

Physics

PS 201	General Physics	(4)
PS 202	General Physics	(4)

[These might be combined into one 5cr course in Biophysics for Health Professionals (3cr class, 1cr lab, 1cr Seminar)]

* Seminar (new) - integrated course content illustrated in practice setting and/or with typical health problems and issues
----small group, problem based format.

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Center for Science & Culture

Category I: Systems of Thought

CSC 233	Women, Biology & Medicine (3)
CSC 240	Critical Thinking, Scientific Ideas and Culture (3)
CSC 248	Magic, Science & Religion (3)
CSC 325	Sociology of Science (3)
CSC 385	History of Biological Ideas (3)
CSC 475	Topics (1-4)
CSC 6xx *	German Social Theory and the Practice of Medicine

Category II: Social Science & Medicine/Science

CSC 242	Society & The Health Professions (3)
CSC 243	Society, Politics & Health Care (3)
CSC 271	Introduction to Medical Anthropology (3)
CSC 310	Sociology of Health Care (3)
CSC 311	Hospitals (3)
CSC 355	Computers, Ethics & Society (3)
CSC 475	Topics (1-4)
CSC 6xx *	Medical Geography (3)
CSC 6xx *	Health Economics (3)

Category III: Humanities & Medicine/Science

CSC 207	Technology & Human Values (3)
CSC 241	Ethical & Moral Dimensions of Health Care (3)
CSC 245	Ethical Issues in Scientific Research (3)
CSC 347	Time, Relativity & Modern Fiction (3)
CSC 368	Literature & Science (3)
CSC 444	Medical Ethics (4)
CSC 475	Topics (1-4)
CSC 6xx *	History of Medicine (3)
CSC 6xx *	Philosophy of Medicine (3)
CSC 6xx *	Literature and Medicine (3)

Communication

Com 255	Fundamentals of Communication (3)
Com 320	Analysis of Intercultural Communication (3)
Com 330	Communication & Social Behavior (3)
Com 340	Principles of Interviewing (3)
Com 361	Interpersonal Communication (3)
Com 485	Analysis of Verbal Communication (3)

* new interdisciplinary courses to be developed

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Other

CIS xxx	Microcomputers for Health Professionals (3)
ST 201	Introduction to Statistics (3)
ST 656	Statistics for Biological Science (3)
BE 431	Decision Support Systems (3)
IFS 201	Issues in Life Span Development (3)
IFS 603	Basic Concepts in Gerontology (3)
IFS 610	The Hospitalized Child (3)
UA 655	Social Environment and Health (3)
UA 812	Management Decision Making (3)
UA 813	Data Base and Decision Support Systems (3)
WS 204	Gender and Knowledge (3)
WS 233	Women, Biology and Medicine (3)
WS 307	Sociology of Sex and Gender (3)
WS 333	Psychology of Women (3)
WS 335	Women and Mental Health (3)
WS 338	Philosophy and Gender
WS 363	Women in Cross-Cultural Perspective

Appendix C

Statements Guiding the Conduct of Program Evaluation

1. Program evaluations should contribute to enlightened discussion of alternative plans for social action.
2. Evaluation is a handmaiden to gradualism; it is both conservative and committed to change.
3. An evaluation of a particular program is only an episode in the continuing evolution of thought about a problem area.
4. The better and the more widely the workings of social programs are understood, the more rapidly policy will evolve and the more the programs will contribute to a better quality of life.
5. The hope that an evaluation will provide unequivocal answers, convincing enough to extinguish controversy about the merits of a social program, is certain to be disappointed.
6. The notion of the evaluator as a superman who will make all social choices easy and all programs efficient, turning public management into a technology, is a pipe dream.
7. An image of pluralistic accommodation more truly represents how policy and programs are shaped than does the Platonic image of concentrated power and responsibility.
8. What is needed is information that supports negotiation rather than information calculated to point out the "correct" decision.
9. The policy-shaping community does not wait for a sure winner; it must act in the face of uncertainty, settling on plausible actions that are politically acceptable.
10. It is unwise for evaluation to focus on whether a project has "attained its goals."
11. Precise assessment of outcomes is sensible only after thorough pilot work has pinned down a highly appropriate form for an innovation under test.
12. Much of the most significant communication of findings is informal, and not all of it is deliberate; some of the most significant effects are indirect, affecting audiences far removed from the program under investigation.
13. An evaluation of a particular project has its greatest implications for projects that will be put in place in the future.
14. It is better for an evaluative inquiry to launch a small fleet of studies than to put all its resources into a single approach.
15. Much that is written on evaluation recommends some one "scientifically rigorous" plan. Evaluations should, however, take many forms, and less rigorous approaches have value in many circumstances.
16. Results of a program evaluation are so dependent on the setting that replication is only a figure of speech; the evaluator is essentially an historian.

¹These statements are selected from a longer list published in: Cronbach, L. J., et al. Toward reform of program evaluation. San Francisco: Jossey-Bass, 1982.

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17. The evaluator will be wise not to declare allegiance to either a quantitative-scientific-summative methodology or a qualitative naturalistic-descriptive methodology.
18. The symmetric, nonsequential designs familiar from laboratory research and survey research are rarely appropriate for evaluations.
19. Multiple indicators of outcomes reinforce one another logically as well as statistically. This is true for measures of adequacy of program implementation as well as for measures of changes in client behavior.
20. For any suitably broad social problem, a "social problem study group" should be set up. It would be charged to inform itself by weighing, digesting, and interpreting what is known. It would foster needed investigations and make the policy-shaping community aware of what is and is not known.

Appendix D

A GUIDELINE FOR EVALUATION ACTIVITIES '

I. THE RELEVANT EVALUATION QUESTIONS ARE IDENTIFIED AND FOCUSED

- A. Criteria for Identification of Questions
 1. The members of the evaluation task force agree on the purpose(s) and emphasis of the evaluation.
 2. The members of the task force decide which components and basic activities of the program will be the subject of the evaluation (the point here is simply to delineate what aspects of the program are to be discussed in detail as specific evaluation questions are focused).
- B. Alternative Approaches for Focusing Evaluation Questions
 1. The evaluation question can be framed in terms of the program's goals and objectives.
 - a. goals clarification provides direction in determining what information is needed and wanted; goals do not automatically determine the content and focus of the evaluation, which depend on what task force members want to know;
 - b. goals are prioritized using the criterion of information need, not just that of relative importance to program.
 2. The evaluation question can be framed in terms of program implementation. Options here include:
 - a. effort evaluation;
 - b. process evaluation.
 3. The evaluation question can be framed in terms of the point in the life of the program when the evaluation takes place. Different questions are relevant at different states of program development.
 4. The evaluation question is framed in the context of the organizational dynamics of a program. Different types of organizations use different types of information and need different types of evaluation. Programs vary in organizational terms along the following dimensions:
 - a. the degree to which the environment is certain and stable versus uncertain and dynamic;
 - b. the degree to which the program can be characterized as an open or closed system; and
 - c. the degree to which a rational goal maximization model, an optimizing systems model, or an incremental, satisficing model best describes decision making processes.

¹This material is a slight modification of work published in: Patton, M.Q. Utilization-focused evaluation. Beverly Hills: Sage, 1978.

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5. The evaluation task force works with information users to find the right evaluation question(s). The right question has several characteristics:
 - a. it is possible to bring data to bear on the question;
 - b. there is more than one possible answer to the question, i.e., the answer is not predetermined or "loaded" by the phrasing of the question;
 - c. the identified decisionmakers want information to help answer the question;
 - d. the identified decisionmakers feel they need information to help them answer the question;
 - e. the identified and organized decisionmakers and information users want to answer the question for themselves, not just for someone else;
 - f. the decisionmakers can indicate how they would use the answer to the question, i.e., they can specify the relevance of an answer for their program.
6. As the evaluation question is focused the fundamental, everpresent question that underlies all other issues is: what difference would it make to have this information? How would the information be used and how would it be useful?

II. EVALUATION METHODS ARE SELECTED THAT GENERATE USEFUL INFORMATION FOR IDENTIFIED AND ORGANIZED DECISIONMAKERS AND INFORMATION USERS

- A. Strengths and weaknesses of alternative evaluation procedures are considered in the search for methods that are appropriate to the nature of the evaluation question. Options include consideration of:
 1. Quantitative and qualitative methods;
 2. Hypothetico-deductive objectivity or subjectivity versus holistic-inductive objectivity or subjectivity;
 3. Distance from versus closeness to the data;
 4. Fixed versus dynamic designs;
 5. Relative emphases on reliability or validity;
 6. Holistic or component units of analysis; and
 7. Inductive versus deductive procedures.
- B. Design and measurement decisions are shared by evaluators and decisionmakers to increase information users' understanding of, belief in, and commitment to evaluation data.
 1. Variables are operationalized in ways that make sense to those who will use the data; face validity, as judged by decisionmakers and information users, is an important instrumentation criterion in evaluation measurement.
 2. Evaluation designs are selected that are credible to decisionmakers, information users, and evaluators.
 3. Major concepts and units of analysis are defined so as to be relevant to decisionmakers and information users; the long-term relevance of definitions and units of analysis are considered to increase the potential for continuous, longitudinal evaluation (where appropriate).
 4. Multiple methods are used and multiple measures employed as much as possible to increase the believability of findings.

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5. Decisionmakers and information users are involved in continuous methods, design, measurement and basic data gathering decisions as changed circumstances, resources, and time lines force changes in methods. Recognizing that initial proposals are poor predictors of final designs, evaluators seek involvement of relevant decisionmakers in design and measurement questions as they arise.
6. Decisionmakers weigh with evaluators the methodological constraints introduced by limited resources, time deadlines, and data accessibility problems. All task force members must be highly knowledgeable about the strengths and weaknesses of data collection procedures.
7. The utilization assumption guiding methods discussions is that it is better to have an approximate and highly probabilistic answer to the right question than a solid and relatively certain answer to the wrong question.

III. DECISIONMAKERS AND INFORMATION USERS PARTICIPATE WITH EVALUATORS IN DATA ANALYSIS AND DATA INTERPRETATION

- A. Data Analysis is separated from data interpretation so that decisionmakers can work with the data without biases introduced by the evaluator's conclusions.
- B. Data analysis is presented in a form that makes sense to decisionmakers and information users. Decisionmakers are given an opportunity to struggle with the data as they become available, so that surprises are avoided.
- C. Evaluators work with decisionmakers and information users to make full use of the data.
 1. Realizing that "positive" and "negative" are perceptual labels, the evaluator avoids characterizing results in such monolithic terms. Most studies include both somewhat positive and somewhat negative findings, depending upon one's point of view. Analysis and interpretation focus on specific results, relationships, and implications rather than general characterizations of the program.
 2. Both strengths and weaknesses of the data are made clear and explicit.
- D. Evaluators work with decisionmakers and information users to develop specific plans for action and utilization based upon evaluation findings and interpretation.
 1. Evaluation ultimately necessitates making leaps from data to judgment, from analysis to action.
 2. Data analysis and interpretation includes the judgments, conclusions and recommendations of both evaluators and decisionmakers.

IV. EVALUATORS AND DECISIONMAKERS NEGOTIATE AND CO-OPERATE IN DISSEMINATION EFFORTS.

- A. Dissemination of findings is only one aspect of evaluation

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utilization, and a minor aspect in many cases. The primary utilization target consists of relevant decisionmakers and information users identified and organized during the first step in the evaluation process.

- B. Dissemination takes a variety of forms for different audiences and different purposes.
- C. Throughout dissemination efforts both evaluators and decisionmakers take responsibility for the evaluation from initial conceptualization to final data analysis and interpretation. Options include:
 1. Both evaluators and decisionmakers are present at dissemination presentations; and
 2. Both evaluators and those for whom the evaluation was conducted are identified in all reports and presentations.