IFP Assessment Results

CATEGORY 2. FOUNDATIONS OF MATHEMATICS AND QUANTITATIVE REASONING

Comments

Need operational definition for critical thinking in mathematics

---Agreed. The mathematics department will work on crafting such a definition.

Discontinue the practice of treating courses with different course numbers as the same

(MAC 2311/2281, MAC 2312/2282)

---Agreed. In the future, the mathematical department will collect separate data in these courses.

Overall IFP objectives

Overall IFP Objective	Foundations of Written Comm. (N=35)	Foundations of Mathematics and Quant. Reasoning (N=65)	Foundations of Science and the Nat. World (N=22 and 46 labs)	Foundations of Society and Human Behavior (N=26)	Foundations in Global Citizenship (N=31)	Foundations of Creative Expression (N=34)
The ability to think critically	35 (100%)	51 (78%)	12 (55%) 31 labs (67%)	15 (58%)	14 (45%)	32 (94%)
The ability to communicate effectively	35 (100%)	0 (0%)	4 (18%) 31 labs (67%)	13 (50%)	14 (45%)	28 (82%)
An appreciation for how knowledge is discovered, challenged, and transformed as it advances	35 (100%)	0 (0%)	12 (55%) 30 labs (65%)	9 (35%)	7 (23%)	29 (85%)
An understanding of ethics and ethical behavior	1 (3%)	0 (0%)	6 (27%) 12 labs (26%)	11 (42%)	1 (4%)	13 (38%)

51 of 65 course sections scored in the Satisfactory or Clearly in Evidence categories.

We need to get this to 100 percent.

---Agreed. Learning to think critically is one of the primary purposes of a university education. As a first step, the mathematics department will craft a definition and attempt to include this definition in all syllabi for all mathematics courses in the IFP.

Mathematics courses did not meet any of the other overall objectives. Although this was

not a requirement, can anything be done to include a strong ethical component in one or more courses? MGF 1106/1107 might be a great fit.

---Possibly. Our lower-division committee will discuss ways in which ethical ideas might be introduced in the Math for Liberal Arts courses, as well as in Introductory Statistics, where one might consider how statistics is used and misused.

Category-specific learning objectives

Students who complete the Mathematics and Quantitative Reasoning requirement will:	Courses Meeting Objective (N=65)
Demonstrate an understanding of mathematical theories and their applications	62 (95%)
Be able to identify and apply mathematical concepts most appropriate to solving quantitative problems	60 (92%)

3 course sections did not meet the first objective

5 course sections did not meet the second objective

Problem primarily due to failure to submit student work

---Agreed. The chair will attempt to obtain better response in the future, as the department continues our own ongoing assessment of the mathematics courses in the IFP.

Syllabi Review

IFP Category	N	One or More Overall IFP Learning Objectives Evidenced in Syllabi	All Category-Specific Learning Objectives Evidenced in Syllabi	Syllabi Conform Completely to Guidelines for Course Syllabi	College-Level Course?
Foundations of Creative Expression	35	35 (100%)	35 (100%)	24 (69%)	35 (100%)
Foundations of Mathematics and Quantitative Reasoning	65	31 (48%)	24 (37%)	30 (46%)	65 (100%)
Foundations of Science and the Natural World	22 46 labs	3 (14%) 0 labs (0%)	1 (5%) 0 labs (0%)	3 (14%) 0 labs (0%)	22 (100%) 46 labs (100%)
Foundations of Society and Human Behavior	26	8 (26%)	16 (62%)	8 (31%)	26 (100%)
Foundations in Global Citizenship	31	6 (19%)	11 (35%)	12 (39%)	31 (100%)
Foundations of Creative Expression	34	19 (56%)	16 (47%)	9 (26%)	34 (100%)

Most of the omissions are fairly minor, but some of the uncoordinated course section syllabi lack important components.

---Agreed. Our lower-division committee will attempt to establish more careful coordination of the syllabi for IFP courses.