Bio 2010 Survey

"BIO 2010" and its effect on the science curriculum at primarily undergraduate institutions: A Survey

1. Have your campus faculty and/or administration discussed the implications of the BIO 2010 report for your curriculum and undergraduate programs?

Yes **82** No **87**

Next >>>

Thank you very much for taking the time to give us your valuable information!

Bio 2010 Survey

"BIO 2010" and its effect on the science curriculum at primarily undergraduate institutions: A Survey (continued)

2. Has your campus increased its opportunities for undergraduate research as a result of the BIO 2010 report?

   ○ Yes ○ No ○ Still under discussion; no decision yet

   15 **27** **17**

3. The Biology Curriculum:

   a. Has your campus altered its BIO curriculum as a result of the BIO 2010 report?

      ○ Yes ○ No

      14 **45**

   b. If NO, does it have plans to alter the curriculum in the future as a result of the BIO 2010 report?

      ○ Yes ○ No ○ Still under discussion; no decision yet

      17 **7** **20**

   c. How has the report affected the balance between courses in biomedical/molecular/genetics and environmental/ecological/agricultural offerings?

      42 ○ No change

      14 ○ Relative increase in biomedical: environmental offerings

      0 ○ Relative decrease in biomedical: environmental offerings

   d. COMMENT on the impact of BIO 2010 on the biology curriculum on your campus (e.g., course offerings; staffing).

4. The Physical Science and Mathematics Curriculum:

   a. Has your campus altered its Physical Science/Math offerings as a result of the BIO 2010 report?

      ○ Yes ○ No

      12 **46**

   b. If NO, does your campus plan to alter its Physical Science/Math offerings as a result of the BIO 2010 report?

      ○ Yes ○ No ○ Still under discussion; no decision yet

      8 **14** **22**

   c. COMMENT on the impact of BIO 2010 on the physical science/math curriculum on your campus (e.g., course offerings; staffing):

Your Name: (optional)

College or University: (optional)

Submit the survey

Thank you very much for taking the time to give us your valuable information!

Q3d: COMMENT on the impact of BIO 2010 on the biology curriculum on your campus (e.g., course offerings; staffing).

2/9/2004 4:07:28 PM

There is nothing to reort yet. Nothing has changed.

2/5/2004 12:03:22 PM

Since environmental degradatation is probably a signature problem of the upcoming century, I don't think Bio2010 is right in neglecting the necessity for training in fields related to ecology.
It should have been called BioMed2010.

2/5/2004 10:55:09 AM

We are altering our curriculum this year, but the recomentations of the BIO 2010 were quickly dismissed. We want our majors to be more braodly educated in ALL areas of the life sciences not just to churn out future ciomedical researchers.

2/4/2004 5:04:43 PM

The BIO 2010 initiative provided some guidance in our new Biochemsitry and Molecular Biology concentration/major

1/13/2004 5:55:47 PM

We have begun exploring ways to better integrate physical sciences and mathematics subjects with biology courses, influenced somethat by BIO 2010. However, we are looking to enrich the content of existing courses and make math/chemistry/physics/biology content more coherent rather that make radical changes in the core contents of existing courses. Hence we expect to change course offerings and staffing only at the margins.

1/1/2004 6:39:21 PM

More non-environmental/ecological courses are starting to appear in the biology curriculum. The completion of a grant application to HHMI that concerned BIO 2010 motivated discussions of this document and continued implementation of some of the issues described in the report.

12/24/2003 10:03:44 AM

It is hard to tell what the consequences will be. Our students take a 4 semester core sequences that covers all of biology (from atoms to ecosystems) and will have to take 3 upper division courses one each in 3 areas (cell/molecular; organismal; ecology/evolution).

12/23/2003 7:34:58 PM

We plan to put some interdisciplinary modules into our intro labs that show the connections between biology and the other sciences.

12/23/2003 9:33:04 AM

Our department instituted several curricular changes prior to the publication of the report. Research opportunities for students have increased, more emphasis on molecular biology at the beginning of the program, etc. For this reason, we have not made additional changes as a result of the report, but we are encouraged that we did the right thing in making the changes we made.

12/19/2003 2:52:37 PM

I'm not in the biology dept, so I'm not exactly sure the status of things. Discussion is happening, and there has been an emphasis on developing things at the math-bio interface thus far.

12/19/2003 11:19:23 AM

We are revising our entire curriculum in Biology, starting with the first 4 intro courses; our primary document for discussion is Bio 2010. We had a day long seminar in the dept this fall focussing on the report and making an action plan as a result.

12/18/2003 11:42:01 AM

We have recently hired a Biologist with specialty in Bioinformatics, influenced in part by BIO 2010.

After discussions influenced by BIO 2010 and other factors, we intend to extend offerings of a new course in Bioinformatics, available to Bio majors; some offerings may be directed more towards Bio majors than CS majors.

12/17/2003 4:41:14 PM

It's been discussed in the context of the college's own plan for 2010. It has influenced those discussions.

12/17/2003 9:08:06 AM

We are being told that we must move to all things biology. Math must teach to the needs of biology, physics must structure the content around biology, and chemistry must serve biology.

12/17/2003 8:46:09 AM

It appears that the report magnifies the importance of the biomedical over environmental curriculum. However, they can BE INTEGRATED, especially as we know that environment has a substantial impact on human health, and we know the specific mechanisms by which environmental problems are caused, cause disease, and can be remedied.

12/16/2003 10:09:17 AM

The impact is still evolving....it helped us to discuss things we were already discussing. We had just hired a Bioinformatics person--we are teaching are first bioinformatics course in computer science. The tension between "human/medical" focus and "the rest of biology is here but minimal--no question that we will stay balanced and have just hired a biogeochemist. Quantitative work will increase dramatically. New ways of teaching chemistry are being discussed. Largest problem is the question of who has the "right" to teach chemistry-related subjects (biophysical chem, biochem). Physics exercises also being developed.

12/16/2003 9:43:13 AM

Report reflected our general approach anyway; if funding effort is successful though, balance will shift to molecular aspects of biology at expense of other research areas - unfortunate.

12/15/2003 9:55:00 PM

We have recently submitted a proposal to HHMI based on BIO 2010. If funded, we will be adding more biomedically related components in several areas of study (bioinformatics, cell imaging, and molecular genetics) to labs in our two-course introductory biology sequence and in some of our upper-level courses. We will also offer a new seminar in bioinformatics. We would add 6-10 more summer research students (across several departments). One question that has not adequately been addressed is what will come out of our existing courses to add this new material.

Your survey needs another question – whether in fact, contrary to Bruce Alberts’ letter in Science, BIO 2010 has been misinterpreted when people claim it diminishes nonbiomedical subject areas in biology. I think it has not been misinterpreted; it does diminish organismal and ecological levels of biology. I am an ecologist who is involved with our environmental program, and I support interdisciplinary activities in science and with other fields. I was, however, very concerned when I first read BIO 2010 shortly after it came out. The title of the document, “BIO2010: Transforming Undergraduate Education for Future Research Biologists,” in combination with its strong emphasis on preparing undergraduate students for “careers in molecular biology, cell biology and other field central to biomedical research,” clearly give the impression that future researchers are needed mainly in biomedical fields. We do need future researchers in those fields, but we need future researchers as much, if not more, in environmental and ecological fields. The biggest problems the world faces are environmental. If the committee truly concluded that “a well-educated biology major should understand the principles of population and evolutionary biology, ecology, cognitive neurobiology, and plant biology, irrespective of his or her future research area,” they should have put this statement in the Preface or on page one, rather than burying it on page 24. There appear to have been no ecologists on the Committee that drafted the document. Words such as “biodiversity,” “ecosystem,” “community ecology,” “systematics,” etc., are absent from the document at the same time that NSF and other agencies are calling for a need for more basic research on organisms. But perhaps the absence of these words is not surprising given that the word “organism” does occur a few times but almost always in the context of a statement about the range of biology “from molecules to organism.” (In real life, organisms occur in populations, communities, and ecosystems.)

BIO 2010 is a political document funded by NIH and HHMI. Whether the Committee that prepared it intended it to or not, the document is contributing to a climate that is beginning to divide biology faculty at small liberal arts colleges, places where organismal biology is often still on a par with molecular biology. (Such divisions have already taken place at many large universities, with organismal biology the clear loser at most places.) Indeed, many biologists who work on whole organisms recognize the value of molecular techniques as tools to help answer questions about those organisms but not as replacement of more traditional work in the field and lab. Colleagues at another small liberal arts college now refer to some members of their department as “the molecular mafia.” As one of my colleagues states, “as written, BIO 2010 is an anti-organismal biology manifesto.”

12/15/2003 5:43:31 PM

We are using this report as support for what we are already doing (broad education in all sciences) and also planning to search for a new position in computational biology.

12/15/2003 5:38:43 PM

We are in the process of discussing broad curricular reform in the sciences and it will be another year before we will know how BIO 2010 really affects the discussion. Already, however, the BIO 2010 report has been a catalyst in our discussions.

12/15/2003 12:51:23 PM

The bio dept. has had some conversations about requiring more "cognates" in math, chemistry, and physics, but we are constrained by a College-wide rule limiting required coursework in the major to a third of the total (usually bent up to 50% for coursework outside one department). At the moment, a bio major requires 43 credits in biology and 57 overall (out of 128), so there's little room to add more math, chem or physics without reducing biology--also contrary to Bio 2010. The biology dept. has begun to discuss with other depts. the possibility of altering their courses to serve better as an intro to their disciplines for biologists (they are now designed to introduce chemistry to prospective chem majors and physics to prospective physics majors). But there isn't much incentive for these depts. to put in the effort to help bio majors, so it's not clear whether this will lead any where.

The report is clearly not well designed for liberal arts colleges, where preprofessional training takes a back seat to broad preparation in civic skills, like reading, analytical thinking, effective oral and written communication, and appreciation of a variety of human endeavors in the arts, humanities, social and natural sciences. While I want to be sure to educate future scientists well, I also want to educate effective citizens, not narrow-minded geeks. So I think breadth outside the sciences is important to undergraduates, even if it comes at the expense of the depth and breadth in science recommended in Bio 2010.

12/15/2003 11:59:15 AM

BIO 2010 serves as a foundation for our recent revision of the Biology curriculum. Some of the changes we are contemplating include changes in the content/focus of the two semester Introductory sequence from diversity, form and function to biochemistry, cell biology, genetics and molecular biology.

12/15/2003 11:53:31 AM

No change just yet, but the 2010 report has resulted in talk of decreasing the frequency of offering of courses related to environmental biology (ecology, plant taxonomy, ornithology, vertebrate natural history, aquatic ecology, etc.).

12/15/2003 10:46:01 AM

The curriculum has not changed. However, it already was very biased toward biomedical offerings.

12/15/2003 10:07:33 AM

The BIO 2010 report was the central part of the discussions we had to prepare our pending 2004 HHMI grant proposal. We will be going ahead with the essence of the proposal for the freshman year (case based courses emphasising quantitative and computational solutions to biological research problems, enhanced freshman seminar and active stipend supported summer program to identify and encourage freshman to do research) whether or not the grant is funded. As part of the process to get a consensus of where we wanted to go with the proposal I distributed the sections of the BIO 2010 report dealing with Chemistry, Physics and Math to those departments. When I met with the Math department to discuss the Math-Biology position proposed in the grant we discussed the implications, but as of now Math is the only department with which we have had this discussion.

12/15/2003 9:44:30 AM

We are in a year-long evaluation of curricular offerings, and the report is very useful. However, I would not sya it has specifically made a difference yet.

12/15/2003 9:40:19 AM

Some of the changes proposed by BIO 2010 were already underway on our campus. We have always had a strong emphasis on undergraduate research. One response by our science departments to BIO 2010 is to work to provide an interdisciplinary seminar course to freshmen and sophomores.

12/15/2003 8:57:04 AM

Requirements have been added to emphasize upper level celluar level biology and organic chemistry while STILL failing to require any upper level ecological or organismal biology. Also, there has been no addition of quantitative skills courses such as statistics. We are producing students that are illiterate in major facets of biology. At a time when the ecological condition of our planet is obviously decaying and ecologists are calling for increased study of ecological systems, or biology departments are becoming debilitatingly focused on the "hot prospects" of cellular and molecular biology. This is not a cry against interdisciplinary study, but a call to not forget the foundations of our field. I think the problem we face is summarized quite well in the following article Ehrenfeld, D. 1898. Forgetting. Orion. Autumn. pp. 5-7

12/15/2003 8:42:34 AM

BIO 2010 was one factor in the department's decision to redesign courses to incorporate the interdisciplinary aspects of subdisciplines within biology and with other sciences. It also led to discussion on how to increase math and computational approaches into biology courses.

12/15/2003 8:19:01 AM

We have not changed our curriculum, but we wonder if there might be pressure to do so based on what is recommended in BIO 2010. Our biology department is very concerned about the imbalanced curricula presented in BIO 2010. Even the supposed "evolution/ecology" option contains a minimal number of courses at the level of the organism and above. We are also very troubled by the minimal attention given to plants. The curricula presented have a huge number of courses. At our PUI, majors are limited to 16 courses (out of 32), which we think is a proper balance in a liberal arts curriculum. Yet some of the BIO 2010 curricula exceed 20 courses. We believe that BIO 2010 has very serious weaknesses. Because it comes from a well-respected organization, it may have a damaging effect on biology education. It is hard enough to convince students that there are many aspects of biology beyond medicine; our task has now been made harder.
On a related matter, we are concerned about the new curriculum proposed by the American Society of Biochemistry and Molecular Biology; this curriculum may have been influenced by BIO 2010. The ASBMB's list of courses largely ignores topics such as physiology, development, ecology, and evolution. Thorough coverage of such topics is crucial to an understanding of biochemistry and molecular biology.

12/15/2003 7:55:29 AM

Increase in undergradute research earlier in college; increase in consideration of math/computer science integration with science programs; increase in pre-college programs

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12/14/2003 2:52:55 PM

none

12/13/2003 9:59:39 PM

We have already been doing most of the things recommended in Bio2010.

12/13/2003 5:50:36 PM

None to date but we anticipate a major overhaul in the next 2-3 years.

12/13/2003 5:18:37 PM

We have considered it, but did not feel there were dramatic differences,and we have been homing our program for several years.

12/13/2003 5:10:59 PM

Ou rBiology curriculum remains very broad and well balanced, but we have added one course and wone faculty position in cellular and molecular biology.

12/13/2003 12:50:02 PM

It looks like it will help enhance opporunities for bio majors to receive more mathematical/computational/statistical training to enable them to work at the intersection of the life and mathematical sciences. There are signs that BIO2010 will influence our bio curriculum here, but it will not alter it in drastic ways. (I can't comment on this in a definitive way because I am not a member of the biology faculty.) We will better prepar our students for bioscience research careers and we will offer more opportunities for undergraduate research in mathematical and computational biology.

12/13/2003 10:29:49 AM

External funding for these revisions has been requested. If funding is received, changes will occur. If not, it is unlikely.

12/12/2003 9:18:49 PM

More local factors drive the composition of our curriculum. As a liberal arts institution we see our mission as being much broader than training students for careers in biomedical research-that is one option open to our graduates but one among many. Our current focus is creating and staffing interdiscipilinary science programs (ES, NS, BIOCH&MOLBIO) but this is driven more by concerns about keeping our curriculum relevant and attracting more science students to our institution (currently better know for arts/humanities) than a concern about biomedical research in particular.

12/12/2003 8:57:55 PM

No changes yet; cross-disciplinary appointment planned with chemistry department contingent on funding (chemical biology)

12/12/2003 7:15:01 PM

The BIO2010 report was written from a Biomedical perspective. It is of course going to have recommendations that will try to improve the education of those going in that direction. Like Alberts, we feel strongly that is would be a misinterpretation of the study to cut areas of Ecology and other non-biomedical topics from the curriculum. There are many good reform ideas that come out of the BIO2010 project that can be applied to these areas as well. Just because it was written with Biomedical disciplines in mind, does not limit its utility for applying its recommendations and principles to other science disciplines.

12/12/2003 5:47:49 PM

We have had a two semester research requirement in place for many years. This is why Item 2 above is answered "No." Our increased emphasis on biomedical/environmental is also partly a consequence of staffing losses combined with budget restrictions over the last two years.

12/12/2003 5:35:22 PM

The biology department is still committed to a balance of cell and molecular, ecology and evolution aspects of biology.

12/12/2003 5:27:33 PM

We have written a Howard Huges grant to hire two new tenure track faculty (biophysics and structural biochem.), add new summer student research positions, alter introductory curricula in biology, chemistry, and physics to stress biomedical applications, and add one new course in research methods.

12/12/2003 5:20:38 PM

We used this report to argue for including Math in our new science building (planning stages now). We have also used this document to bolster our requests for student-stipend funding from the institution.

12/12/2003 5:18:48 PM

Our faculty recognizes the importance of keeping current but with most being senior faculty and many without training in modern molecular/biotechnology methods it is hard for them to integate these subjects into their classes. We have embarked on a 5-year plan to evaluate the entire program and to update in other areas (like computer and mathematical modeling).

12/12/2003 5:14:24 PM

The BIO 2010 report does not include physiology in the core curriculum and there are no organismal level courses in the core, despite the fact that physiology is the integrating discipline that spans from cell-molecular to ecology.

12/12/2003 4:55:13 PM

It was the centerpiece of a major curricular and pedagogical reform proposal to HHMI.

12/12/2003 4:34:28 PM

we have used Bio2010 to inform us for writing an HHMI proposal. we have plans to alter curriculum, increase opportunities for research, etc. however are awaiting funding. Just the reading of BIO 2010 by most faculty was helpful in motivating change

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12/12/2003 4:13:46 PM

Along with other reports calling for re-evaluation of pedagogical approaches (such as How People Learn), Bio2010 is helping us to revise the introductory sequence in our biology and biotechnology programs. Our new courses will more explicitly address students' preconceptions in all areas of biology, emphasize the process and (historical and contemporary) contexts of science, and use more student-centered pedagogies. We recognized the lack of balance b/t cell-molecular and ecological biology in Bio2010 as an inherent weakness of the report, not as a prescription for curricular emphases.

12/12/2003 4:13:21 PM

This has stimulated a long overdue discussion about interdisciplinarity in the life sciences

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12/12/2003 4:11:41 PM

Implementation requires more funding. if a pending HHMI grant is funded change will follow; if not change will be realtively slow

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12/12/2003 4:11:26 PM

Applications to HHMI for support of Biochemistry interdisciplinary concentration offered by Biology and Chemistry departments based in part on 2010 recommendations

Q4c: COMMENT on the impact of BIO 2010 on the physical science/math curriculum on your campus (e.g., course offerings; staffing):

2/5/2004 12:03:22 PM

Physics has a course for bio students with bio examples and math is developing a smorgasbord including
calc ii with linear algebra and a soupcon of statistics. Both of these courses will help increase the interest
of bio students in phys sci/math, but if we could only do something about the FOUR COURSES
in chemistry!!! Not much bio there, sadly.

2/5/2004 10:55:09 AM

We are too small to make a class dedicated to the needs of future biomedical tech types.
The degree of specialization recommened is not feasibly implemented at a school with only
100 bio majors.

1/13/2004 5:55:47 PM

Same as above: We have begun exploring ways to better integrate physical sciences and mathematics subjects with biology courses, influenced somethat by BIO 2010. However, we are looking to enrich the content of existing courses and make math/chemistry/physics/biology content more coherent rather that make radical changes in the core contents of existing courses. Hence we expect to change course offerings and staffing only at the margins.

1/1/2004 6:39:21 PM

Limited staffing has limited the degree to which the college can accomodate the recommentations of the report. However, undergraduate research is starting to infiltrate the regular semester courses in addition to an increasing number of independent studies, such that institutionalized research may be forthcoming soon.

12/24/2003 10:03:44 AM

The Biology dept is restructuring its major and we don't know yet how this will affect courses in other departments...

12/23/2003 9:33:04 AM

I am not aware that the report had any impact on our Math/Physical Sciences program.

12/19/2003 2:52:37 PM

Again, most thing that have already happened are at the math-bio interface. Some discussion about developing an entry level hybrid intro bio and intro chem course, but discussion about that won't get serious for another year.

12/19/2003 11:19:23 AM

I am not completely aware of those departments actions, but we are talking about changing our interactions with those courses in our curriculum, so I suppose change will follow in any case.

12/18/2003 11:42:01 AM

We are offering a new course in Bioinformatics beginning in January 2004. One of our CS faculty is developing this course together with our Biology Bioinformaticist and an external visitor; the local faculty members expect their interests in connections between Biology and CS in the future.

We have recently hired a second Biostatistician. We anticipate that our two statisticians will develop research and curriculum related to Biology in the future, in part motivated by BIO 2010.

We anticipate increasing connections between Mathematics and Biology in the near future. We have introduced a new partial course in "quantitative work across the curriculum," first offering next Spring associated with biological applications.

In part responding to BIO 2010, we had an in-house workshop for faculty on the topic of Bioinformatics, attended by Biologists, Computer Scientists, Mathematicians, and Statisticians this Fall. We invited an outside expert to provide two days of presentations and activities.

12/17/2003 4:41:14 PM

It has led to an agreement to improve the physics curriculum for biology majors

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12/17/2003 9:08:06 AM

Once again, we are being mandated that physical sciences courses will be structured around biological topics.

12/17/2003 8:46:09 AM

We had begun this discussion before the 2010 report, deciding we needed more physics (esp. calc based) for biology and biol-pre med majors. Our earth sciences were also found lacking in a recent review of our ed cert programs.

12/16/2003 10:09:17 AM

More changes are in the works...various curriculum grants are being written. The boundaries between disciplines need to be preserved when good and broken when not useful.

12/16/2003 9:43:13 AM

Will provide a very strong improvement in overall integration of science curricula, and hopefully, understanding for students.

12/16/2003 9:25:41 AM

The chemistry dept. plans to change from a two semester general chemistry course to a one semester general chemistry course. The general chemistry course will be even more discovery based than our current general chemistry. The first semester of organic chemistry will be offered in the spring of the first year with second semester organic chemistry offered fall of the second year. During spring of the second year an optional, more advanced chemistry course will be offered.

12/15/2003 5:43:31 PM

We are working together to bring more biology into physical science and math courses.

12/15/2003 12:51:23 PM

There are some discussions ongoing between math and biology about introducing some more "biology-friendly" math courses, a la Lou Gross at the U. of Tennessee. A new biostats course is being offered by the math dept. this year, because of a new hire and not as a result of Bio2010. It's hoped this will be the start of a trend.

12/15/2003 11:59:15 AM

We hope that Math and Computer Science will tailor a two semester sequence that is different from the traditional Precalculus and Calculus I, though we currently require it.

12/15/2003 10:07:33 AM

See comment 3 d above.

12/15/2003 9:44:30 AM

No immediate impact, though there may be changes after the biology and chemistry departments make changes,

12/15/2003 9:40:19 AM

Changes in the Physics and Chemistry curricula, to make them more "biomedical friendly" were underway prior to our reading BIO 2010.

12/15/2003 8:57:04 AM

More biochemistry, more organic chemistry, no additional math or statistics. Or students will have a lot of chemical data and no skills to analyze it or understanding of the organisms in which the relevance can be understood. I was never more concerned about the current state of ognaismal level and above understanding as when I recently heard introductory biology students say that we should proceed with use and development of GM crops regardless of any ecological consequences. And yes, they were mostly pre-med and molecular biology type students.

12/15/2003 8:42:34 AM

none yet

12/15/2003 8:19:01 AM

Discussion underway on content of courses.

12/15/2003 7:55:29 AM

Awaiting answer on submitted grant proposal that facilitates this component.

12/14/2003 2:52:55 PM

none

12/13/2003 9:59:39 PM

Math has cross-listed courses with biology and will be adding a course using primarily biological examples. Chemistry just made a few modifications to its curriculum.

12/13/2003 5:50:36 PM

None to date but we anticipate a major overhaul in the next 2-3 years.

12/13/2003 5:18:37 PM

none

12/13/2003 5:10:59 PM

No great impact.

12/13/2003 12:50:02 PM

We will be creating up to four courses for math & bio majors: an intro to mathematical modeling in the biosciences, a bioinformatics course, and a research practicum courses. The fourth course will either be a biostats course or a programming course for bio & non-CS majors.

The development of these courses is supported by a NSF UBM grant. See http://mathbio.truman.edu/ (or http://vh216801.truman.edu/MathBio2003/) for more information about Truman's Mathematical Biology Initiative.

12/13/2003 10:29:49 AM

External funding for these revisions has been requested. If funding is received, changes will occur. If not, it is unlikely.

12/12/2003 9:18:49 PM

We have begun talking about possible curricular connections between BI and MA/CS but currently do not have the resources or a clear vision of how to proceed most effectively.

12/12/2003 8:57:55 PM

No changes yet, but crossdisciplinary appointment planned with biology contingent on funding (biophysics)

12/12/2003 7:15:01 PM

We already have significant Chemistry, Physics and Math in our major. We even have a team taught Biomathematics and Bioinformatics course required of all our majors.

12/12/2003 5:47:49 PM

We have increased our math and chemistry requirements by one course each, but these were courses already in place. We are also entering into discussions with the math department about what kinds of mathematical skills are important for our majors.

12/12/2003 5:35:22 PM

The math and physics faculty currently try to integrate biological model systems into their curricular offerings. The report has prompted increased discussions and plans in this area.

12/12/2003 5:27:33 PM

see above

12/12/2003 5:20:38 PM

We had altered our Math requirements (increased) the year before the report

12/12/2003 5:18:48 PM

Chemistry already feels the pressure of biology students taking organic and biochemistry.

12/12/2003 5:14:24 PM

No comment...I'm not sure our physical sci people even know about BIO 2010.

12/12/2003 4:55:13 PM

The mathematics and biology department are collaborating as a part of the above-mentioned curricular reform.

12/12/2003 4:34:28 PM

we are implementing a Physics for life sciences - interdisciplinary physics course and have plans for several other interdisciplinary courses if funding becomes available. This report was extremely helpful to our dept.

12/12/2003 4:13:46 PM

We have written an HHMI proposal requesting funds for faculty release time to develop the interdisciplinary elements of modern science throughout our science curricula - especially the physical sciences, math, and computational sciences. In our estimation, Bio2010 doesn't go far enough in offering ideas for fully integrative courses. Instead, it suggests the addition of interdisciplinary modules into existing courses - a good first step, but not an endpoint.

Many of the most interesting problems in modern science occur at the interface between traditional disciplinary boundaries. In preparing future scientists for careers in these interdisciplinary areas, we cannot afford to let traditional boundaries get in the way. If this necessitates organizational reforms, then so be it!

12/12/2003 4:13:21 PM

More activity and movement here than in biology.

12/12/2003 4:11:41 PM

Resources are as usual the rate limiting factor

12/12/2003 4:11:26 PM

none