Proposed revisions in the Ph.D. curriculum in the Graduate Program in Molecular Biology, Cell Biology, and Biochemistry (MCBB)

Submitted by the MCBB Program Director, Ulla Hansen

Background and Summary:
The MCBB curriculum has not been significantly reviewed since the graduate program's inception over 16 years ago. Upon review this year by the MCBB Program Committee (consisting of faculty representatives from all of the major participating departments: Biology, Biomedical Engineering, Chemistry, Health Sciences-Sargent), the following changes were discussed, proposed, and unanimously approved. The proposed curriculum was then discussed at the annual MCBB Faculty meeting in May 2012. In a subsequent email vote of the faculty, the response was unanimously positive.

The major changes, summarized in the table below, are: 1) enhanced flexibility for students to explore in depth the diverse scientific areas of their PhD research, while maintaining the core emphasis on molecular biology, biochemistry, and cell biology; 2) addition of a Statistics course requirement; and 3) addition of a Teaching and Career Development course requirement (1 credit). In altering the curriculum, it is recognized that it is critical also to maintain the rigor of the core courses so as to fully prepare our students for their careers.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Current Curriculum†</th>
<th>Proposed Curriculum†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Biology (4 credit courses)</td>
<td>Two courses (BI 552 and BI 753)</td>
<td>One course (BI 753*) —</td>
</tr>
<tr>
<td>Biochemistry (4 credit courses)</td>
<td>Two courses (MB 721 and MB 722)</td>
<td>One course (MB 721 or 722*)</td>
</tr>
<tr>
<td>Cell Biology (4 credit courses)</td>
<td>One course (BI 735)</td>
<td>One course (BI 735)</td>
</tr>
<tr>
<td>Statistics (4 credit courses)</td>
<td>-</td>
<td>One course (SPH BS704)</td>
</tr>
<tr>
<td>Graduate Seminars (2 credit courses)</td>
<td>Two seminars (BI 583 and BI 584)</td>
<td>Two seminars (BI 583 and BI 584)</td>
</tr>
<tr>
<td>Teaching and Career Development (1 credit)</td>
<td>-</td>
<td>One course (MB 697)</td>
</tr>
<tr>
<td>Electives</td>
<td>Two 4-credit courses (or two 2-credit + one 4-credit courses) = 8 credits</td>
<td>Three 4-credit courses (or 2 2-credit + 2 4-credit) = 12 credits</td>
</tr>
</tbody>
</table>

†The indicated curriculum is for post-bachelor's PhD students. Post-master's PhD students can petition to waive up to 4 credits in coursework.
*If this curriculum is approved, the syllabi for these courses will be revised as necessary after discussion amongst the relevant faculty to ensure an appropriate graduate-level single course.
††BI/MB 697 is currently under review for approval (to be taught by Kathryn Spiliios and other faculty).

Rationale and comparisons to other national programs: These alterations reflect both the increased movement toward interdisciplinary science, requiring more flexible training options, and the necessity for use of quantitative approaches (e.g. a statistics or other quantitative requirement has become standard for training grant opportunities). In addition, they address
concerns voiced by the current student population. Finally, the revisions will position our curriculum competitively with those in similar graduate programs at peer and peer-plus institutions across the country, including several to which we have lost prospective graduate students in recent years.

We catalogued the current curricular requirements at the following 17 programs:

- Brown University, Molecular Biology, Cell Biology, and Biochemistry (MCB) Program (2 tracks)
- Cornell, Biochemistry, Molecular and Cell Biology (BMCB) Program
- Dartmouth, Molecular and Cellular Biology (MCB) Program
- Duke University, Program in Cell and Molecular Biology (CMB) Program (umbrella)
- Johns Hopkins, Biochemistry, Cellular and Molecular Biology (BCMB) Program
- NYU (School of Medicine), Cellular and Molecular Biology (CMB) Program
- Penn State (College of Medicine), Cell and Molecular Biology (CMB) Program
- Tufts Sackler School, Cell, Molecular and Developmental Biology (CMD) Program
- UC Berkeley, Molecular and Cell Biology (MCB) Program
- UC Davis, Biochemistry, Molecular, Cellular and Developmental Biology (BMCDB) Program
- U Penn, Biochemistry and Molecular Biophysics (BMB) Graduate Group
- U Penn, Cell & Molecular Biology (CAMB) Graduate Group (umbrella)
- USC, Genetic, Molecular and Cellular Biology (GMCB) Program
- U Texas-Austin, Cell and Molecular Biology (CMB) Program
- U Washington, Molecular and Cellular Biology (MCB) Program
- U Wisconsin-Madison, Cellular and Molecular Biology (CMB) Program (umbrella-10 focus groups)
- Yale University, Molecular Cell Biology, Genetics and Development (MCGD) Program

Although the programs vary, there are general similarities along two types of formats:

1) 3-4 required core courses, generally including one per scientific field, with a similar number of electives

2) 2 required core courses, with flexible electives, depending on field of study (often true of the umbrella programs)

Thus, the flexibility to focus on topics of specific interest to each student in the coursework is a central component of almost all of the indicated programs. In addition, many include statistics or computational biology. All include rotations and ethics training, which is also currently included in the MCBB program without course credits, and will be maintained as such.
Subject: Re: FW: Proposal for a revised PhD curriculum in the MCBB Program
Date: Sunday, July 8, 2012 4:59:32 PM ET
From: Ulla Hansen <uhansen@bu.edu> (sent by uhansen.bu@gmail.com <uhansen.bu@gmail.com>)
To: Jackson, Susan K <sjackson@bu.edu>
CC: Hughes, W Jeffrey <jhughes@bu.edu>, Wipf, Laura E <lwipf@bu.edu>, Law, Peter G <pgl@bu.edu>, Sorenson, Michael <msoren@bu.edu>

Dear Susan,
Thanks for your careful review of the proposal. In response to your queries:
1) As I previously indicated to Mike Sorenson, I have no problem with having the first-year MCBB students delay registration for MB 697 until it has been approved through appropriate channels.

2) As you suspected, the graduate student "concerns" did largely relate to desiring greater flexibility in the curriculum, so that they could take advantage of additional courses in more specialized fields. They also are generally eager to take statistics, and many have in fact been doing so already.

3) With regards to MB 721 vs. MB 722, the original intent of the MCBB Program Committee was to require MB 721 only. The program committee recognized at the time that the enrollment in MB 722 might in fact drop considerably as a result, however, we no longer believe that requiring a full year of biochemistry is optimal for our students.
One of the MCBB faculty (who teaches MB 722) objected, indicating that he did not believe that MB 721 would be sufficient depth in biochemistry for students in the program. Therefore the proposal was revised to have students opt for either MB 721, if they have not had one year of undergraduate biochemistry prior to matriculating, or MB 722, if their backgrounds are sufficient such that they are prepared to take MB 722 instead. In either case, the Program Committee thought this would provide sufficient contact with the topic for its application in their future careers.
I note that MB 721 is required also for PhD graduate students in the Cell and Molecular Biology track of the Biology graduate program, so this course will continue no matter what the MCBB curriculum requires. Our current plan may indeed jeopardize a sufficiently large enrollment for MB 722 every year, but if so, perhaps it could be taught every other year instead. In addition, some of our students (and those from other programs) who are particularly interested in biochemistry are anticipated to take MB 722 as an elective.

I do intend to convene the current biochemistry MCBB faculty from both Biology and Chemistry, to discuss this topic further, but I suspect the plan as indicated above is likely to prevail. If modifications to MB 721 are suggested as a result of these discussions, I believe the changes are likely to involve mainly relative emphases on topics covered. It is doubtful that revisions would be substantial, in large part due to the requirement for this course for other PhD programs. If MB 722 is significantly modified (e.g. being taught every other year, or revised in content), a course revision proposal would be sent through appropriate channels, as you requested.

Finally, I note that any revisions to BI 753 (the Molecular Biology requirement) would be minor, and simply involve emphasizing different topics to a greater or lesser degree. Thus, it is not anticipated that a course revision proposal will be forthcoming.
for this course.

4) Regarding biostatistics at the School of Public Health, it is indeed the case that a number of our students have already been enrolling in this course (I note that the course number was recently revised). We have already broached the professor regarding our plans, and were told that since they teach multiple sections of the course consistently, the addition of our students should not impact their plans in any way. I will, as suggested, obtain email confirmation of this and forward it as an addendum to the proposal.

Thanks again for your comments. I look forward to the processing of the revised MCBB curriculum through academic committees, and providing any additional information required, such that our PhD students can benefit from an improved MCBB curriculum.

Best regards,
Ulla

On Mon, Jul 2, 2012 at 10:00 AM, Jackson, Susan K <sjackson@bu.edu> wrote:
Dear Ulla,

Thanks very much for this proposal which, by copy of this reply, I'm also forwarding to Jeffrey Hughes for his preliminary review. As we discussed, since this is a doctoral program it will be reviewed by the Graduate Academic Affairs Committee (rather than Natural Sciences Curriculum Committee) en route to APC and full faculty. That said, Peter Law (pnl@bu.edu) provides single first point of contact for all curricular routes, and it's to Peter that you should send any edits as well as eventual course revision proposals for BI 753 and MB 721/722.

Your proposal is very clear and frames the proposed revisions nicely. Here, pending Jeffrey's review, are a couple of queries, comments, and suggestions.

1. As I've discussed with Mike Sorensen, also copied here, MB/BI 597, the new (or, rather, newly formalized) orientation course, will be reviewed first thing in the Fall semester (we'll append it to materials for GAAC). BI faculty will also vote formally in Fall about requiring it for the BI doctorate. You can tell Fall 2012 incoming cohort of MCBB students that, once course is approved (during Fall semester), they can be formally registered, and it will show on their transcripts.

2. I assume that "concems" attributed to (matriculated) graduate students (as well as those who went elsewhere) are for the same greater "flexibility" in designing their individual courses of study than is driving the overall proposal. Confirmation or correction on that point would be helpful.

3. It's not entirely clear whether by "MB 721 or MB 722" you mean a) that only one of those courses will be offered (footnote suggests that's it) or b) that students will choose between them, or c) that two slightly different courses including same essential core material will continue to exist, but that only one will be offered per annum. Either a) or c) is fine. With current program size, b) might be problematical, yielding under-enrollment and potential course cancellations. Clarification of intent would thus be helpful on this point, too.

4. Finally, with regard to SPH BS 704, it may be that some of your students already take it, in which case, impact on enrollment in that course will be negligible. In any event, it will be important for you to check in formally with SPH Biostats, explain that you hope to require the course, and obtain a brief written confirmation (email fine) from them that they're in the know and can accommodate enrollments. We (CAS/GRS) need to keep providing this kind of model of neighborliness, because it's a good thing to do and a good investment in reciprocity.
I hope this helps for starters. Please don’t hesitate to be back in touch at any point along the way.

All best,
Susan

From: Ulla Hansen <uhansen@bu.edu>
Date: Sun, 1 Jul 2012 18:43:38 -0400
To: “Jackson, Susan" <sjackson@bu.edu>
Subject: Proposal for a revised PhD curriculum in the MCBB Program

Dear Susan,
As we briefly discussed recently, the MCBB graduate program has thoroughly considered and is now proposing a revised curriculum for our PhD students. I am attaching the proposal for your consideration. If this proposal suffices, I would appreciate if you would forward it into the appropriate administrative process. Alternatively, I look forward to providing any additional information, or to responding to other comments/suggested revisions or indications of what additional steps I should take to move the proposal forward.

Finally, I note that, as you already pointed out, our intent is to give current MCBB students the choice of whether to adhere to the current requirements, or to the new requirements, if they are approved.

Thanks so much for your consideration.
Best regards,
Ulla

Ulla Hansen, Ph.D.
Director, MCBB Graduate Program
Professor, Dept. of Biology
Boston University
5 Cummington Street
Boston, MA 02215, USA

Phone: (617) 353-8730
FAX: (617) 353-8484
Website: http://www.bu.edu/biology/people/faculty/hansen/
Subject: Addendum - Proposal for a revised PhD curriculum in the MCBB Program
Date: Tuesday, July 10, 2012 11:51:11 AM ET
From: Ulla Hansen <uhansen@bu.edu> (sent by uhansen.bu@gmail.com <uhansen.bu@gmail.com>)
To: Jackson, Susan K <sjackson@bu.edu>
CC: Hughes, W Jeffrey <hughes@bu.edu>, Wipf, Laura E <lwipf@bu.edu>, Law, Peter G

Dear Susan,
Please find below the confirmation of acknowledgement and accommodation from the School of Public Health regarding the proposed Biostatistics requirement for MCBB PhD students. This is an addendum to the circulating proposal regarding revisions for the MCBB curriculum, in response to your request.

Best regards,
Ulla

--
Ulla Hansen, Ph.D.
Professor, Dept. of Biology
Director, MCBB Graduate Program
Boston University
5 Cumington Street
Boston, MA 02215, USA

Phone: (617) 353-8730
FAX: (617) 353-8484
Website: http://www.bu.edu/biology/people/faculty/hansen/

---------- Forwarded message ----------
From: Sullivan, Lisa <lsull@bu.edu>
Date: Tue, Jul 10, 2012 at 7:41 AM
Subject: RE: Proposed Biostatistics Requirement for MCBB PhD students (CRC)
To: "Hansen, Ulla M" <uhansen@bu.edu>
Cc: "Paal, Christine S" <cpaal@bu.edu>

Dear Ulla –

Thank you for your note. I am glad that the biostatistics course is helpful to your students and we certainly welcome them to join the class. I am copying our Registrar here, Chris Paal, she can help with the logistics. At the School of Public Health we have a much larger than anticipated incoming class so some of our core courses are full. We will, however, accommodate your students and make a plan for the future. Please do contact Chris at your convenience and we will get your students registered. Thanks, Lisa

From: uhansen.bu@gmail.com [mailto:uhansen.bu@gmail.com] On Behalf Of Ulla Hansen
Sent: Tuesday, July 10, 2012 12:09 AM
To: Sullivan, Lisa
Subject: Proposed Biostatistics Requirement for MCBB PhD students (CRC)
Dear Lisa,

I am writing to inquire whether a proposed change in the PhD curriculum for students in the Molecular Biology, Cell Biology and Biochemistry (MCBB) graduate program, on the Charles River campus, would be acceptable to the faculty at the School of Public Health involved in teaching Biostatistics. I am addressing this to your attention, as I understand that you have taught SPH BS 701 (Introduction to Biostatistics), which several MCBB students have taken in recent years, and significantly benefitted from.

In a recent review of the MCBB curriculum for PhD students, the MCBB faculty unanimously agreed that we should begin to require a statistics component; the obvious choice was BS 701 (now replaced by BS704) given our students' experiences. Ours is a small program with generally 4-5 PhD students per year (maximum of 8). The requirement would only pertain to newly matriculating students, not to those students already in the program.

Thus, I wish both to inform you and your colleagues of our preference, and to obtain confirmation that this requirement could be accommodated within your enrollments, before we proceed with our proposed curriculum revision. If desired, I would of course be pleased to discuss this further with you, or whomever else might be appropriate.

I look forward to your response.

Sincerely yours,

Ulla

--

Ulla Hansen, Ph.D.
Director, MCBB Graduate Program
Professor, Dept. of Biology
Boston University
5 Cumington Street
Boston, MA 02215, USA

Phone: (617) 353-8730
FAX: (617) 353-8484
Website: http://www.bu.edu/biology/people/faculty/hansen/
CAS/GRS New Course Proposal Form

This form is to be used when proposing a new CAS or GRS course.

This form should be submitted in hard copy to Senior Academic Administrator Peter Law (617-353-7243) in CAS Room 106 or as a PDF file to pgl@bu.edu. For further information or assistance, contact Associate Dean Susan Jackson (617-353-2410; sjackson@bu.edu).

DEPARTMENT OR PROGRAM: Biology

DATE SUBMITTED:

COURSE NUMBER: GRS BI/MB 697

COURSE TITLE: A Bridge to Knowledge: A Practical Seminar for First-Year Graduate Students in Biology

INSTRUCTOR(S): Kathryn Spilios

TO BE FIRST OFFERED: Sem./Year: Fall/2012

SHORT TITLE: The “short title” appears in the course inventory, on the Link University Class Schedule, and on student transcripts and must be 15 characters maximum including spaces. It should be as clear as possible.

FIRST YEAR SEMESTERS:

1ST

COURSE DESCRIPTION: This is the description that appears in the CAS and/or GRS Bulletin and is the first guide that students have as to what the course is about. The description can contain no more than 40 words.

This seminar is for first-year biology and MCBB graduate students. Basic pedagogical theory and professional development topics are covered. The course is intended to help you become an effective teacher and an informed member of the graduate community.

PREREQUISITES: Indicate “None” or list all elements of the prerequisites, clearly indicating “AND” or “OR” where appropriate. Here are three examples: “Junior standing or CAS ZN300 or consent of instructor”; “CAS ZN108 and CAS ZN203 and CAS PQ206; or consent of instructor”; “For SED students only.”

1. State the prerequisites: For first year Ph.D. or M.A. students in Biology and MCBB, or first-time teaching fellows in Biology and MCBB.

2. Explain the need for these prerequisites:

CREDITS: (check one)

☐ Half course: 2 credits
☐ Full course: 4 credits
☐ Variable: Please describe.
☒ Other: Please describe. 1 credit
DIVISIONAL STUDIES CREDIT: Is this course intended to fulfill Divisional Studies requirements?

☐ No
☐ Yes. If yes, please indicate which division ____________________ and explain why the course should qualify for Divisional Studies credit:

HOW FREQUENTLY WILL THE COURSE BE OFFERED?

☐ Every semester  ☒ Once a year, fall  ☐ Once a year, spring  ☐ Every other year  ☐ Other: Explain:

NEED FOR THE COURSE: Explain the need for the course and its intended impact. What is the relationship of this course to the curriculum in your department/program, in other departments/programs, in CAS or other schools and colleges? Which students are most likely to be served by this course? (You must attach appropriate cognate comments using cognate comment form if this course is intended to serve students in specific other programs. See FURTHER INFORMATION below about cognate comment.)

This course provides first year graduate students instruction in basic pedagogical techniques as well as discussion of professional development issues. This course represents a revision of a previously established seminar that Biology has been running for the past 10 years. The previous iteration of this course was considered within the BI699 designation and was designed for new teaching fellows only. We are proposing to expand the course to include all first year graduate students.

First year graduate students are faced with many challenges in both their professional and academic life. This course aims to prepare the student to teach undergraduates in a lab or discussion setting (regardless of if they are concurrently teaching) by providing a general background pedagogical theory and technique. In addition, we will provide sessions that will help them in their professional life, such as grant writing, choosing an advisor, etc.

ENROLLMENT: How many undergraduate and/or graduate students do you expect to enroll in the initial offering of this course?

Approximately 20 graduate students

CROSS-LISTING: Is this course to be cross-listed or taught with another course? If so, specify. Chairs/directors of all cross-listing units must co-sign this proposal on the signature line below.

OVERLAP:

1. Are there courses in the Course Inventory (CC00) with the same number and/or title as this course
   ☒ No.
   ☐ Yes. If yes, any active course(s) with the same number or title as the proposed course will be phased out upon approval of this proposal.

2. Relationship to other courses in your program or others: Is there any significant overlap between this course and others offered by your department/program or by others? (You must attach appropriate cognate comments using cognate comment form if this course might be perceived as overlapping with courses in another department/program. See FURTHER INFORMATION below.)
FACILITIES AND EQUIPMENT: What, if any, are the new or special facilities or equipment needs of the course (e.g., laboratory, library, instructional technology, consumables)? Are currently available facilities, equipment, and other resources adequate for the proposed course? (NOTE: Approval of proposed course does not imply commitment to new resources to support the course on the part of CAS.)

NONE

STAFFING: How will the staffing of this course, in terms of faculty and, where relevant, teaching fellows, affect staffing support for other courses? For example, are there other courses that will not be taught as often as now? Is the staffing of this course the result of recent or expected expansion of faculty? (NOTE: Approval of proposed course does not imply commitment to new resources to support the course on the part of CAS.)

No additional staffing needs are necessary; the course will be managed and taught by Kathryn Spilios with some classes taught by Kim McCall

BUDGET AND COST: What, if any, are the other new budgetary needs or implications related to the start-up or continued offering of this course? If start-up or continuation of the course will entail costs not already discussed, identify them and how you expect to cover them. (NOTE: Approval of proposed course does not imply commitment to new resources to support the course on the part of CAS.)

NONE

EXTERNAL PROGRAMS: If this course is being offered at an external program/campus, please provide a brief description of that program and attach a curriculum vitae for the proposed instructor.

FURTHER INFORMATION THAT MUST BE ATTACHED IN ORDER FOR THIS PROPOSAL TO BE CONSIDERED:

1. A complete week-by-week SYLLABUS with readings and assignments that reflects the specifications of the course described in this proposal; that is, appropriate level, credits, etc. (See guidelines on "Writing a Syllabus" at http://www.bu.edu/ceit/teaching-resources/writing-a-syllabus/.)

2. Cognate comment from chairs or directors of relevant departments and/or programs. Use the form at http://www.bu.edu/cas/pdfs/faculty-staff/cognatecomment.doc. You can consult with Associate Dean Susan Jackson to determine which departments or programs inside and outside of CAS would be appropriate.

DEPARTMENT CONTACT NAME AND POSITION: Kathryn Spilios, Director of Instructional Laboratories, Kim McCall, Associate Professor

DEPARTMENT CONTACT EMAIL AND PHONE: KSPILOS@BU.EDU; 617-358-1958; KMCCALL@BU.EDU, 617-358-0442

DEPARTMENT APPROVAL:

<table>
<thead>
<tr>
<th>Department Chair</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Department Chair(s) (for cross-listed courses)</td>
<td>Date</td>
</tr>
</tbody>
</table>

3
DEAN'S OFFICE CURRICULUM ADMINISTRATOR USE ONLY

CAS/GRS CURRICULUM COMMITTEE APPROVAL:

☐ Approved  Date: ________________
☐ Tabled   Date: ________________
☐ Not Approved  Date: ________________

Divisional Studies Credit:
☐ Endorsed
   ☐ HU
   ☐ MCS
   ☐ NS
   ☐ SS
☐ Not endorsed

________________________________________
Curriculum Committee Chair Signature and Date

Comments:

PROVISIONAL APPROVAL REQUESTED for Semester/Year ________________________________

________________________________________
Dean of Arts & Sciences Signature and Date

Comments:

CAS FACULTY: Faculty Meeting Date: ________________________ ☐ Approved  ☐ Not Approved

________________________________________
Curriculum Administrator Signature and Date

Comments:
Hi Susan,

Following up on this one from June...

We had a faculty meeting yesterday and the Biology faculty approved BI 697 as a required course for 1st year graduate students. If you need additional information, please let us know.

Thanks, Mike

Third, I think we can certainly have students attend the course and register for it after the fact once it has been approved.

Good. So, we’ll hold proposal in queue and you’ll let us know when and how BI faculty decides? (If course will be required, we can doctor paperwork here to reflect that.)

Please advise on next steps. Do you need a revised proposal? Should be have the faculty meet before fall to consider whether the new course is required for all new student?

Please see above. No action needed until faculty reconvenes in September to discuss requiring. Thanks again.

On Jun 27, 2012, at 6:48 AM, Jackson, Susan K wrote:
Dear Mike and Friends,

Thanks very much for clarification. Please see interlinear replies in italics below.
Best, Susan

From: "Sorenson, Michael" <msoren@bu.edu>
Date: Tue, 26 Jun 2012 15:49:51 -0400
To: "Jackson, Susan K" <sjackson@bu.edu>
Cc: "Mccall, Kim" <kmccall@bu.edu>, "Hansen, Ulla M" <uhansen@bu.edu>, "Spilos, Kathryn E" <kspilos@bu.edu>
Subject: Re: First-Year Seminar for Grad Students

Hi Susan,

A bit more information on this after checking with folks here.

First, I did sign the original version of this proposal. You were given a revision (I think in response to Peter Law) that was sent up the street electronically.

Got it.

Second, as I noted in my earlier reply, this was viewed not so much as a new course but rather as formalizing something that we were already doing. As such, it has not yet been presented and discussed at a full faculty meeting. Kathryn's course for new students (under the auspices of BI699) was already required for new TPs. The question of whether other new students (e.g., those on Dean's or NSF fellowships) should be required to take the course has been considered and approved by the MCBB faculty, but not by the Biology faculty. This will affect one incoming Biology student his fall and so we would propose to make it optional for her and have the Biology faculty decide on that point at the earliest opportunity this fall, unless you think we should resolve that question at an earlier date.

Sounds just right. (My personal view is that strongly recommending to the lone non-TP would be just fine—although she'll likely see the value on her own. Not only is course content invaluable, but it provides opportunity for her to be fully part of the cohort.

Third, I think we can certainly have students attend the course and register for it after the fact once it has been approved.

Good. So, we'll hold proposal in queue and you'll let us know when and how BI faculty decides? (If course will be required, we can doctor paperwork here to reflect that.)

Please advise on next steps. Do you need a revised proposal? Should be have the faculty meet before fall to consider whether the new course is required for all new student?

Please see above. No action needed until faculty reconvenes in September to discuss requiring. Thanks again.

Thanks, Mike

On Jun 25, 2012, at 10:41 AM, Jackson, Susan K wrote:
Dear Mike,

Katherine Spilios and Kim McCall have recently (last week) submitted a new course proposal for BI/MB 697, a one-credit offering for all (TF and other) incoming BI and MCBB grad students. It is a once-a-week offering, combining initial focus on teaching with a range of graduate orientation issues extending to research and career paths. But maybe you knew all that? My first reason for writing was to understand whether this proposal, since not signed by you, has been vetted and endorsed in the department. A big follow-up question not definitively answered in proposal text is whether facBI and MCBB faculties intend that this course be required of all incoming graduate students or simply "open" to them. Thanks for letting me know.

The other, logistical issue is that, while intention is to teach the course in Fall 2012, there will be no opportunity between now and then for review and approval by Graduate Academic Affairs Committee (serving in this instance as curriculum committee). Everyone recognizes the value of Kathryn’s efforts and effectiveness as a leader in TF training (to date under auspices of BI 699) and the last thing I want to do is imply otherwise or put up barriers. But any move to preempt faculty governance is a slippery slope. So, the question would be, assuming faculty is all for BI 697, can you do as other departments have done successfully in the past, that is, require and/or invite incoming students to participate with message that formal registration will occur later in the semester. It’s not entirely clear either whether students serving as TF’s register only for BI 699 as usual, leaving formal registration in BI 697 for others, or....

Thanks for any and all light you can shed.

Susan

Michael Sorenson
Professor and Chair
Department of Biology
Boston University
5 Cummington St.
Boston, MA 02215

(617) 353-6983
FAX: (617) 353-6340
A Bridge to Knowledge: A Practical Seminar for First Year Graduate Students in Biology
Course Syllabus

Instructor
Kathryn Spiliotis, Director of Instructional Labs

Office hours: TBA

Time & Place: Mondays 10-11am, BRBxxx

Objectives
One goal of this course is to help you to become an effective and efficient teacher, regardless of whether or not you are currently teaching. In this seminar, we will define a good teacher as someone who mentally prepares, physically prepares, and assesses their teaching with an open mind. This course will also provide you with some background in pedagogy to help you understand what teaching and learning are. Some of these tools may not be appropriate for your present teaching situation, but they should be useful at some point during your graduate career. At the heart of a successful teacher is an effective communicator—a skill that will help you regardless of your chosen career path.

The second goal of this course is to provide professional development. As a first-year graduate student, you may not realize that the skills you are presently learning can be transferred to any job, including non-academic jobs. Inevitably, everyone has to give a presentation, explain how to use a piece of equipment, or critique a paper. We will focus on topics that will help you succeed as a graduate student and beyond.

Assignments and Activities
For scientists participating in this workshop, it may be tempting to believe that some of the in-class activities and homework assignments are not analytical enough to be effective tools for learning about teaching. The assignments are not intended to be mind-bending or time-consuming. The purpose of these activities is to help you analyze your development and to make you aware of your attitudes towards teaching and learning.

Attendance and Participation
You should plan to attend every class session, although one absence will be excused during the semester with full attendance and participation credit. Attendance and participation are worth 50% of your final grade.

Written Assignments
The short written assignments are intended to help you think about and evaluate your own progress. There are five written assignments, each of which should be no more than 1-2 double-spaced pages in length. The assignments are weighted equally with a total value of 50% of your final grade. Late papers will result in a 1% reduction in your final grade for each day late. Papers over one week late will not be accepted.
**Academic conduct**
You should know and understand the provisions of the CAS Academic Conduct Code, which is available at [http://www.bu.edu/cas/students/graduate/forms-policies-procedures/academic-discipline-procedures/](http://www.bu.edu/cas/students/graduate/forms-policies-procedures/academic-discipline-procedures/). Cases of suspected misconduct will be dealt with according to University guidelines and may be referred to the Dean's Office.

**Course Webpage**
Much of the course information, including the syllabus, descriptions of assignments, reading material, and useful links can be found on the Blackboard website. Click on "Course Information" for general information and “Course Documents” for readings. Please check your email address regularly for any updates to the class content or schedule.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic and associated readings</th>
<th>Assignments/Guest Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday Aug 30&lt;br&gt;(after GRS orientation)&lt;br&gt;1-3pm</td>
<td>Microteaching  &lt;br&gt;Introduction to teaching undergraduates</td>
<td>• Be prepared to give a short five-minute presentation about yourself</td>
</tr>
<tr>
<td>Friday Aug 31&lt;br&gt;(after Biology orientation in morning)&lt;br&gt;1-3pm</td>
<td>Part 1: Tips on Effective Speaking and Teaching Part I, Chapters 1 and 2  &lt;br&gt;Part 2: Safety Training with EHS</td>
<td>• Bring Completed Pre-Course Evaluation  &lt;br&gt;• Read Part I and Part II, Chapters 1 and 2</td>
</tr>
<tr>
<td>Monday Sept 10</td>
<td>Mechanics of Running a Class Part II, Chapter 3</td>
<td>• Thought Paper #1 due today  &lt;br&gt;• If teaching, bring in an outline today of your talk for your first class.</td>
</tr>
<tr>
<td>Monday Sept 17</td>
<td>Effective communication  &lt;br&gt;Univocal vs. dialogic discourse  &lt;br&gt;Types of questioning</td>
<td></td>
</tr>
<tr>
<td>Monday Sept 24</td>
<td>Active Learning through Case Studies Part II, Chapter 4</td>
<td>• Thought Paper #2 due today</td>
</tr>
<tr>
<td>Monday Oct 1</td>
<td>BGSA and GSO Opportunities  &lt;br&gt;An Introduction to Classroom Assessment: formative and Summative Assessment Part II, Chapters 5 and 6</td>
<td>• BGSA speaker?  &lt;br&gt;• Answer pre-class activity questions and take Learning Styles Inventory before coming to class</td>
</tr>
<tr>
<td>Tuesday Oct 9&lt;br&gt;Monday class schedule</td>
<td>The Diversity of Learners Part II, Chapter 7</td>
<td>• Thought paper #3 due today</td>
</tr>
<tr>
<td>Date</td>
<td>Topic</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Monday Oct 15</td>
<td><strong>Grant opportunities and writing</strong></td>
<td>• Speaker TBA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If teaching, take Teaching Style Inventory before coming to class</td>
</tr>
<tr>
<td>Monday Oct 22</td>
<td><strong>Stress Management for Grad Students</strong></td>
<td>• Thought paper #4 due today</td>
</tr>
<tr>
<td></td>
<td><em>Part III, Chapters 1 and 2</em></td>
<td>• Keep logs on page 54 and 55 before coming to class</td>
</tr>
<tr>
<td>Monday Oct 29</td>
<td>Choosing an advisor and dissertation committee</td>
<td>• Kim McCall, Director of Graduate Studies</td>
</tr>
<tr>
<td>Monday Nov 5</td>
<td><strong>Academic Honesty at BU</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Part II, Chapter 8</em></td>
<td></td>
</tr>
<tr>
<td>Mon Nov 12</td>
<td>Experimental design, collecting and managing data</td>
<td>• Kim McCall</td>
</tr>
<tr>
<td>Mon Nov 19</td>
<td>No class</td>
<td></td>
</tr>
<tr>
<td>Monday Nov 26</td>
<td><strong>Documenting your professional life with ePortfolios OR</strong></td>
<td>• Natalie McKnight or Linda Wells (CGS)</td>
</tr>
<tr>
<td></td>
<td>Inquiry based teaching and learning</td>
<td></td>
</tr>
<tr>
<td>Monday Dec 3</td>
<td>Career paths</td>
<td>• Kim McCall &amp; EBE faculty</td>
</tr>
<tr>
<td>Mon Dec 10</td>
<td>Final Class – evaluations</td>
<td>Thought paper #5 due today</td>
</tr>
</tbody>
</table>