The request document and a draft of the Cat I proposal was sent to the following addresses:

To:  Gary.Beach@oregonstate.edu, michael.lerner@oregonstate.edu, john.bailey@oregonstate.edu, allen.thompson@oregonstate.edu, ossiand@math.oregonstate.edu, robert.mason@oregonstate.edu, Jerri.Bartholomew@oregonstate.edu, Andy.Karplus@oregonstate.edu, theresa.filtz@oregonstate.edu, lesser@science.oregonstate.edu, Bose@eecs.oregonstate.edu, bill.bogley@oregonstate.edu, robert.mcgorrin@oregonstate.edu, ossiand@math.oregonstate.edu, selina.heppell@oregonstate.edu, norman.hord@oregonstate.edu, raw@coas.oregonstate.edu, jonesj@geo.oregonstate.edu, Roy.Haggerty@oregonstate.edu, Dan.J.Arp@oregonstate.edu, Joyce.Loper@oregonstate.edu, mark.leid@oregonstate.edu, marinelr@oregonstate.edu, "Tyler, Brett" <Brett.Tyler@oregonstate.edu>, tom.weller@oregonstate.edu

Received comments from:
COS
SLS
Math
EECS
BB
Micro
Chem

For COS, we met with Dean Haggerty and again with head/chairs in COS and received support for the proposed major.

Jeff Chang is also a member of the curriculum committee for the School of Life Sciences (IB, Micro, BB) and has introduced the BDS major to the committee on multiple occasions. Each time, the committee provided valuable feedback that helped us craft the submitted proposal.

Met with EECS committee (Carlos Jensen, Tom Weller, Ben Lee, and Mike Rosulek) and with EECS curriculum committee and received support for the proposed major:

1) They will open up seats in their courses for us.
2) For the 300- and 400-level courses, they recommended I bump them down one year in the “four-year plan”, remove CS321 and CS381 from the list (viewed as not essential for our majors), and the committee will see if there are others they would recommend.
3) They were enthusiastic with BDS211 and immediately stated it would be an important class for COE students. However, they indicated that their students may not take it unless it is a BaccCore course.
4) They suggested we expand the capstone course to two minimally two quarters so their students and our students could work together. Their senior capstone course is a whole year. They thought mingling our students would be transformative and bring in new types of data for them to work on. I really liked this idea. We originally had two quarters for the capstone.
On Aug 22, 2018, at 3:16 PM, Jerri Bartholomew <barhoje@oregonstate.edu> wrote:

Hi Joey,

No concerns, but I did pass by someone on our curriculum committee and they asked if it would be appropriate for MB 448: Microbial Ecology to be listed for the one option? The section that has classes on population, communities, and systems ecology?

Jerri

Jerri Bartholomew, Professor and Head, Department of Microbiology
Director John L. Fryer Aquatic Animal Health Laboratory
Oregon State University | Department of Microbiology | 541-737-1834

Mailing address: Nash Hall 226, Corvallis, OR 97331-3804

Our response:

Jerri,

Thanks. We did not list classes on the CAT1 if there are prerequisites beyond those included in the major. MB 448 requires CH 332 whereas the major only requires 331 for those in the genomics option. Thus [sic] does not preclude a student wanting to take more Chemistry as part of their electives and taking MB 448. So MB 448 would accepted as an upper division elective, as would CH 332 in this example.
HI Joey and Jeff,

I just got asked by our dean about your BDS Cat 1 proposal, and remembered you emailed me in August about it. I’m sorry that in the midst of the summer fall transition busy-ness I forgot about it and didn’t getting back to you about it.

I did not read the whole thing but looked through the various course requirements. Here are a couple points of feedback:

1) Most importantly, for the “Genomics” option, I’d ask you please remove BB315 from the choices available to satisfy the one course needed for “Advanced Molecular, Cell, Organismal or Physiology”. BB493 can stay. The BB493 course is a conventional lab course in which we expect to have some capacity and that provides a good one-course survey of key molecular biology techniques. In contrast, the BB315 lab course is a new “course-based undergraduate research experience” we developed specifically for our BMB major and that we are worried about being oversubscribed. I think this change still leaves plenty of good ways to satisfy that requirement.

2) I found something confusing in the “minor in BDS” table. The last row of the table states “Upper division electives Choose 2-3 class; need at least 8 credits and at least one upper division class for a total of 12 upper division credits”. I’m not sure what is meant, but the phrasing seems to imply that “at least one upper division class” can provide “a total of 12 upper division credits”?

Thanks for taking these comments into account.

Andy

Our response:
Removed BB315
Clarified the last row of the table.
Math department feedback on BDS Proposal

Below, we share some comments and concerns about the undergraduate mathematics coursework for the different options in the BDS major.

1) The ecological and environmental informatics (EEI) option:
   - We recommend replacing MTH 323 (Mathematical Modeling) with MTH 420 (Models and Methods of Applied Mathematics). While the content of MTH 323 is appropriate for the EEI option, MTH 323 serves as a WIC course for math majors and is in extremely high demand. We are concerned about accommodating BDS majors when space for math majors is already limited. MTH 420 is an adequate substitute for MTH 323, and the two courses have the same prerequisites. MTH 323 was removed and replaced with MTH 420; this is an excellent recommendation. Thank you. (in red are modified responses to the Math department)
   - ST 415 is not a modeling course, so we do not understand why it is listed as an alternative to MTH 323 or MTH 427. ST415 is an alternative for students to fulfill the degree, which should not be conflated with it being an alternative as fulfilling the same domain knowledge. Please also bear in mind that as a starter, we are using pre-existing courses. We look forward to working with units to develop new courses as the program grows!

2) The Computational Biology (CB) option:
   - Students in the CB option would benefit from a course on computation. MTH 351 would serve this purpose (note MTH 253 is a prerequisite). An alternative to MTH 351 is MTH 420, with prerequisites of MTH 256 and 341. In MTH 420, students utilize computational tools such as MATLAB and PYTHON. Thank you. I agree. However, the strategy I used in the options was to list the courses with the “easiest path”, i.e., they do not have additional pre-reqs that are not satisfied by the core courses or those core to an option. This does not preclude students from taking MTH351 to round out their option. We will need strong advising to help students navigate the complexities of so many disciplines.
   - Students in the CB option would also benefit from MTH 361 (Introduction to Probability) because of its applicability to several of the ST and CS courses listed in the option. Note that MTH 361 is a prerequisite for MTH 428, which could replace MTH 427 in the option as a course on mathematical modeling in biology. With this in mind, the CB option could offer two possible paths for math coursework: MTH 256, MTH 427 (deterministic modeling) or MTH 253, MTH 361, MTH 428 (probabilistic modeling). We felt it was best to avoid requiring so many 200-level MTH courses in an attempt for balance (3 intro bio, 1 intro chem, 4 intro math, 3 intro CS, and 3 Stats (not intro level, per se).
On Aug 24, 2018, at 1:53 PM, Lerner, Michael M <Michael.Lerner@oregonstate.edu> wrote:

Hi Joey and Jeff – I asked our relevant faculty and heard the following:

- This will increase the pressure on the BB labs and several of chemistry options require these labs (BB 493 and 494). BB might need to open more sections to handle the demand.
- Possibly the new major would increase demand for CH 231/261 in particular and CH 232/262 and 233/263. The students in the new major might have taken those for other majors, but if there is a real increase of 100 students, we would want to plan accordingly.

Our response:

Michael,

Thanks for the feedback.

We anticipate that the initial enrollment in the major will come from existing students at OSU who are looking for this type of major. Future growth of the major we anticipate will mirror that of the university. So we do not think that this major will result in rapid increase in capacity of the CH23X series.

Please let me know if you need any additional information.