Announcements

Dean’s Research Leave Recipient
Jim Glaser, Dean of the School of Arts and Sciences

Call for Pre-Major Advisors
Nancy Bauer, Dean of Academic Affairs

Dean’s Annual Publications Party, April 23rd, 3-4:30 PM
Jim Glaser, Dean of the School of Arts and Sciences

Academic Awards Ceremony
Carmen Lowe, Dean of Academic Advising & Undergraduate Studies

Tufts Arts Festival
Joseph Auner, Music Department

Old Business

Discussion and Vote on Revised Learning Outcomes Assessment Committee (LOAC) Proposal
Laura Rogers, Committee Chair LOAC

New Business

LA&J Curricula Committee Proposals
David Proctor, Chair, LA&J Curricula Committee

Sharing and Preserving Faculty Scholarship
Martha Kelehan, Head of Collections, Tisch Library

Faculty Governance Discussion with A&S Elected Representatives
Vida Johnson, Professor, GRALL
Lynne Pepall, Professor, Economics

Appendices

Agenda and Briefing Information
LOAC Revised Proposals
LA&J Curricula Committee Agenda
A Quick Guide to Depositing Faculty Work in the Tufts Digital Library

Appendix A
Appendix B
Appendix C
Appendix D
DEAN GLASER: Welcome to the final A&S faculty meeting of the year. Glad to see so many people here. We will get started with announcements. We have a number of them. There's a lot of events going on. So after these announcements if anybody has events they'd like to announce to the rest of the faculty, please do.

ANNOUNCEMENTS

DEAN’S RESEARCH LEAVE RECIPIENT
DEAN GLASER: The first thing I'd like to let you know about is the dean's research leave process is complete and the awardee for the dean's research leave next year will be Adriana Zavala from art history.
(Applause)

There she is, she just walked in. That applause was for you. Congratulations. We are looking forward to seeing what your research leave reveals.

PROFESSOR ZAVALA: Thank you.

CALL FOR PRE-MAJOR ADVISORS
DEAN GLASER: Now, I'd like to ask Nancy to talk about pre-major advising. Before I do that, I just want to note that Nancy and I will be pre-major advisors next year as well as hopefully many of you.

DEAN BAUER: Because we have a lot of slack time in our schedules. I want to first really thank the faculty, and I ask you if you are a chair or program director to deeply thank your faculty because when Laura Doane, and I know she's here, there she is back there, asked our office if we could help with this unexpected shortfall of roughly 500 students in the A&S that did not have pre-major advisees when all the dust settled. We put out that announcement a couple of days ago. So many people stepped up immediately and we made a dent, a serious dent. But we still need extra pre-major advisees. So as you know Jim and I are taking some on. I'm sure Barbara will as well. The thing that we're concerned about is just having students with no academic contact with somebody who's going to help them select their courses and be there for them.

I know that Dowling Hall is doing the best it can to sort of provide for those students, but even if you can just take a few people and just do the bare minimum that's better than nothing. Better than bare minimum would be good too. But again, that's one of the main things I want to say. It was just astonishing work. I was really touched, of how many people immediately stepped up. So if you can ask your faculty again and see if they could just this one year give us that, that would be really, really awesome. Thank you.
DEAN’S ANNUAL PUBLICATIONS PARTY, APRIL 23RD, 3-4:30 PM
DEAN GLASER: Mark your calendars for April 23rd from 3:00 PM to 4:30 PM where the dean's annual publications party will be hosted in this room. If you have a book or an article or something published in the last year, could be something that's in the traditional form as well, please make sure Erica Colwell receives it. Erica, are you here? See Erica right after the meeting today and let her know. But we would like to be able to display all the intellectual accomplishments of our faculty. We invite you all to savor the successes that we've had in the past year. Carmen?

ACADEMIC AWARDS CEREMONY
DEAN LOWE: I would like to remind the faculty of our academic awards ceremony this Friday at 7:30 PM in Cohen Auditorium. We are giving out our academic awards. This is our annual honors convocation for our general competitive prizes, departmental awards, and other special prizes. We encourage faculty to attend. I'd also like to thank you for writing all those wonderful letters of nomination, nominating students for these prizes. We really, really appreciate. So then Friday 7:30 PM Cohen. Thanks.

TUFTS ARTS FESTIVAL
PROFESSOR AUNER: Thanks. I just want to make a short announcement about the arts festival that starts tomorrow. There's a handout that has the essential information. On one side is a full list of the events. There are a lot of performances in music and dance and theater and there are exhibitions of student work. There's a symposium in a shaft on Freud's architecture. I'm sure some other things I should mention. But in addition to those, there are ongoing performance things. There are a number of special interdisciplinary events which are on the other side of the thing. The idea was to bring people together in departments in the same room to be talking about what they're doing. So there's a student research symposium with a really impressive group of students. A student performance showcase. In the three roundtables you are mainly featuring faculty and alumni and you can see who's on those of alumni and the arts, which is tomorrow. Jonathan is doing that one. A really great lineup of people. Raiders of the Lost Archives program on faculty research, Activism and Advocacy in the Arts that Barbara Grossman put together. Those three roundtables, if you get there, if you're the first 65 people in line there's a free dinner, so in case you need some free food. Those are at five, Thursday, Friday, and Saturday. Then Sunday is a really big event with a big program on film studies at Tufts. Nancy is going to be on that with a bunch of other people. It's going to include discussion of the new directions and scholarship in film studies at Tufts and screenings of some works, including Judith Wexler's film The Passages of Walter Benjamin, which is an amazing film and you can see a bunch of other films following that. So I hope you can come to something. If you can't come in person, there is a number for streaming that you can watch at home. Thanks very much.

DEAN GLASER: Thank you, Joe, and thank you for your leadership and putting this very exciting festival together and to your colleagues also.
Is there anybody from the chemistry department here to announce the Max Tishler Award Lecture? Well, there is going to be a Max Tishler Award Lecture and you are all invited. But I don't know who's giving it or where it's going to be. But I'm sure it will be fabulous as it is every year. We'll make sure to put something out. Erica, if you can make a note that we'll put something out to everybody about that?

We have some old business, and I'd like to ask Laura Rogers to come up for a discussion and vote on the Learning Outcomes Assessment Committee Proposal.

OLD BUSINESS

DISCUSSION AND VOTE ON REVISED LEARNING OUTCOMES ASSESSMENT COMMITTEE (LOAC) PROPOSAL

PROFESSOR ROGERS: I'd like to invite all the members of LOAC who are here to come join me up here. I just like to put a face to this committee. It might help with the second round, round two. We were here last month. Since last month, moments after I left here, I just avoided being (inaudible) I figured what could happen this time.

So last time I inadvertantly came to you to discuss the work of LOAC and ask you to affirm that work without actually having to file a motion, for which I apologize. But at least it introduced you to the topic. Those who are with me on this and their names all appear here, so don't try to hide if you're on my committee.

You have two proposals in front of you. The more conservative proposal and the more aggressive proposal, and either one is acceptable to us as far as I know. The first one, let me just tell you briefly what the difference is. The first one asks the arts and sciences to simply authorize our committee, the Learning Outcomes Assessment Committee, to develop distribution Area Learning Objectives to guide the assessment of student learning in courses taken for the purpose of meeting Tufts' distribution requirements. The rationale is below it.

The second proposal, the progressive one, is asking you to endorse the plan to adopt the Draft Distribution Area Learning Objectives for use in voluntary pilot projects intended to promote the assessment of student learning outcomes in courses taken to meet the Tufts' distribution area requirements. The rationale is below it.

The second proposal, the progressive one, is asking you to endorse the plan to adopt the Draft Distribution Area Learning Objectives for use in voluntary pilot projects intended to promote the assessment of student learning outcomes in courses taken to meet the Tufts' distribution area requirements.

We believe that either one of these steps would support the work of LOAC in continuing to develop distribution area learning outcomes for the purposes of complying with the expectations from NEASC that we do so, number one. That we do so with faculty assent and participation, number two. And that we do so in order to make as transparent as possible the rationale for requiring students to take courses they ordinarily wouldn't choose to take while they were spending time with us. So those are the kinds of rationales in a nutshell. They're laid out in the proposals. Does anyone want to say anything?
So I'd like to entertain a short conversation before we decide which motion. I'd like to get a feel from the faculty which motion would you prefer if it were up to you to make the decision.

PROFESSOR MAHONEY: Anne Mahoney, classics. Thank you for all this. I think it's a really useful step to have objectives. And as a result, I would prefer proposal number two because that gives me something concrete to work with right now. I can test this in a class in the fall, see how it works out, see if these objectives match the kinds of objectives I have. I believe that's something concrete to argue about going forward. So I think proposal two it seems to me is a good place to start.

PROFESSOR ORIANS: Colin Orians in biology. I second that, even though it's not a motion, I realize that. But I agree I like number two.

PROFESSOR ROGERS: There's not a clamor. There's other business. So why don't we begin with proposal two, move the motion, see if it passes, and if not, we'll go and discuss proposal number one. Does that make sense to everybody? Okay. So can I hear the motion or who makes the motion? I make the motion, okay. Second?

PROFESSOR DEVOTO: If it comes from a committee it does not require a second.

PROFESSOR ROGERS: Is there a discussion of proposal number two? Let me just read it again. The arts and sciences faculty endorses the plan to adopt the Draft Distribution Area Learning Objectives for use in voluntary pilot projects intended to promote the assessment of student learning outcomes in courses taken to meet the Tufts' distribution area requirements.

Any discussion?

PROFESSOR DEBOLD: When will we learn about the outcome of a pilot project? When will we come back and talk about these sort of test objectives?

PROFESSOR ROGERS: That's a great question, and I wish I had an answer. But if we can pursue this, that we will develop a pilot project, a series of projects, we'll come back, let you know, what the time line is, what those projects are, and then we would come back with the results of those. I foresee this being -- I mean, we need to make a report by 2018. So we'll have some -- there will be some next step between now and 2018. Any other?

All those in favor say aye.

ALL: Aye.

PROFESSOR ROGERS: All those opposed?

UNKNOWN SPEAKER: Nay.

DEAN GLASER: I want to thank Laura and thank the committee. This is important work. Our accreditation is, of course, very important to us. This is something we've made a lot of progress on in regard to assessment within courses and within majors. This is the last piece of that project, and we're very fortunate to have Laura and this committee to craft a way forward with this. Of course, we do hope that it will have benefits for us as we offer programs to our students. So thank you and congratulations.

Now, I'd like to ask David Proctor to come up. Let me just say while David is walking up, that I hope you'll join me in recognizing him because I think this year the Curriculum Committee in the last couple of years it's been his responsibility for leading it, and we've had a very smooth Curriculum Committee process. It's kind of a thankless committee. So I would like to thank him.

(Applause)

NEW BUSINESS

LA&J CURRICULA COMMITTEE PROPOSALS

PROFESSOR PROCTOR: So we have a relatively short agenda today. I want to go through items one through ten first. We'll go through all of those, discuss, and have votes on all those. Then we'll have a discussion about item eleven.

So items one, two, three, and four are proposals to add Sanskrit to our curriculum in a more permanent way. I'll read the different course offerings and then if you have any questions, Anne Mahoney is here who's going to be teaching those courses, and she can answer those for you.

So item one is a new course Sanskrit 1 Elementary Sanskrit 1. Item two, new course, Elementary Sanskrit 2. Item three, new course, Sanskrit 3, Intermediate Sanskrit. Item four, Sanskrit 120 Readings in Sanskrit.

Are there any questions or concerns on those four items? Vida?

PROFESSOR JOHNSON: Who will be teaching these courses and is this a new hire?

PROFESSOR MAHONEY: It's not a new hire. It's me.

PROFESSOR PROCTOR: Other questions? All right. Is there a motion to approve items one through four?

UNKNOWN SPEAKER: So moved.
PROFESSOR PROCTOR: Is there a second?

UNKNOWN SPEAKER: Second.

PROFESSOR PROCTOR: All in favor?

ALL: Aye.


Items five through seven are drama and dance. We'll go through each one of these. Item five, new course Drama 8 First-Year Showcase. Any questions or concerns on that?

Item number six, Drama & Dance, Dance 75 Choreographer's Workshop. Questions or concerns on that?

Item number seven, Drama & Dance, Dance on Camera, Dance 77. Questions or concerns on that one?

Is there a motion to approve items five through seven?

UNKNOWN SPEAKER: So moved.

PROFESSOR PROCTOR: Second?

UNKNOWN SPEAKER: Second.

PROFESSOR PROCTOR: All in favor?

ALL: Aye.


Moving on then to our next series of items for physics and astronomy. Items eight, Astronomy 31 Stellar Structure and Evolution. Questions or concerns on that course?

Item nine, Astronomy 32 Galactic and Extragalactic Astrophysics. Questions or concerns on that course?

Lastly, item 10, Physics 62 Quantum Theory II. Questions or concerns on that course?

Is there a motion to approve items eight through ten?
UNKNOWN SPEAKER: So moved.

PROFESSOR PROCTOR: Second?

UNKNOWN SPEAKER: Second.

PROFESSOR PROCTOR: All in favor?

ALL: Aye.

PROFESSOR PROCTOR: Opposed? Abstaining?

That brings us to the last item on the agenda, which is item eleven, which is a proposal for a new second major in education. I'd like to ask David Hammer to come up here and take any questions that you might have. We'll open discussion on this. Are there any questions or concerns on this proposal? Is there a motion to approve the proposal?

UNKNOWN SPEAKER: So moved.

PROFESSOR PROCTOR: Is there a second?

UNKNOWN SPEAKER: Second.

PROFESSOR PROCTOR: All in favor?

ALL: AYE.

PROFESSOR PROCTOR: Opposed? Abstentions? The ayes have it. Thank you very much.

Then just quickly pointing out I want to remind all of you that this Sunday, April 19th, at 2:30 PM the Phi Beta Kappa Initiation Ceremony. We would like to have more faculty attend to support the 61 seniors and ten juniors who will be elected this year.

PROFESSOR ZEHL ROMERO: Can I ask a question? To David Hammer, while it's great that we offer Sanskrit and when Vida asked who is going to teach it, Anne answered, “It's me.” But Anne has been teaching other courses I assume, and who will teach those courses? I mean, that's a question that I have in general.

PROFESSOR PROCTOR: Absolutely. Anne is going to continue, from what we were informed, Anne's going to continue to teach the courses that she's currently been teaching and she's already been teaching Sanskrit as special topics courses in addition to everything else that she's teaching. So her teaching responsibilities will not change. This is simply an effort to formalize Sanskrit and Bulletin. Thank you.
DEAN GLASER: Christiane, you might want to keep that mic because I'm responsible for asking you to make an announcement on behalf of FRAC.

PROFESSOR ZEHL ROMERO: Last year for the first time in a long time FRAC has received more funds thanks to our dean. We were also asked to support funding for publications, online publications. And we had been doing that, but we made small changes in that. The change is simply that while we had a clear schedule for other grants, we are now going to do it on a rolling basis so people get an answer very quickly within two, maximum three weeks coming with your application. The other thing we did change is so-called hybrid open access publications. We will not support any more on the advice of the library and on the advice of Dean Bauer. We are not going to do that because essentially it means double dipping. The journal subscription the library has to pay and then the individual who publishes has to pay as well. Most universities, I understand, don't support that. However, if somebody for some reason has to use that or wants to use it, it was decided that they should go to the deans and see what support is available and also what can be done to make their work open access anyway. There are means and the means will help in that. I hope it's clear.

DEAN GLASER: Thank you very much. While we're on the topic of open access, I do understand that there are dollars that have been allocated to open access for graduate students to publish in open access journals, and those dollars have not been spent. So if you have graduate students who are part of a publication we would like to see open access publication of that. Please contact the graduate program. Is that okay, Sarah? Okay, very good.

Now, I'd like to --

PROFESSOR ORIANS: Can I just backtrack a little bit on the education. This is Colin Orians. I'm wearing my environmental studies hat. We have a tradition, now we have two second majors in existence, education and environmental studies. There's only two as I understand it because community health just graduated. So my question really is at some point in time there was a regulation you couldn't major with two second majors. I guess I just want to sort of find out who is the committee that explores that because I want to understand why environmental studies and education wouldn't double major? So it's sort of a question to hopefully the collected wisdom here. One explanation I've heard is if you somehow don't complete the requirements of both of them by the time you graduate you end up with nothing. So that's the only argument that I've heard. So I just wanted to know, because you can't back off environmental studies and then just do the education. So that's the only argument I've heard. I guess I just wanted to know if we wanted to have a discussion. Who is that discussion with?

DEAN GLASER: Carmen, do you have a response to that?

PROFESSOR LOWE: Yes. The Educational Policy Committee, EPC. Anne Mahoney is the chair and Montserrat is the co-chair.
DEAN GLASER: I'd like to move on to Martha Kelehan from the Tisch Library to talk about sharing and preserving faculty scholarship. Martha, thank you for joining us.

SHARING AND PRESERVING FACULTY SCHOLARSHIP
MS. KELEHAN: Hi, I'm Martha Kelehan from Tisch Library and the head of collections and the social-sciences collections librarian. I wanted to start my presentation with the idea that I want you to leave with. That is, that the Tufts Digital Library is open for business. I also wanted to share with you that there's more than one way to talk about open access. Chiefly, when we've come to talk to you about open access issues we focused on open access journals, that is exactly what the focus of the FRAC award is and it's supported by Tisch's open access publication that supports graduate student work. I think it might be similar to what Jim is mentioning.

I'd like to draw your attention today to another option that exists for those published articles, and that is self-archiving. Certainly, I don't want to diminish. It does take a little bit of your time but it's significantly cheaper than $3,000 in article processing fees and also does not require that you alter your decision making about where you like to publish. I think that's really important to stress about this option.

So most article contracts that you probably signed in the last few years already include provisions for self-archiving. For articles that are published in a traditional manner are now typically available to subscribers via the publisher's website or print, it still happens, right. It could be a print publication as well. There is this additional option that could make your work more widely available. So by taking the time to self-archive a copy of your article it allows the world to access your research for free.

So why would you bother doing this? I think there are a couple of good reasons to take the time to put your article wherever your publisher permits you to. One reason is that it allows, it's another place for Google to find you, and that is not trivial in these times. A second good reason to put your article in a lot of places is summed up by the adage that we use in the world of digital preservation, LOCKSS. Lots of copies keep stuff safe. So if the server farm that your user uses goes down, there will be many other places where people can find your work. It's good to have lots of copies of things out there.

Also, if you deposit your work in something like the Tisch Digital Library there's even more benefits because it's an archive and it's explicitly an archive. We care about preservation. We make sure that the bits and the bites are in the right place. And we care that we're committed to format migration. So when PDF eventually dies as a file format, we're all waiting for that day to happen, we will be here to make sure we migrate it into whatever the next thing that PDF is. We're going to take your VHS tape and make it into a DVD and then make it into streaming. That's what we're here to do.

So hopefully this is a worthwhile endeavor to share your work more widely, but it's not trivial to
figure out exactly which version you can share. That's what I want to talk to you for about a few minutes on. It means we're going to go into the weeds a little bit, and I acknowledge that, but I think it's valuable to go into the weeds because I hope at the end you'll see it wasn't that bad.

So here we are in the weeds. This is also in the handout that I provided. Do not attempt to read this screen. It's a bad idea to try to read this screen. It's way too tiny. This kind of intense looking flowchart is meant to work you through this process. It kind of depends on how you attack the flowchart and where you are in the process of publishing. So if you have not yet published your article, you could avail yourself of the Tufts' model amendment, which pretend I'm standing over there pointing you to that part of the flowchart. This is something that Tufts council has provided and it's a way for me to retain more of your rights. But if that's not an option for you for whatever reason, there are contracts that allow you to retain a lot of your rights under these self-archiving provisions. If you can find your contract, excellent, that's a great place to be. If you can't there is a really wonderful website called Sherpa/Romeo that basically boils down most contracts into kind of a boiler plate. This is what most people have who publish with these journals. These are the rights. This is what you can and cannot do. So once you get to that stage you need to identify four things. There are four questions that you have. Where can you deposit it? When can you post it? Is there an embargo; which version? And are there other conditions?

These are publisher's contracts that we're talking about. There are always other conditions but they're not that bad.

So more a little bit about the weeds. I wanted to make this kind of explicit to you what this actually looks like. So this is Springer's self-archiving policy and then I've highlighted the places that address my four questions, the four pieces of information you need to find out.

So in the case of Springer, they do allow you to take what they're calling the author's accepted manuscript. That's their more formal version of it's the very last thing you do before you send it to the publisher. It's the one that doesn't have Springer stamped inside the places on it. That's the version that you're going to work with for these kinds of things.

You need to figure out when. So for Springer they require a 12-month embargo. That means it has to be dark. You cannot post it for 12 months. But after that 12 months, after publication, you can share this copy.

The where matters. And the where is different for different publishers. So this is a little bit important to think about. You have to be specific about your where. So for Springer in this example you can put it on your own personal website. You can put it in any repository, which would of course include the Tufts Digital Library. Then they also allow you to put it on something like archive (inaudible) server.

The other conditions for Springer is that it's not actually that bad. They want you to include a
(inaudible) that points to the Springer website.

So basically once you've gotten those four things under control you can upload it to places. You can put it places. I think that generally I've looked at a lot of different publishers to try to see are there things in common, and the lowest common denominator is your website and your institutional repository. So those are always, not always, but they're most likely to be the place that you will be permitted to do this and then each publisher has its own flavor of additional places you can put it.

So I'm going to take another minute and show you how easy it is to do this, to put it into the Tufts Digital Library. So what you have to do is go to our website mira.lib.tufts.edu and that is part of this screen. Then you login with your UTLN and select faculty publication. It drops you to the other part of the screen. That's it. That's all that you have to do. The entirety of the process can be displayed on one little power point slide. So you just need to put in the title of the work. It will auto-populate with who you are. Then the other thing that's most exciting for me is that there is an embargo field available here. So you don't even have to worry about this. I think for me the ideal process would be that you send it to your editor, your article is done, you don't have to think about it anymore, you come right here, deposit it. If it was a Springer example you would say I need a 12-month embargo, and then you stop having to think about it. Twelve months later we will turn it live for you and people can discover your work in this other way and it doesn't cost any of us $3,000.

I just want to say that we're working on this. We're developing it. So we really need your feedback. We want to make this an accessible and easy process for you. If this does not seem feasible, now is a good time for us to hear that. Thank you so much for your time. I'm happy to take questions.

(Applause)

PROFESSOR ALLEN: Thank you. I'm Jennifer Allen from community health. This seems to be feasible going forward. It seems like a huge amount of work going backwards. I just wondered if there will be support for this. I imagine it would take a lot of work to track articles published in the past.

MS. KELEHAN: Yes. I think we're in a nice place that it does allow you to add to the library and where we have the time and capability kind of dip back in time to flush this out further. I need to go through the experience of looking at all those screens because I think it looks hard, though it actually does not take that much time. But if it feels like it takes too much time, we'll think about ways we can help you do that. At some point we have to ask you, we're not going to have the version before the version, so we have to ask you for that. But we can handle all this deposit stuff if you give us that. We can make this screen not part of your life if that's going to work. I am happy to help make that happen.

PROFESSOR CEBE: Peggy Cebe, Physics. Isn't the DOI number enough? And do we have
that for previous publications in the past? Do we really have to fill out a form if we have the DOI number?

MS. KELEHAN: So the DOI is going to link people to the published version. So if you do not hear about an institution that does not have a subscription to that work then you'll just get the abstract. You won't end up in the actual article itself. So this is more about expending access to the articles.

PROFESSOR FUHRMAN: Juliet Fuhrman, biology. So right now all of our doctoral candidates and our senior honors thesis students upload their thesis to some unknown website. Will this be the replacement for that, which I would love to have it?

MS. KELEHAN: The question of honors thesis and the question of dissertations and masters thesis is a very complex landscape. Shocker, right. So I think they are actually -- I'll tell you what's going on right now. So at least, we as colleagues, correct me if I miss-speak, so for undergraduate honors thesis they already have the option to self-deposit. So their work is going into the Tufts Digital Library. For masters and dissertation projects, those are going through ProQuest, which is an external outside of it. We're in discussion, I think it's a discussion for the faculty to have, about should it also be reflected in the Tufts Digital Library as well.

PROFESSOR FUHRMAN: So this can't be a new ProQuest?

MS. KELEHAN: Not as it currently -- technologically, it could be. Policy-wise, I don't think so.

PROFESSOR TOBIN: Roger Tobin, Physics. I just wondered, given that this information is in Sherpa/Romeo, why can't we just give you the file and tell you what the journal was and you do all the rest of it? I don't want to seem lazy but --

MS. KELEHAN: The only difference is that, and it's kind of equivalent practically speaking, is how many other libraries do handle this. You could have crossed out stuff in your author's contract and the Sherpa/Romeo is just the boilerplate contract. They could have slipped you another contract under the door, and we wouldn't know that unless you tell us that, then we can take it from there. But certainly, again, we're happy to figure out ways to make this less on you and more on us.

UNKNOWN SPEAKER: For the undergraduate thesis and the masters dissertation thesis I think we need a way to embargo those for longer periods. I think the Ph.D. and masters three months is now the choice, and I don't know about the undergraduate, but a lot of times that's unpublished and processed data that shouldn't be posted until it's actually ready to go to a publication.

MS. KELEHAN: So I believe right now for the senior honors thesis they are working on turning an embargo option on. The technology for displaying an embargo option into that form that parallels with the form the faculty would use. But regardless of it showing up, there's always an
embargo option available. I think that's really important to know. It's upon request right now, but it does exits. The process for master-level thesis and for dissertations because that's through ProQuest. I believe that the school can decide what the appropriate options are, and then we can direct ProQuest to make those options available. So it's slightly different processes, but under all circumstances like we do not feel like we are the appropriate body to decide what embargo. It's really the decision of the school.

PROFESSOR SCHILDKRAUT: Debbie Schildkraut, political science. I have two questions. One is you mentioned that once we send it off to be published then we can enter it in with the embargo, but (inaudible) printed on the journals with have the online date and the published date. So is there any uniform piece to when it counts as published as far as the embargo is concerned?

MS. KELEHAN: I don't know the answer to that. I'll have to find out which one counts. I know that even a month matters but the difference between those two --

PROFESSOR SCHILDKRAUT: It really takes a long time before it appears in print version on the website. The second is once we upload something and then from the searcher side of things, if someone Googles my name and they find the link to the article for the journal but then also the link at Tufts, if they click on Tufts, do they get kind of an HTML or is it the Word, PDF version, or those clunky Excel tables added on at the end? I mean, what does it look like to somebody who finds it that way as opposed to at the journal?

MS. KELEHAN: I think that's why in the Springer example it includes a link to the published version. It is definitely. I think this is why, I'll editorialize just a little bit. I have a hard time avoiding editorializing, but I'm going to. For this I think it's why they are permitting you to do this. It is a version that is less attractive. It is the version that you send to your editor, turned into a PDF. So I think they are very savvy about that logic.

PROFESSOR RANKIN: Alisha Rankin, history. I'm actually following up on that question, just a few details. When you send the last version off you get copy edits back. Can you incorporate the copy edits into the version we send you or is it supposed to be the last version before the press touches it? Also, do you have page numbers because obviously the page numbers aren't going to be the same?

MS. KELEHAN: I think this is also why in the other conditions they're going to refer you to the final published version which is what people would use to cite. I don't believe, but I'll have to check. They're pretty specific. This is a legal document. They're pretty specific about the language. My guess is you're not allowed to incorporate the copy edits.

PROFESSOR MIRKIN: Sergei Mirkin, biology. So this is great. I'm very happy to hear of a similar program which is called (inaudible). What happened there, there are federal (inaudible).

MS. WOOD: Thank you. I just wanted to reiterate one part of it that could've gotten a little bit
lost just on the basis of the questions, which is the example she gave from Springer is just that. It's an example. Then ultimately, it depends on which publisher you are working with as to which rules you are agreeing to follow. She started with the flowchart. The first piece is anytime you can negotiate with a publisher to talk about these issues or just to simply return the agreement with these added to it to see if they'll accept them, the better it is to circumnavigate these issues. But we cannot in the library do anything about your contacts after the fact. So that's why we're here to try to ensure we raise that awareness so that you understand the ramifications of those choices for this kind of access which is to get beyond the pay walls for people who either are temporarily or long-term have access to your scholarship.

DEAN GLASER: Who should they call if they want a one-on-one conversation about the particulars?

MS. WOOD: I think that certainly Martha is one of our key experts in this area and would be delighted. But many of you already have a working relationship with a librarian in your field and I would encourage you to ask these questions with whatever librarian you're comfortable working with. This is becoming part of our bread and butter. We may not have the answer right away but we'll find it. That's what we do.

DEAN GLASER: Thank you, Martha. Thank you, Laura. This is a great example of the library partnering with the faculty in a way that's really important to our careers and our reputation and our impact on the scholar in the community as its been defined. So hats off, really, this is great.

(Applause)

FACULTY GOVERNANCE DISCUSSION WITH A&S ELECTED REPRESENTATIVES

DEAN GLASER: I'd like to call Vida to come up. Linda and Vida were elected to represent arts and sciences in some forthcoming conversation and planning about broadened university governance. We thought it would be a good thing before we sent them off to do that for us to have a conversation with the arts and sciences faculty to hear some sense of what the faculty's thinking is on this so they can best represent us. I actually had a couple of questions that I formulated just to try to kick things off. Then we'll get some other questions as well and hopefully we can get a free flowing conversation in this last half an hour.

I think the questions that I start with are what will be the potential domain of this body? What will this body be responsible for deciding? Which issues will be taken up by this body? The second question I really have is given the size of arts and sciences, how do we ensure the right representation of arts and sciences interests?

I'll throw those questions out not just to Vida and to Lynne but to everybody and then if people have questions they'd like to pose or comments on these or other questions. With that, I will turn this over to Lynne and Vida.
PROFESSOR JOHNSON: Well, first I want to thank everyone who voted for me. I did run a low-key campaign with middle-class faculty sitting at lunch counters in Iowa. I actually thought it was very funny when people came up to me and said congratulations. I didn't really campaign.

I have known Lynne for a long time since she had very small children back in 1991. So we're very happy we'll be working together and representing the faculty. I asked the vice provost, Kevin Dunn, who is sort of putting together this group. By the way, this group, I wasn't sure how many schools we actually had, but there will be something like 16 people on this committee. Just figuring out how that committee is going to work is not necessarily going to be easy, but basically what Kevin told me that we will decide who will chair the committee, etcetera. He's just sort of the convener and he will probably bring to this group some of the issues he says will be confidential sort of to the group but a place to have open discussion on issues that really need cross school input and feedback. I keep saying that he's asked to kind of make decisions on behalf of the provost's office and really has no group to consult with what these decisions might be.

Some examples that were raised were university-wide rules, whether perhaps having to do with graduate students, having to do with Title IX, and how things are handled. We actually run a lot of different shops but have had no place and no input from faculty. The point was that certainly the provost's office would like to have faculty input and discussion. So it will be to some degree I see a kind of sounding board. It will be interesting to see how faculty from different schools sort of react.

The thing that I would bring to it is tenure and promotion because as we know there are bridge hires and the first one is going to be across arts, sciences and engineering to schools that have a joint tenure process. But what happens if you want to hire someone at the medical school or the Sackler school and arts and sciences. They have different processes. And that's one of the things that this team committee is sort of making suggestions, sort of, we've got the best process so why don't you take ours for example. But they might not want to do that necessarily. So there are going to be issues that will require us to make sort of joint procedures across schools. So I'm seeing that piece of it as being on our agenda.

PROFESSOR PEPALL: Thank you. I ran a very strong campaign. So thank you for those votes. But I actually was interested in serving on this committee. I am interested because as graduate dean I learned an awful lot about the other schools and it's very interesting because each school thinks they're different and the problems they face are unique to them, and in fact, there's great commonality across schools and the challenges we're facing. We're such a small institution that not to work together and figure out how we can solve some of these issues, particularly graduate education. It struck me as sort of a real lost opportunity. I think I would bring to the table kind of a perspective is how can we, being a smaller research university, be better and not even knowing who are colleagues are across schools I think is a real inhibiting factor. So I look forward to this. I have the perspective of somewhat more graduate because that's where I saw so many synergies. I was on a committee, the Graduate Education Committee, which is one of the first cross school committees that Tony set up to look at issues in graduate education. So that was
my first experience at really working with the deans and the other representatives across schools and I really enjoyed it. So, on that piece I'm looking forward to it.

But I'm also mindful, that arts and sciences, I mean we're a very unbalanced university. Total enrollment is 10,000 and 5,000 is sitting in arts and sciences, more probably. So it's not a balanced group. So I think the issues of representation and interest is a key one and should be a key one on all issues that we talk about. So I'm looking forward to it. Actually, Vida knows, I don't know the timeline when we're expected to get down and when we're expected to come back to you. I presume we'll be meeting sometime in the summer and then we'll be reporting in the fall.

PROFESSOR MIRKIN: I don't know if you know the answer, but I'm very curious what is the function of this body? Is it primarily advisory to the provost or to have some executive functions? I think I like the advisory function better but I'm not certain that that's a vision of the provost office and I wonder if you can comment?

PROFESSOR PEPALL: I can't comment on it but I suspect that we're just a task force looking into issues.

PROFESSOR JOHNSON: And just to remind everyone that we are the task force that's going to look into the possibility of any kind of body that might have some sort, as you put it, executive function. This is sort of an exploratory body to see if, in fact, we do have enough issues of importance that might require some kind of decisions from the group like that. But we're still in the exploratory phase I would think.

PROFESSOR ZEHL ROMERO: I want to say we have to hold our horses, so-to-speak, because my understanding and maybe it's wrong now, was that this is a group that has to work out what we want, such an executive committee, what its parameters will be, what its function. That's for all of you to work out and for all of us to add what we might want to see and let you know.

PROFESSOR JOHNSON: I agree.

PROFESSOR HIRSCH: A little bit of a different perspective on the commonality of the schools that Lynne was talking about. You may remember some years ago there was an incident with the Primary Source and the president, as a result of that, wanted to change the freedom of expression policies. In the end, he was sort of pressured into creating an ad hoc committee, which I was on, and it was university wide. What I discovered with the other schools was that they had a very hard time understanding what had happened here because they didn't have the same kinds of issues for various reasons. And it was a challenge to get people on the committee from the other schools to grasp what goes on with the undergrad population. So I think it's important, as Jim was saying, to talk about representation in arts and sciences and also to have a clear demarcation of which things belonged to that group and to this faculty.

PROFESSOR PEPALL: I agree, Steve that the issues that an undergrad student population that's
residential poses are completely different from some of the issues that the schools downtown face in terms of their student body.

PROFESSOR TOBIN: Thank you for running such great campaigns and for your willing to serve on this. I think this is a really important thing. I would like to, sort of following up on Steve's comment, I'd like to encourage you to try to keep the purview of this committee as much as possible out of the academic realm. I think there's some very important issues. Like there's some issues about health insurance, issues of child care, many issues that I think do cross. But I would be very reluctant to see this sort of an entity beginning to encroach on the academic prerogatives of the individual schools. I think they're really very different. That includes tenure issues. That includes all sorts of academic policy. So I think the calendar issues that touch on (inaudible) so I think there are going to be some things that are on the margins, but I just want to urge you to defend those borders if possible.

PROFESSOR JOHNSON: I suspect from what I've heard and from other, I know a couple of people in other schools, is that they are probably similarly inclined.

PROFESSOR MANZ: Beatrice Manz, history. Following up on what Roger said, I again reiterate what he says in terms of remembering that centralization can go too far in terms of any number of academic and calendar issues a very good point. The other thing that concerned me with the bullet points on the purview of this committee was budget. I feel especially since in this committee we are not properly fully represented. That is to say we have the same number as everyone else. But I would think that budget, if you're talking about where the budget is going to go among the schools, is something that a senate should probably not deal with.

PROFESSOR PEPALL: I agree. I think this is pretty vague what they say on the bullet points. So I agree. Right now I think all the schools operate, you know, each votes on its own, whatever that expression is. So I don't see that this committee is going to be able to come in and reverse that. Basically, just the academic piece graduate, there is some space between the academic and the sort of, you know, support system where there is commonality. I think that for international students at the graduate level we have lots of international students and lots of concerns about how well they are supported in their academic pursuit. So I don't think this is an academic committee, but I can see places where how we support our students across the schools is important.

DEAN GLASER: May I ask something of the two of you. Vida, you said there's going to be some confidentiality issues, confidentiality parameters, and I think that's perfectly appropriate. But I do think there would probably be some value with your coming back to the faculty in the fall with some of the ideas that are being brought up and seek further guidance from the faculty as the agenda through this as the body starts to form. I think it would be useful to know what is off limits for bringing back and what is on limits for bringing back and if there would be some value with being able to share with your constituents now that you are representing us, you know what's going on there.
PROFESSOR SMITH: George Smith, philosophy. I want to follow up on Beatrice's point. From conversations I've had face-to-face with both the president and the provost I've become appreciative how frustrated they are at the fact that the way the administration is funded mainly by a flat tax across the schools is giving them very little room to do their own initiatives. They virtually have to have outside money to do any initiatives at all. Though when it comes to modifying grounds and buildings, new buildings, etcetera, that's perfectly reasonable. But the concern I have is I would really not like to see that set in control the fraction of in effect the tax fraction across the board because I think the issues of what's happened here of course over the years is the provost office has become a great deal more important to the university than it was and in much more in need of a large budget. But the total effect is one of their being frustrated because they want to do more. I don't deny them that. I would just like not to see a university-wide senate deciding the fraction of tax that goes to people. Thank you.

PROFESSOR PEPALL: I don't think they would want that either actually. I mean, faculty don't set the tax rate now. It's the trustees. It's a central decision. So I don't see that being something that would be a university senate decision, from where I sit anyway.

PROFESSOR ORIANS: Colin Orians, biology. I'm going to struggle with this question. So there are some things academically that the provost does do. So they support CELT. They support the Tufts Institute of Environment, which has an academic function. So they do a fair bit of support of academic things. So my question is sort of trying to figure out there are things like that I think that belong centrally because those are things that have impact on all schools. What is the learning outcomes, you know, thinking about ways of teaching and learning and that seems like that's a logical place for them to be because they're working across schools. I would say the same thing about the Tufts Institute of Environment. They're trying to come with scholarship and education about the environment that spreads across the schools, get people from different schools to one another. So I guess my, coming back to Roger, and trying to figure out how do the faculty have a voice in those things that are being run around the provost's office? What is the role in which faculty can play and say we want a bigger, better CELT, we want a bigger, better TIE, we want a bigger, better X. How we want to have investments into those programs that don't live in the school. I think there are a lot of programs that don't fit nice and neatly into a school. So I guess I just bring that up not with answers, but with questions on I think this committee needs to wrestle with the implications of creating a body that looks at these centrally administered programs.

PROFESSOR PEPALL: I think that's a great point, Colin. I really do. Because sometimes centralizing it can actually weaken its impact because it doesn't sort of grasp on to a school, so what's the right balance of cross school and school-based academic initiatives I think is really important and interesting.

PROFESSOR JOHNSON: And like it or not, we are moving towards cross-school collaboration, that is the bridge professorships will be that and that's also going to raise a number of issues how do these professors function across two schools and how they would have basically full
appointments and full voting rights. I was thinking they're going to go to two sets of meetings, two sets of tenure cases. They're going to drive between Medford and Downtown, etcetera. But the fact is that this, I would think, committee as it considers what kind of body there might or might not be necessary. We might all come back and decide we're fine, we don't need to do anything. But I think this committee will have to think about the future and what kind of collaborations and cross-school initiatives are either offering now or coming soon. So they would need some kind of structure to be able to manage that, academically too.

DEAN GLASER: Thank you very much for your service to us. (Applause)

DEAN GLASER: We send you off not to battle but to be collaborative with our colleagues and our provost.

PROFESSOR PEPALL: Feel free to email if you have questions.

DEAN GLASER: With that, I wish you all a happy end to the term. Thank you. (Meeting adjourned)

MEETING ADJOURNED

Respectfully Submitted,

Jillian Dubman
Secretary of the Faculty for Arts, Sciences & Engineering
A&S Faculty Meeting, Wednesday, April 15, 2015

Schedule and Location

Wednesday, April 15, 2015 12:00 PM
Coolidge Room, Ballou Hall
Light lunch, coffee, and water served at 11:30 AM

Agenda

Announcements
Dean’s Research Leave Recipient
Jim Glaser, Dean of the School of Arts and Sciences

Call for Pre-Major Advisors
Nancy Bauer, Dean of Academic Affairs

Dean’s Annual Publications Party, April 23rd, 3-4:30 PM
Jim Glaser, Dean of the School of Arts and Sciences

Old Business

Discussion and Vote on Revised Learning Outcomes Assessment Committee (LOAC) Proposal
Laura Rogers, Committee Chair LOAC

New Business

LA&J Curricula Committee Proposals
David Proctor, Chair, LA&J Curricula Committee

Sharing and Preserving Faculty Scholarship
Martha Kelehan, Head of Collections, Tisch Library

Faculty Governance Discussion with A&S Elected Representatives
Jim Glaser, Dean of the School of Arts and Sciences
Vida Johnson, Professor, GRALL
Lynne Pepall, Professor, Economics

For Reference

Attachments*

- Agenda
- LOAC Revised Proposal
- LA&J Curricula Committee Agenda
- A Quick Guide to Depositing Faculty Work in the Tufts Digital Library

*Please print all attachments and bring them with you to the meeting; a limited number of hard copies will be available at the meeting

Listings of future faculty meetings as well as the agenda and attachments for this meeting are online at http://ase.tufts.edu/faculty/meetings/.

April 15, 2015
Proposal #1 to Tufts Faculty of the Arts and Sciences

The Learning Outcomes Assessment Committee (LOAC) proposes the following resolution:

The Arts and Sciences faculty authorizes LOAC to develop Distribution Area Learning Objectives to guide the assessment of student learning in courses taken for the purpose of meeting Tufts’ Distribution requirements.

Rationale: In 2010, Tufts began a small scale project to assess student learning outcomes in the core curriculum in order to meet the NEASC requirements that Tufts assess student learning in its “general education curriculum” as well as in its departments and programs. In their report, NEASC noted that while the “well-defined and faculty-owned learning outcomes and assessment plans for the University’s undergraduate majors” were noteworthy, the “work is yet to be done to articulate and assess general education and institution-level learning outcomes.” (NEASC, Letter to President, November 4, 2013). Tufts will be required to give emphasis, in its 5-year report in 2018, to its “success in articulating and assessing student achievement of general education and institutional level learning outcomes and using the results for improvement.” (ibid). In order to develop a coherent plan for supporting faculty work in assessing student learning outcomes, we must “articulate” the learning objectives that will be used to guide such assessment.

To maintain the spirit of our “faculty-owned” process, we are seeking faculty approval of this resolution to affirm that the faculty authorizes LOAC to continue building faculty capacity to assess student learning outcomes in courses taken to fulfill Distribution Area requirements. The Draft Learning Objectives developed in the pilot project will be the starting point in the next round of projects, all voluntary, designed to assess student learning outcomes. These projects will be reported to NEASC in 2018.

We expect that faculty who teach courses students take to fulfill distribution requirements and who volunteer to participate in the next round of projects will use one or more of the Learning Objectives in their course syllabus (by creating course-specific learning objectives derived from these Learning Objectives). Participants in ongoing projects will be coached as they develop strategies for assessing student attainment of these objectives and use their results to improve teaching and curriculum. Faculty who participate in the projects will also revise the draft learning objectives based on their shared experience with them in an annual collaborative review process led by LOAC.

Members of LOAC:

Harry Bernheim, Drusilla Brown, Thomas Downes, John Fyler, Fulton Gonzalez, David Hammer, Heather Nathans, Donna Qualters, Laura Rogers (Chair), Susan Russinoff, Evan Simpson, Dawn Terkla, Nancy Bauer, Lauren Conoscenti, Sarah Herschel, and Carmen Lowe.

Faculty Participants in the Pilot Project on the Assessment of Learning Outcomes in Distribution Course Requirements:

Natural science: Susan Ernst, Jonathan Kenney, Anne Gardulski, Leon Gunther, George Elmore
Mathematical science: Boris Hasselblatt, Grayson Kimball, Susan Russinoff, Mary Glaser, David Garman
Social science: Chip Gidney, Helen Marrow, Natalie Masouka, Ayanna Thomas, Rich Eichenberg, Jim Ennis
Humanities: David O’Leary, Jeanne Penvenne, Susan Russinoff, David Ekbladh, Sonia Hofkosh, Alisha Rankin, George Scarlett
Arts: David Locke, Christina Maranci, Alice Trexler
Proposal #2 to Tufts Faculty of the Arts and Sciences

The Learning Outcomes Assessment Committee (LOAC) proposes the following resolution:

The Arts and Sciences faculty endorses the plan to adopt the Draft Distribution Area Learning Objectives for use in voluntary pilot projects intended to promote the assessment of student learning outcomes in courses taken to meet the Tufts Distribution Area requirements.

Rationale: In 2010, Tufts began a small scale project to assess student learning outcomes in the core curriculum in order to meet the NEASC requirements that Tufts assess student learning in its “general education curriculum” as well as in its departments and programs. In their report, NEASC noted that while the “well-defined and faculty-owned learning outcomes and assessment plans for the University’s undergraduate majors” were noteworthy, the “work is yet to be done to articulate and assess general education and institution-level learning outcomes.” (NEASC, Letter to President, November 4, 2013). Tufts will be required to give emphasis, in its 5-year report in 2018, to its “success in articulating and assessing student achievement of general education and institutional level learning outcomes and using the results for improvement.” (ibid). In order to develop a coherent plan for supporting faculty work in assessing student learning outcomes, we must “articulate” the learning objectives that will be used to guide such assessment.

To maintain the spirit of our “faculty-owned” process, we are seeking faculty approval of this resolution to affirm that the learning objectives developed by members of Tufts Arts and Sciences faculty to fulfill this “articulation” requirement will be used in the next round of projects, all voluntary, designed to assess student learning outcomes. These projects will be reported to NEASC in 2018. We expect that faculty who teach courses students take to fulfill distribution requirements and who volunteer to participate in the next round of projects will use one or more of the Learning Objectives in their course syllabus (by creating course-specific learning objectives derived from these Learning Objectives). Participants in ongoing projects will be coached as they develop strategies for assessing student attainment of these objectives and use their results to improve teaching and curriculum. Faculty who participate in the projects will also revise the draft learning objectives based on their shared experience with them in an annual collaborative review process led by LOAC.

Members of LOAC:

Harry Bernheim, Drusilla Brown, Thomas Downes, John Fyler, Fulton Gonzalez, David Hammer, Heather Nathans, Donna Qualters, Laura Rogers (Chair), Susan Russinoff, Evan Simpson, Dawn Terkla, Nancy Bauer, Lauren Conoscenti, Sarah Herschel, and Carmen Lowe.

Faculty Participants in the Pilot Project on the Assessment of Learning Outcomes in Distribution Course Requirements:

Natural science: Susan Ernst, Jonathan Kenney, Anne Gardulski, Leon Gunther, George Elmore
Mathematical science: Boris Hasselblatt, Grayson Kimball, Susan Russinoff, Mary Glaser, David Garman
Social science: Chip Gidney, Helen Marrow, Natalie Masouka, Ayanna Thomas, Rich Eichenberg, Jim Ennis
Humanities: David O’Leary, Jeanne Penvenne, Susan Russinoff, David Ekbladh, Sonia Hofkosh, Alisha Rankin, George Scarlett
Arts: David Locke, Christina Maranci, Alice Trexler
Learning Objectives for the Natural Sciences Distribution Requirement

Students will learn to:
1. Accurately use and communicate basic scientific vocabulary, terms, and concepts (including relevant quantitative concepts).
2. Gather or synthesize, evaluate, and critically interpret scientific evidence.
3. Evaluate scientific information presented in a variety of media and make decisions about its accuracy, validity, and implications.

Learning Objectives for the Mathematical Sciences Distribution Requirement

Students will:
1. Develop knowledge and problem-solving skills in using mathematical tools and procedures, and apply these skills in a variety of contexts.
2. Learn to discern underlying patterns or structure and represent these using abstract or symbolic representations.
3. Learn to reason precisely and systematically, and to critically assess the plausibility of claims or solutions.

Learning Objectives for the Social Sciences Distribution Requirement

In the context of at least one social science, students will be able to:
1. Identify the core concepts, theories, and methods used by social scientists to observe, to analyze, or to predict human behavior.
2. Identify patterns underlying everyday social phenomena that are otherwise invisible or taken-for-granted.
3. Describe the influence of historical, social, cultural, or political structures on human behavior and make comparisons and contrasts across contexts.
4. Communicate ideas clearly within the disciplinary standards of argument, evidence, analysis, and citation.

Learning Objectives for the Humanities (Revised 2012)

Students will:
1. Demonstrate skill in close reading and critical analysis while engaging questions within the humanistic tradition of interpreting text as well as oral, visual, kinetic, and other materials as expressions of human experience and thought.
2. Describe the influence of historical, social, cultural, and political contexts on human experience and make comparisons and contrasts across multiple contexts.
3. Recognize, evaluate, and use evidence effectively and in accordance with the standards of scholarship in at least one of the humanities disciplines.
4. Communicate ideas clearly and compellingly in writing and in oral presentation.

Learning Objectives for the Arts Distribution Requirement

In at least one art form, students will be able to:
1. Identify the style, concepts, materials, methods and techniques used to create a work of art or performance.
2. Recognize the historical, political, social, and/or aesthetic contexts of works of art or performance.
3. Appreciate the imaginative and expressive traditions of cultures through engagement with or creation of art work or performance.
4. Communicate effectively through or about the arts in one or more of the following ways:
   a. through a performance or personal expression that demonstrates creativity and foundational skills in the use of artistic techniques
   b. through critical analysis of a work of art or artistic tradition using evidence and formal language to support the analysis
   c. through reflective practices that integrate perceptions of the art form/art work with personal experience
Summary of the Tufts Pilot Project in Assessing Learning Outcomes in General Education

Tufts approached the requirements to demonstrate that the university is assessing student learning relative to established goals and criteria through an initiative at the Department and Program level. Every department and program developed learning objectives for majors and a method for collecting and evaluating student work to determine areas of program strengths and needs.

In the early stages of this process, Tufts learned that universities are also required to develop learning objectives and to evaluate students’ learning outcomes in the core or general education curriculum—that is, in the curriculum we require of all students and that therefore constitutes the intellectual core of a Tufts education.

In 2010, when the Learning Outcomes Committee began planning for this component, assessment of student learning in the core curriculum, we faced several challenges:

1. The core curriculum is expansive, includes several threads under two categories, and a significant number (well over half) of undergraduate courses satisfies one or more of the requirements. The core curriculum at Tufts includes Foundations requirements (College Writing, Foreign Language and Culture, World Civilizations) and Distribution requirements.
2. We decided to focus our efforts on the Distribution requirements—however, there were no learning objectives specified for these requirements.
3. We had not yet developed a culture of assessment among faculty—in fact, there was even some resistance to the assessment requirements. We needed a voluntary program enlisting faculty who were, if not enthusiastic, at least willing to work on a project to develop and assess the core curriculum.

Pilot Project workshops were planned to develop the assessment of learning outcomes in the Tufts core curriculum. To do this, we would need to:
   a. Recruit volunteers who teach courses designed to fulfill a distribution requirement to meet in distribution groups
   b. Facilitate defining shared learning objectives that would apply to courses taught to meet the distribution area requirements
   c. Develop guidelines for collecting data to inform course faculty about how well their students are meeting the learning objectives
   d. Support faculty in using data to improve instruction in their courses
   e. Encourage faculty to share the process with other members of their department

The project took place over two years; altogether 25 faculty members plus 2 additional faculty facilitators participated (5 faculty members participated both years). At every point, the goal was to develop meaningful, sustainable approaches to assessment that would be used to enhance teaching and learning.

In the first summer, each working group developed Learning Objectives for their distribution area. During the following year, faculty explored ways to evaluate student work using criteria derived from the learning objectives and samples of work from assignments/tests they were already using in their classes. In the second summer, we reviewed the learning objectives. The Humanities second year group revised their learning objectives; the other groups approved the original objectives. The working groups also reviewed the various methods used to evaluate student work relative to the learning objectives and to aggregate the results for the purposes of interpreting patterns in student outcomes. We developed guidelines for the second year of assessment data collection. Several faculty from each year received coaching in this process. At the end of the second year, all faculty who participated in either or both years met to review the pilot project and to make recommendations for the future. These recommendations included a request that Tufts provide more intensive coaching and support to faculty in assessing student learning outcomes using learning objectives.
For Reference: Working Definitions of the Distribution Areas (used by ARB) 2015

1. Humanities
The humanities focus on cultural, literary, historical, and philosophical questions. They rely on close reading, interpreting, and critical analyses of various expressions of human experience and thought.

2. Arts
The arts focus on the study of the critical and historical aspects of the creative and performing arts, as well as studio experience in those areas. Courses engage in the aesthetic interpretation and/or practice of the different art forms.

3. Social Sciences
The social sciences are concerned with the study of human behavior and institutions. They typically take an empirical approach.

4. Natural Sciences
The natural sciences systematically investigate through observation and experimentation the basic mechanisms and rules that deal with matter and energy, including living systems, and their interrelations and transformations.

5. Mathematical Sciences
The mathematical sciences use quantitative and symbolic reasoning to examine ideas derived from our perceptions of the natural world.

(These definitions are based on language that appeared in the Tufts Bulletin for a number of years before being deleted in 2006-2007 for unknown reasons.)
LAJ Curricula Committee Meeting Agenda
April 15, 2015

*Items 1-11 require committee and LAJ faculty approval; Items 12-25 require committee approval only.*

**Part I**

Item 1. NEW COURSE – Classics – SKT 0001
Item 2. NEW COURSE – Classics – SKT 0002
Item 3. NEW COURSE – Classics – SKT 0003
Item 4. NEW COURSE – Classics – SKT 0120
Item 5. NEW COURSE – Drama & Dance – DR 0008
Item 6. NEW COURSE – Drama & Dance – DNC 0075
Item 7. NEW COURSE – Drama & Dance – DNC 0077
Item 8. NEW COURSE – Physics and Astronomy – AST 0031
Item 9. NEW COURSE – Physics and Astronomy – AST 0032
Item 10. NEW COURSE – Physics and Astronomy – PHY 0062
Item 11. NEW MAJOR – Undergraduate Second Major in Education

**Part II**

Item 12. CHANGE PROGRAM – Minor in Asian American Studies
Item 13. COURSE CHANGE DESCRIPTION – Drama & Dance – DNC 0071
Item 14. COURSE CHANGE DESCRIPTION – GRALL – HEB 0001
Item 15. COURSE CHANGE DESCRIPTION – GRALL – HEB 0002
Item 16. COURSE CHANGE DESCRIPTION – GRALL – HEB 0003
Item 17. COURSE CHANGE DESCRIPTION – GRALL – HEB 0004
Item 18. COURSE CHANGE DESCRIPTION – GRALL – HEB 0021
Item 19. COURSE CHANGE DESCRIPTION – GRALL – HEB 0022
Item 20. COURSE CHANGE DESCRIPTION – GRALL – HEB 0121
Item 21. COURSE CHANGE DESCRIPTION – GRALL – HEB 0122
Item 22. COURSE CHANGE TITLE & DESCRIPTION – Physics and Astronomy – PHY 0061
Item 23. COURSE CHANGE TITLE & DESCRIPTION – Physics and Astronomy – PHY 0064
Item 24. COURSE CHANGE TITLE, DESCRIPTION & NUMBER – Physics and Astronomy – PHY 0082
Item 25. CHANGE PROGRAM – Psychology (Cognitive and Brain Science)
Part I

Item 1. NEW COURSE - Classics

From: Anne Mahoney, 7-4643, anne.mahoney@tufts.edu

Department Chair: Vickie Sullivan, 7-3213, vickie.sullivan@tufts.edu

SKT 0001 Elementary Sanskrit 1

Bulletin Description: Introduction to the phonology, morphology, and syntax of classical Sanskrit, and the Devanāgarī writing system, through reading, writing, listening, and speaking. Relationship of Sanskrit to Greek, Latin, English, and modern Indian languages.

Next Anticipated Offering: every fall; on schedule for Fall 2015 as special topics

Rationale. Sanskrit is the third great ancient Indo-European language, alongside Greek and Latin. Its position in South Asian culture is similar to that of Latin in European culture. Students working on Indo-European linguistics, on any aspect of South Asian culture, or on comparative ancient histories will find Sanskrit both useful and fascinating. Many of the fundamental texts for Hinduism and Buddhism are originally in Sanskrit. The two great Indian epics, the Mahābhārata and the Rāmāyaṇa, are directly comparable to the Iliad and Odyssey in the Western tradition, not only because of the way all four texts came to exist, but because of their continuing relevance; these texts, along with the Rig Veda, are important for the study of Indo-European linguistics and culture. Sanskrit drama has a long history as literature and performance, and some of the most famous plays are accessible to advanced students. Sanskrit 1 has been offered as a special-topics course in classics for 8 years, and subsequent semesters have been offered as directed-study courses. Although enrollments have been small, nonetheless, several Liberal Arts undergraduates have taken at least one semester; one Engineering undergraduate and one Liberal Arts student each took 6, and one graduate student in classics took 4. Sanskrit grew out of the successful Indo-European Linguistics course. Students who took that class the first time it was offered were curious about Sanskrit, and asked if it could be taught. While only one of them eventually took the class, this student took three semesters, and ended up using a Sanskrit text alongside Latin and English texts in an interdisciplinary honors thesis. Most students who have taken Sanskrit have been classics majors (usually in the Greek-and-Latin track), though some come to the subject through the South Asian community or through work on ancient India in other classes. Enrollments and previous course numbers are as follows: term, course, title, enrollment

Fall 2007 CLS 0091 Elementary Sanskrit 1 1
Spring 2008 CLS 0092 Elementary Sanskrit 2 1
Fall 2008 CLS 0091 Elementary Sanskrit 1 1 CLS 0092 Elementary Sanskrit 3 1
Fall 2009 CLS 0092 Elementary Sanskrit 2 1
Fall 2009 CLS 0191 Elementary Sanskrit 1 1
Spring 2010 CLS 0192 Elementary Sanskrit 2 1
Fall 2010 CLS 0183 Elementary Sanskrit 1 3
Spring 2011 CLS 0192 Elementary Sanskrit 2 3
Fall 2011 CLS 0183 Elementary Sanskrit 1 1
CLS 0191 Intermediate Sanskrit 1 3
CLS 0192 Sanskrit Readings 1 Spring 2012 CLS 0192 Sanskrit Readings: Rig Veda 3 Fall 2012
CLS 0183 Elementary Sanskrit 1 3
CLS 0191 Sanskrit Readings: Kalidasa 1 Spring 2013 CLS 0192 Elementary Sanskrit 2 1
CLS 0192 Sanskrit Readings: Drama 1 Fall 2013 CLS 0183
Elementary Sanskrit 1 1
Spring 2014 CLS 0192 Elementary Sanskrit 2 1
Fall 2014 CLS 0183
Elementary Sanskrit 1 2
CLS 0191 Intermediate Sanskrit 1 Spring 2015 CLS 0192 Elementary Sanskrit 2 1
CLS 0192 Sanskrit Readings: Rig Veda 1 Fall 2015
CLS 0183 Elementary Sanskrit 1
CLS 0192 Intermediate Sanskrit

Overlap. There is no overlap, as the Sanskrit language is not taught elsewhere at Tufts. Sanskrit complements our existing courses in South Asian history, religion, philosophy, and art.
Colleagues in Religion and Anthropology support the proposal. 

**Resource Requirements/ Curricular Adjustments.** Sanskrit will continue to be taught by Mahoney using the directed study mechanism; we will therefore keep enrollments low. The library already has the essential books (dictionary, grammar, literature).

**Requirements.** These courses will count as electives in all classics major tracks.

**ARB Review:**

**ARB Review Requested for FL Requirement**

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**Item 2. NEW COURSE - Classics**

*From: Anne Mahoney, 7-4643, anne.mahoney@tufts.edu*

*Department Chair: Vickie Sullivan, 7-3213, vickie.sullivan@tufts.edu*

**SKT 0002 Elementary Sanskrit 2**

**Bulletin Description:** Continuation of SKT 1: further morphology and syntax, vocabulary building, pragmatics.

**Next Anticipated Offering:** every spring

**Rationale.** See SKT 1.

**Overlap.** See SKT 1.

**Resource Requirements/ Curricular Adjustments.** See SKT 1.

**Requirements.** See SKT 1.

**ARB Review:**

**ARB Review Requested for FL Requirement**

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**Item 3. NEW COURSE - Classics**

*From: Anne Mahoney, 7-4643, anne.mahoney@tufts.edu*

*Department Chair: Vickie Sullivan, 7-3213, vickie.sullivan@tufts.edu*

**SKT 0003 Intermediate Sanskrit**

**Bulletin Description:** Reading of selections from the *Mahābhārata* or *Rāmāyaṇa*, and review of grammar as necessary.

**Next Anticipated Offering:** Fall 2015 (as a directed study) and subsequent fall semesters depending on student demand.

**Rationale.** See SKT 1.

**Overlap.** See SKT 1.

**Resource Requirements/ Curricular Adjustments.** See SKT 1.

**Requirements.** See SKT 1.

**ARB Review:**

**ARB Review Requested for FL Requirement**

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**Item 4. NEW COURSE - Classics**

*From: Anne Mahoney, 7-4643, anne.mahoney@tufts.edu*

*Department Chair: Vickie Sullivan, 7-3213, vickie.sullivan@tufts.edu*

**SKT 0120 Readings in Sanskrit**

**Bulletin Description:** Readings from classical or Vedic Sanskrit literature. May be repeated.
**Next Anticipated Offering:** Expected Spring 2016.

**Rationale.** See SKT 1.

**Overlap.** See SKT 1.

**Resource Requirements/ Curricular Adjustments.** See SKT 1.

**Requirements.** See SKT 1.

**ARB Review:**

*Distribution Credit Humanities*

*Culture Option South Southeast Asian Culture (region of origin)*

*World Civilizations Credit*

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**Item 5. NEW COURSE - Drama**

*From: Heather Nathans, 6176273524, heather.nathans@tufts.edu*

*Department Chair: Heather Nathans, 6176273524, heather.nathans@tufts.edu*

**DR 0008 First-Year Showcase**

**Bulletin Description:** Introduces first-year students to the production program in the Department of Drama and Dance with a strong emphasis on developing both the creative and the collaborative aspects of performance. Students present a fully-staged public performance and work as designers, directors, stage managers, dramaturgs, and crew.

**Next Anticipated Offering:** This course was piloted in Fall 2014, and will be offered on a regular basis every fall for incoming first-year students.

**Rationale.** While the Drama curriculum offers a strong series of theatre history courses and a basic "Intro to Acting" course, there has been, up until this point, no natural "gateway" into the Drama program for first-year students eager to learn about all aspects of the production process, and interested in developing their collaborative skills. This course was especially designed to offer first-year students a guided transition into the Drama program's offerings. It incorporates all elements of acting, directing, design, and dramaturgy, including both an experiential learning process in which students collaborate with senior faculty members to learn these skills, and lectures and readings that provide historical and scholarly context for their work. The class incorporates research, analytical writing, as well as creative projects. The class culminates in a fully-staged production for which the students serve as performers, designers, stage managers, dramaturgs, and crew (under the guidance of faculty and production staff). All production work takes place during recitation hours so students are not unduly burdened during their first semester on campus. First-year students are also matched with more senior Drama student mentors who can serve as a resource during their first term on campus.

**Overlap.** Not at the present time.

**Resource Requirements/ Curricular Adjustments.** The course is delivered by a department faculty member and one or two teaching assistants, depending on enrollment. It occupies a "workshop" slot already built into our production season. A $15 lab fee attached to the course covers royalty fees for the shows produced by the students and any consumable prop items. All readings are provided for students on the TRUNK site.

**Requirements.** This course may fulfill one of the elective requirements for the major.

**ARB Review:**

*Distribution Credit Arts*
**Item 6. NEW COURSE - Drama & Dance**

*From: Renata Celichowska, 617.627.2555, renata.celichowska@tufts.edu*

*Department Chair: Heather Nathans, 617.627.2222, heather.nathans@tufts.edu*

**DNC 0075 Choreographer's Workshop**

**Bulletin Description:** Develop a project through specific, personal compositional process. Includes one initial movement assignment for all students. Compositional possibilities are a starting point from which choreographers define options. Includes in-class movement experiences, showings, discussion, the creation of 2-3 short dances, and performance in one’s own and other student dances. Viewing, reading and journal assignments specific to each student. Additional rehearsal time outside of class. Prerequisites: Previous dance composition or DNC 62; permission of the instructor.

**Next Anticipated Offering:** Fall, 2015.

**Rationale.** This course is a revision of DNC 117 Studies in Dance Composition that more accurately describes the Dance Program Curricular goals for mentoring students in the creative process. Tufts students interested in creative process and choreography are coming to our courses with a wide-variety of experience and interests. The existing course is being taught in a style that accommodates and uses the strength of this variety to challenge students to push their creative comfort zones and knowledge base. The description of the old course does not reflect the current course nor the needs of the program students. The change in numbering aligns with a larger re-numbering of Dance Program courses that was initiated with the on-boarding of the new Director of Dance in Fall, 2012.

**Overlap.** No overlaps. This is the only dance composition course at Tufts.

**Resource Requirements/ Curricular Adjustments.** None.

**Requirements.** Currently, the DNC 117 Studies in Dance Composition course fulfills a minor requirement in creative process. The replacement course, DNC 75 Choreographer's Workshop, will also fulfill a minor requirement in creative process and will eventually be the prerequisite course for students wishing to complete a Dance Minor Capstone project in Choreography. We see the need for this additional level of mentoring so that students preparing choreography have at least a semester of choreographic experience before attempting the more independently structured capstone project.

**ARB Review:**

*Distribution Credit Arts*

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**Item 7. NEW COURSE - Drama & Dance**

*From: Renata Celichowska, 617.627.2555, renata.celichowska@tufts.edu*

*Department Chair: Heather Nathans, 617.627.2222, heather.nathans@tufts.edu*

**DNC 0077 Dance on Camera**

**Bulletin Description:** Inter-disciplinary course designed for any dancer, artist or student interested in film & video production with dance or movement as a medium. Participants will take dance and movement concepts outside of studio walls and into the community through site-specific collaborative video projects. Through storyboarding, shooting, editing, and choreographing/directing, students will learn basic video production techniques and advanced camera work in this hands-on course. Development of movement ideas as well as non-linear editing skills will be explored. Work culminates in end of semester public screening and online video sharing. Open to all. No dance or film/video experience necessary.
Next Anticipated Offering: The course has been successfully offered twice as a .5 credit Special Topics course: Spring 2014 (DNC 92.03) and Spring 2015 (DNC 92.03). We are currently scheduled to offer it again as a .5 credit Special Topics course Fall, 2015. However, the work involved in the course and the university-wide investment of equipment to establish this course presents itself as an opportunity to make this a permanent, full-credit course that we anticipate offering every fall semester. Therefore, we would like to convert it to a fully numbered and listed course in the curriculum and bulletin.

Rationale. Dance on Camera, also referred to around the world as dance on screen, videodance, dancefilm, or screendance, is a visual and kinesthetic experience in the form of a film or video work. Dance on Camera prioritizes dance over conventional dialogue and acting to tell a story or convey an idea. Dance on Camera is itself, an innovative genre in the field of dance and has made radical developments with the advancement of technology over the past few years. The world is rapidly becoming a digital landscape and the Department of Drama and Dance is committed to updating the curriculum by integrating technology into their teaching and course offerings. Over the past two years, the Dance Program has been addressing some of the areas in which our Tufts Program can develop and expand to more fully reflect current aesthetic activity in the dance field. The collaboration between new media and technology and dance is one of those areas in need of development. The first integrated dance and technology course taught at Tufts, Dance on Camera, was offered as a Special Topics course during Spring Semester 2014 and again during Spring Semester 2015. This course explores aspects of history, composition, aesthetics, and technology as a foundation for film and video production with dance or movement as its medium. For the past two years, part-time faculty member Jaclyn Waguespack has worked with Marc Raila and Michael Callahan, both Digital Media Technologists in the Tisch Library’s Digital Design Studio (DDS) at Tufts, to help provide support for the course and serve as resources for the students. The course has proven itself to be a popular and innovative addition to the Department’s course offerings. The Dance on Camera course encourages students to think, connect, create, communicate, and collaborate with each other on a deeper level, which is in keeping with the liberal arts vision of Tufts. The goal of the Dance on Camera course in the future will be to continue its momentum by challenging the students’ problem-solving, collaboration, and critical thinking skills and by introducing them to the most advanced digital technologies and tools. The Dance on Camera course fills a gap in our department by providing both practical and theoretical exposure to the creative intersection between dance and film. The Dance on Camera course creates a forum through which we can support and develop dance and technology teaching and research. It also bridges the gap between other departments, namely the Film Program and Communications and Media Studies, to provide a foundation for additional interdisciplinary courses. The Dance on Camera course allows students to develop hands-on technological skills through the study and practice of artistic expression. The university has invested in the Tisch Library’s Digital Design Studio and additional media labs on campus. This course encourages students to make use of the ever-expanding resources currently available to them. The university, through a Tufts Innovates! seed grant, has already invested in purchasing the necessary equipment for the Department of Drama and Dance to continue to offer this course at a professional level (equipment acquired: 10 digital single-lens reflex cameras as well as lighting and grip equipment). Peer institutions offer similar courses integrating dance, media and technology. Including the Dance on Camera course in our curriculum makes us a competitive choice for prospective students.

Overlap. Due to the specialized nature of this inter-disciplinary art form (Dance & Film), we do
not see a conflict with any current dance OR film/media studies endeavors. Members of the Tufts Media and Film studies programs, such as Jennifer Burton (Drama & Dance), Howard Woolf (Ex-College) and Julie Dobrow (CMS) are aware of the course and have been partnering with the Dance Program to get word out about it.

**Resource Requirements/ Curricular Adjustments.** Plans for the course include continuing to allocate part-time faculty resources through the Dance Program and use of newly purchased equipment, including 10 cameras, a studio light kit and support equipment, and on-site studio a/v projectors.

**Requirements.** The course is not only be available to Drama and Dance Minors in fulfillment of elective credits, but it will be a gateway course for students interested in the intersection of performance and media studies. For the Fall, 2015 semester, the course is being cross-listed with Communications and Media Studies. The course also offers transferrable skills for students working in media in other dance and drama courses.

**ARB Review:**

**Distribution Credit Arts**

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**Item 8. NEW COURSE - Physics and Astronomy**

*From: Danilo Marchesini, 7-2756, danilo.marchesini@tufts.edu*

*Department Chair: Roger Tobin, 7-5461, roger.tobin@tufts.edu*

**AST 0031 Stellar Structure and Evolution**

**Bulletin Description:** Interaction of light and matter, telescopes, stellar structure, stellar evolution, inter-stellar medium, exoplanets, and formation of planetary systems. Some assignments involve the use of computers. Intended for students with a background in physics and/or astronomy and mathematics and a strong interest in astronomy. May be used to satisfy the concentration requirements for major and minors in the Department of Physics and Astronomy. Prerequisites: Physics 11 and 12, or by instructor consent.

**Next Anticipated Offering:** Fall 2015

**Rationale.** The course was offered as a special topic course, namely AST 0015, in the Fall 2013 and Spring 2015 semesters. It was titled “Special Topics – Stellar Evolution”. AST 0031 fulfills the need of a course intended for students with a background in physics and/or astronomy and mathematics, and a strong interest in astronomy. In particular, this course is a required course for undergraduate students majoring or minoring in astrophysics. This course is needed to strengthen the course offering for the major in Astrophysics. This course does not have much impact on other programs of study outside the department. Within the department of Physics and Astronomy, AST 0031 does not conflict with other courses, while it satisfies the need for a more rigorous and more focused course on stellar structure and stellar evolution. Prof. Marchesini, has taught AST 0031, in its special topic version AST 0015, in both the Fall 2013 and Spring 2015 semesters, and there is no foreseeable change in the instructor of this course. This course nicely complements AST 0032, which covers extragalactic astrophysics and cosmology, and AST 0101, which teaches radio astronomy.

**Overlap.** Part of the content of AST 0022 overlaps with AST 0031. AST 0022 has been historically taught by Prof. Ken Lang, and it has been primarily attended by students from the School of Engineering. AST 0031 differs from AST 0022, as AST 0031 fully focuses on stellar astrophysics, specifically on stellar structure and stellar evolution, whereas AST 0022 had a much broader content, introducing concepts both in stellar astrophysics (e.g. the Sun, stellar
evolution, planets), and in extragalactic astronomy and cosmology (e.g. dark matter and supermassive black holes in galaxies, the interstellar medium, the expanding universe, radio galaxies, gamma-ray bursts, and the cosmic microwave background radiation). AST 0022 better fulfills the needs of an introductory course in stellar astrophysics and extragalactic astronomy, whereas AST 0031 is better suited for an in-depth understanding of stellar structures and stellar evolution. There is no other potential overlap with courses in other departments.

**Resource Requirements/ Curricular Adjustments.** No new resources needed. The instructor will be teaching the course and he/she will also be responsible for grading and course management.

**Requirements.** The course is part of the astronomy and astrophysics major core requirements. It also serves to fulfill science elective requirements for students majoring in related fields (especially physics and engineering). It will allow students taking AST 0032 to better understand the material. Other than that, AST 0031 will not be the requirement for any other courses.

**ARB Review:**

**Distribution Credit Natural Sciences**

**Item 9. NEW COURSE - Physics and Astronomy**

*From: Anna Sajina, 7-5354, anna.sajina@tufts.edu*  
*Department Chair: Roger Tobin, 7-5461, roger.tobin@tufts.edu*

**AST 0032 Galactic and Extragalactic Astrophysics**

**Bulletin Description:** Key radiative processes in astrophysics, the Milky Way galaxy, normal and active galaxies including quasars, formation and evolution of galaxies, and observational cosmology. Will include assignments involving the use of computers. Intended for students with a background in physics and/or astronomy and mathematics, and a strong interest in astronomy. May be used to satisfy the concentration requirements for majors and minors in the department of physics and astronomy. Prerequisites: Physics 11 and 12, or by instructor consent.

**Next Anticipated Offering:** Spring 2016 – In general, we expect it to be given in the Spring semester, so that students have the option of taking the sequence AST 0031 – AST 0032 in sequential order, although AST 0032 can also be taken without taking AST 0031 first.

**Rationale.** This course was offered as a special topic course (AST 0016 – Special Topics: Galactic and Extragalactic Astrophysics) in the Spring of 2012, and again in the Fall 2014. The course fulfills the need of a course intended for students with a background in physics and/or astronomy and mathematics, and a strong interest in astronomy. In particular, this course is a required course for the undergraduate students majoring or minoring in astrophysics. This course is needed to strengthen the course offerings for the major in astrophysics. However, the course also serves as a science elective for students not majoring in astrophysics but who would prefer a more rigorous and physics based introduction to galactic and extragalactic astrophysics. The students who have taken the course in the past (in its special topic version) included physics, engineering, astrophysics and computer science majors. Prof. Sajina has taught AST 0032 in both the Spring 2012 and Fall 2014 semesters and there is no foreseeable change in the instructor of this course.

**Overlap.** AST 0032 does not conflict with other courses offered at Tufts. It complements AST 0031 (Stellar Astrophysics). Indeed, the course uses the same textbook (Carroll and Ostlie’s Introduction to Modern Astrophysics), but focus on different chapters therein. For astrophysics majors, the intended sequence is AST 0031 and then AST 0032, although AST 0032 can also be
taken without AST 0031. Several students have already taken the courses in reversed sequence.
Given the nature of the course, the only potential instructors are within the physics and
astronomy department, and have all been aware of these courses since their initial offering as
Special Topics courses.

**Resource Requirements/ Curricular Adjustments.** No new resources needed. The instructor
will be teaching the course, and he/she will also be responsible for grading and course
management.

**Requirements.** The course is part of the Astrophysics major core requirements. It also served to
fulfill science elective requirements for students majoring in related fields (especially physics
and engineering).

**ARB Review:**

*Distribution Credit Natural Sciences*

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**Item 10. NEW COURSE - Physics and Astronomy**

*From: Krzysztof Sliwa, 7-3332, kслиwa@tufts.edu*

*Department Chair: Roger Tobin, 7-5461, roger.tobin@tufts.edu*

**PHY 0062 Quantum Theory II**

**Bulletin Description:** Selected topics from: perturbation theory, EPR paradox, Bell's theorem,
applications of quantum theory to model solids, conductors, scattering theory, quantum
cryptography and computation. May be used to satisfy the concentration requirements for majors
and minors in the department of physics and astronomy. Prerequisites: Physics 0061—Quantum
Theory I.

**Next Anticipated Offering:** It should be taught on a regular basis in the Spring semester. First
instance will be given in Spring 2016.

**Rationale.** One semester is barely enough time to properly introduce students to the concepts
and rules of quantum mechanics, its formalism and interpretation, to solve the hydrogen atom
using Schrodinger equation, and to study angular momentum and spin. There is not enough time
to properly explain perturbative theory, EPR paradox, scattering theory, and to show applications
of quantum theory to solid state models, conductors et cetera. A second course must thus be
created, as in many physics department across the country. It has already been successfully
offered 3 times as a special topic, demanded by students.

**Overlap.** There is no conflict with other courses at Tufts as this is an upper level physics course
that can only be given in the physics department. All the potential instructors are in the physics
department, and are well aware of this course, as it was discussed in a faculty meeting.

**Resource Requirements/ Curricular Adjustments.** We should commit ourselves to teaching
two quantum theory courses each year. If we don’t do it, our students will be leaving Tufts with
only rudimentary knowledge of one of the most important fields of physics. This means devoting
one faculty to teach such a course every Spring semester. No graders or other resources will be
devoted to this course.

**Requirements.** This course is not a physics major requirement, but count toward the physics
major.

**ARB Review:**

*Distribution Credit Natural Sciences*
Item 11. NEW MAJOR - Undergraduate Second Major in Education

From: David Hammer, 7-2396, David.Hammer@tufts.edu

Department Chair: David Hammer, 7-2396, David.Hammer@tufts.edu

Rationale. This major proposal is submitted in response to the formal Tufts Community Union (TCU) request for a major, the growing interest among students in Education as a scholarly and professional field, and the shifting nature of teacher preparation nationwide.

First, on 2/17/14 the TCU passed the resolution of this request: “BE IT FURTHER RESOLVED THAT the TCU Senate requests that the Education Department take all the appropriate steps for the creation of an Education major such as designating the appropriate coursework and seeking approval from the requisite faculty committees.”

Second, the development of an Education minor and the expansion of Education courses across undergraduate programs such as American Studies, Peace and Justice Studies, and Women’s, Gender, and Sexuality Studies, has prompted increased interest in Education as a major area of study.

Third, there is persistent societal interest in education, with respect to curriculum (e.g. the “Common Core”) and teacher preparation (e.g. in recent proposed new regulations). An undergraduate major that prepares young people to engage in such issues with intellectual depth has the potential for great impact, including as graduates consider related careers as scholars, teachers, lawyers, policy makers, and so on. Further this major could provide a model for an undergraduate Education degree that is not attached to licensure or other professional features but focuses on scholarship.

Minimal impact on resources. The proposed major mostly assembles existing resources in the Department of Education and course offerings from other A&S Departments. The impact will be mainly in increased enrollments in existing courses and added (or shifted) advising loads. When and if undergraduate interest demands, we will seek out additional resources.

Major focus. The major proposed here reflects two broad foci of scholarly attention in Education. One concerns the study of institutions, systems, and ideologies; the other concerns the study of the processes and practices by which learners and teachers come to new understandings in particular disciplinary areas.

Education. Education is a constellation of practices, processes, and institutions situated at the nexus of social organization in the contemporary world. Therefore, the study of Education demands deep scholarly engagement with both the complex ongoing and historical systems of power that form society and the processes of thinking, learning, teaching, and assessment practiced across educational contexts. In that spirit, this major considers the ethical and material dimensions of schooling and teaching, the reproductive material and ideological functions in the relationship between school and society, the role of race, gender, class, and sexuality in the production of knowledge, and both the oppressive and liberatory potentials of teaching and learning.

At another level, the study of Education concerns learning, teaching, and assessment in the disciplines. The emergence of discipline-based education research, with the cognitive and learning sciences, is challenging long-held understandings of pedagogy. Research on learning academic disciplines (e.g. history, mathematics, etc.) has expanded notions of disciplinary “content” to include the disciplines’ respective epistemic values, aims, and practices.
Mathematicians, for example, are professional learners, and so learning mathematics means learning how to learn, and this recognition motivates reconsideration of curriculum and pedagogy. This major engages students in the study of the epistemological, socio-cognitive, and developmental features of teaching and learning within and across academic disciplines.

**Bulletin Description.** Education at Tufts is a 10-credit second major. Students will enter the major through a multi-disciplinary exploration of the scholarly field of Education, organized into five areas of study and required coursework. Education majors will select a concentration in one of two areas: Educational Studies or Teaching and Learning in the Disciplines. Majors must take at least three 100-level courses and undertake a capstone experience to complete the major. Majors may double-count up to three courses with another major, provided the double-counting requirements of the first major are the same.

**Teaching and Learning.** The study of Teaching and Learning is organized around explorations of student and teacher thinking, practice, and interaction. Scholarship in this concentration explores what it means to participate in the disciplines (e.g., science, history, mathematics, languages), how particular environments support learning, and the relationships and interactions between students and teachers in educational settings. For instance, Teaching and Learning students can examine how students in classrooms take up scientific and mathematical practices and dispositions. Others can explore how educational activities expand the ways students think about the humanities.

**Educational Studies.** Educational Studies focuses on the social and cultural foundations of education with particular attention to race, gender, sexuality, and other dimensions of societal organization. Scholarship in Educational Studies considers these dimensions in relation to an array of educational institutions and practices, such as: public schools; policies; pedagogies; and, political movements. Guided by critical theoretical study and drawing from disciplinary approaches in anthropology, history, philosophy, sociology, and law, students in this major explore places where knowledge is produced, structures that shape that knowledge production, and forces that have shaped education in the past and will continue to shape education in the future.

**Course Requirements.** All Education majors will take five (5) courses that fulfill the core requirements in the 5 areas of study. There are two courses, marked with an asterisk (*) that we will develop if the major is approved.

Core requirements:

1. **Introductory course:** An introductory course that familiarizes students with a range of the lines of inquiry that reach across areas of the field of Education:
   - ED 1 School and Society
   - ED 11 Observing Theory in Action
   - ED 62 Class, Race, Gender in the History of U.S. Education
   - ED 91 Food and Schools
   - ED 91 The Global Educator

1. **Literacy course:** A course aimed at considering the cultural, linguistic, and cognitive features of literacy:
   - CD 154 Development of Literacy
   - CD 155 The Young Child's Development of Language
   - ED 191 Foundations of Literacy
   - [course to be developed by new hire in Critical Literacy Studies]

1. **Teaching and Learning course:** A course focusing on the particular forms of knowledge,
practice, and thinking about teaching and learning within specific disciplines and multi-disciplinary fields. (Some courses presume or assign teaching experiences—e.g. tutoring, etc.—for a minimum of 3 hours/week):

- ED 10/13* Teaching and Learning in the Humanities and Social Sciences
- ED 111 Development of Knowledge and Reasoning in the Science Curriculum
- ED 112 Mathematics Learning Environments
- ED 114 Linguistic Approaches to Second Language Acquisition
- ED 116, 117 Interdisciplinary Elementary Curriculum
- ED 119 Development of Knowledge and Reasoning in Engineering
- ED 191 Art Education, A Global Perspective

1 Foundations course: A disciplinary course attending to the critical, theoretical questions of Education situated within the Educational Studies scholarship

- ED 160 Comparative Education
- ED 161 Sociology of the School
- ED 162 Race, Class, Gender and the History of US Education
- ED 163 Philosophies of Education

1 Development course: A course situated within scholarship on human development and learning

- ED 130 Human Development and Learning
- CD 51 Intellectual Development of the Young Child
- CD 82 Social Policy for Children and Families
- CD 151 Advanced Intellectual Development of the Young Child
- CD 152 Development of Thought and Language
- CD 153 Culture and Learning: Issues for Education

Concentrations

Teaching and Learning concentration requirements. 5 additional credits earned through coursework and the capstone experience. For this concentration, majors must take 3-4 courses distributed across the following areas:

Practices courses:

- 120 Practice of Teaching: History and Political Science/Political Philosophy
- 121 Practice of Teaching: Science
- 122 Practice of Teaching: Mathematics
- 123 Practice of Teaching: English
- 124 Practice of Teaching: Languages
- 125 Practice of Teaching: Latin and Classical Humanities
- 127 Practice of Teaching Elementary STEM
- 129 Practice of Teaching Engineering and Design
- ED 191 (COMP 150) Theories and Technologies for K12 CS Education

Research Methods courses:

Students planning to complete a capstone involving research (either a project or internship) must take at least one methods class:

- ED 191 Design based research
- ED 271 Methods for Educational Research (by permission only)
- SOC 101 Quantitative Research Methods
- SOC 102 Qualitative Research Methods
- CD 42 Introduction to Problems of Research: Methods and Design
- CD 142 Problems of Research: Methods and Design
CD 144 Qualitative and Ethnographic Methods in Applied Social Science Research

Electives: Students choose electives in consultation with their major advisor, such as from the following courses.

- ED 92: Prosocial Education for a Democratic Society
- ED 142 Education of the Exceptional Child
- ED 164 Education for Peace and Justice
- ED 182 Technological Tools for Learning
- ED 183 Grammar and Writing for Teachers
- ED 189 The Role of “Story” in Education
- COMP 150 (ED 191) Design of Collaborative Learning Environments
- ED 191 STEAM - A Primary Study of Color: an Artistic, Social, and Scientific Inquiry into Color
- ED 198: Step-Up Boston: field experience in Education: undergraduates: contexts for human development (fulfills Development requirement)
- PSY 121 Applying Cognition to Education
- PSY 139 Social Cognition

Capstone Experience. Students will select a capstone experience from among the options below. Students will enroll in an accompanying seminar.

- ED 193/194: Major Research Project in Education (1 credit)
  ED 195/196*: Senior Honors Thesis (2 credits)

Students may (1) conduct a study designed by the student and report the results in some venue (e.g., conference, article, etc.), (2) participate on a research project with faculty and pursue a particular line of inquiry within that project; (3) participate in a research study with a local educational institution or non-profit and report findings in some venue.

- ED 198/199: Field Studies in Education (1 credit)

Students may complete a field experience in a local school or educational setting. The details of the practicum will be discussed with the advisor and directions of school partnerships, placements, and teacher education.

- ED 105/106: Major Internship Experience (1 credit)

Students may participate in an internship with a local educational institution (e.g., museum, research and development non-profit, policy organization, etc.). This internship may focus on Education broadly, including policy, programming, curriculum development, and others.

Educational Studies Concentration requirements. 5 Additional credits earned in coursework and through the capstone experience. For this concentration, majors must take 3-4 courses distributed across the following areas:

Foundations courses:
- ED 160 Comparative Education (fulfills core requirement)
- ED 161 Sociology of the School (fulfills core requirement)
- ED 162 History (fulfills core requirement)
- ED 163 Philosophies (fulfills core requirement)

Theory courses:
- ED 167 Critical Race Theory
- ED 160 Comp Ed (Post-colonial theories) (fulfills core requirement)
- ED 191 Feminist Theories in Education
Electives: Students choose electives in consultation with their major advisor, such as from the following courses.

- AMER 180 African Americans in the Post-Civil Rights Era
- AMER 194 Race and Racialization in Native America
- ANTH 130 Anthropological Thought
- ANTH 169 Anthropology of the State: Subject, Citizen, Sovereignty
- CD 164 Cultural Diversity in Child and Family Services
- CD 177 Bilingual Children in U.S. Schools
- EC 124 State and Local Public Finance
- EC 127 Urban Economics
- EC 145 Economics of Higher Education
- ED 191 STEAM - A Primary Study of Color: an Artistic, Social, and Scientific Inquiry into Color
- ED 142 Education of the Exceptional Child
- ED 191 Radical Lesbian Thought
- ENG 191 Black Feminist Theories
- ENG 192 Fanon and Black Textual Revolution
- FAH 1 or 2 Introduction to World Art (I or II)
- HST 128 Civil Rights Movement
- HST 129 Black Political Thought in the Twentieth Century
- PH 125 Racism and Social Inequality
- PS 105 Constitutional Law
- PS 106 Racial and Ethnic Politics
- PS 118-06 Topics in American Politics: Community Organizing
- SOC 149 Sexuality and Society
- SOC 187 Immigrant Children & Children of Immigrants
- SOC 188 Racial Identity in Historical Perspective
- UEP 240 US Social Welfare Policy

Research Methods courses. Students undertaking a thesis or paper in their first major, but who are interested in focusing on some aspect of Educational Studies, are encouraged to take a research methods course, selected in collaboration with their Educational Studies advisor. This course can fulfill either the Elective or Advanced Seminar category, depending on the course.

- WGST 190 Doing Feminist Research
- SOC 102 Qualitative Research Methods
- ANTH 149 Ethnographic Methods
- CD 144 Qualitative and Ethnographic Methods in Applied Social Science Research

Capstone Experience. Educational Studies majors will take two advanced seminars, chosen from the following list. Through one of these seminars, students must establish a line of inquiry and conduct a research paper of at least 30 pages in length. This paper must demonstrate engagement with at least one theoretical framework and one area of educational research. The paper will be submitted as the final paper for the course and to the major advisor.

Advanced Seminar courses.

- ED 191 Pedagogies (course number pending)
- WGST 190 Doing Feminist Research (fulfills possible methods requirement)
- ED 167 Critical Race Theory
Part II

Item 12. CHANGE PROGRAM—Minor in Asian American Studies

From: Jean Wu, 72311, jean.wu@tufts.edu
Department Chair: Jean Wu, 72311, jean.wu@tufts.edu

Current Bulletin Description: Asian American Studies is an interdisciplinary academic field dedicated to the examination of the historical and contemporary experiences of Asian Americans, which includes the diasporic East Asian, Southeast Asian, South Asian, and Pacific Islander populations whose lives and labor shape and are shaped by the United States and the Americas. It applies the methods and perspectives of traditional academic disciplines, including but not limited to history, sociology, anthropology, education, psychology, and literature, to understanding the histories, communities, cultures, and experiences of Asian Americans. Asian American Studies was founded jointly with Black Studies and Ethnic Studies as a result of efforts for curricular transformation that were part of the national movements for racial and social justice of the 1960s and 1970s. Though the field has grown and expanded since it was initiated over four decades ago, it retains a focus on addressing social disparities in the U.S. and the world as they relate to Asian Americans. A minor in Asian American Studies provides a coherent program of study for students who wish to critically examine Asian American experiences and wish to develop a specialization in Asian American Studies alongside their degree pursuits.

The AAS minor requires six credits:

1. One introductory survey/foundation course on Asian American experiences with at least a third of its content on Asian American history
2. At least one course focused on race in which Asian American experiences are addressed in a U.S. sociopolitical context; these courses should include at least one major module/unit on Asian American histories, experiences, and/or cultures
3. At least one course with full focus on Asian American experiences beyond the foundation
4. Up to two elective courses that, while they may not have direct Asian American content, must address issues or topics relevant to the historical and/or contemporary experiences of Asian Americans. Examples of these types of topics include but are not limited to immigration, educational access, bilingualism, health disparities, labor relations, environmental justice, media representations, cultural resistance productions, comparative race and ethnic studies, etc. Students wishing to count these courses towards the minor in Asian American Studies must consult with the course instructor for permission to focus independent work (e.g., a paper) on an appropriate Asian American topic; all elective courses must be approved by the Asian American Studies Committee.
5. An integrative capstone course or project that focuses on an Asian American community. The capstone project must be approved by the AAS committee and may be fulfilled in one of three ways:
   a. A faculty-supervised internship in an Asian American organization or organization that significantly services Asian American communities. Students must produce a final paper
analyzing their experience.

b. A community-based research course in which the research focus is on an Asian American community.

c. An independent research paper or project on the Asian American experience with AAS faculty or other AAS-approved faculty advisor.

Minors in Asian American Studies may take up to two courses as independent study or as transfer courses from other institutions or that are counted towards a major or a foundation requirement. Courses with grades lower than C- will not be accepted towards the minor. Special note on Languages The minor does not require proficiency in Asian languages because the language of the field of Asian American Studies (i.e. the scholarly literature) is English. Moreover, we do not want to discourage students from other majors, especially students with pre-professional plans, from taking the minor because of a language requirement that would require them to add additional credits to their program of study. A student who decides to pursue proficiency in an Asian language may count one course at the advanced level (e.g., JPN 21, CHNS 21 or above, or equivalent in another Asian language) towards one of the elective courses in the minor. We also encourage students interested in strengthening their knowledge of one or more Asian languages to seek an internship or project as their capstone experience that will allow them to interact with newer immigrants, who will be less likely than more established Asian Americans to speak English. For more detailed information, please visit http://as.tufts.edu/asianStudies/minors.

New Description: Asian American Studies is an academic minor program in the Consortium of Studies in Race, Colonialism, and Diaspora. As an interdisciplinary academic field, Asian American Studies is dedicated to the examination of the historical and contemporary experiences of Asian Americans, which includes diasporic East Asian, Southeast Asian, South Asian, and Pacific Islander populations whose lives and labor shape and are shaped by the United States and the Americas. It applies the methods and perspectives of traditional academic disciplines, including but not limited to history, sociology, anthropology, education, psychology, and literature, to understanding the histories, communities, cultures, and experiences of Asian Americans. Asian American Studies was founded jointly with Black Studies and Ethnic Studies as a result of efforts for curricular transformation that were part of the national movements for racial and social justice of the 1960s and 1970s. Though the field has grown and expanded since it was initiated over four decades ago, it retains a focus on addressing social disparities in the U.S. and the world as they relate to Asian Americans. Sample courses include: Introduction to Asian America, Asian American History, Asian American Literature, Race in America, Politics of U.S. Immigration Policy, Bilingual Children in U.S. Schools, Race, Ethnicity, and Health A minor in Asian American Studies provides a coherent program of study for students who wish to critically examine Asian American experiences and wish to develop a specialization in Asian American Studies alongside their degree pursuits.

The AAS minor requires six credits:
1. One introductory survey/foundation course on Asian American experiences with at least a third of its content on Asian American history
2. At least one course focused on race in which Asian American experiences are addressed in a U.S. sociopolitical context; these courses should include at least one major module/unit on Asian American histories, experiences, and/or cultures
3. At least one course with full focus on Asian American experiences beyond the foundation
4. Up to two elective courses that, while they may not have direct Asian American content, must
address issues or topics relevant to the historical and/or contemporary experiences of Asian Americans. Examples of these types of topics include but are not limited to immigration, educational access, bilingualism, health disparities, labor relations, environmental justice, media representations, cultural resistance productions, comparative race and ethnic studies, etc. Students wishing to count these courses towards the minor in Asian American Studies must consult with the course instructor for permission to focus independent work (e.g., a paper) on an appropriate Asian American topic; all elective courses must be approved by the Asian American Studies Committee.

5. An integrative capstone course or project that focuses on an Asian American community. The capstone project must be approved by the AAS committee and may be fulfilled in one of three ways:
   a. A faculty-supervised internship in an Asian American organization or organization that significantly services Asian American communities. Students must produce a final paper analyzing their experience.
   b. A community-based research course in which the research focus is on an Asian American community.
   c. An independent research paper or project on the Asian American experience with AAS faculty or other AAS-approved faculty advisor.

Minors in Asian American Studies may take up to two courses as independent study or as transfer courses from other institutions or that are counted towards a major or a foundation requirement. Courses with grades lower than C- will not be accepted towards the minor. Special note on Languages The minor does not require proficiency in Asian languages because the language of the field of Asian American Studies (i.e. the scholarly literature) is English. Moreover, we do not want to discourage students from other majors, especially students with pre-professional plans, from taking the minor because of a language requirement that would require them to add additional credits to their program of study. A student who decides to pursue proficiency in an Asian language may count one course at the advanced level (e.g., JPN 21, CHNS 21 or above, or equivalent in another Asian language) towards one of the elective courses in the minor. We also encourage students interested in strengthening their knowledge of one or more Asian languages to seek an internship or project as their capstone experience that will allow them to interact with newer immigrants, who will be less likely than more established Asian Americans to speak English. For more detailed information, please visit http://as.tufts.edu/AsianAmericanStudies/

Rationale. When the minor was created it was housed in American Studies because it expanded the scope of the race and ethnic studies curricula in American Studies and made it most visible/accessible to interested students. With the creation of the new Consortium of Studies in Race, Colonialism, and Diaspora, affiliated faculty are embarked on a process of “norming” the minors in the consortium: Latino Studies Minor and Colonialism Minor, as is proposed Asian American Studies Minor. We are confident that the Asian American Studies minor will have increased visibility and access to students by its association with the RCD Consortium. Administrative support for the minor will be handled in the same way it currently is, by the program administrator for the RCD Consortium.

Overlap. There are no conflicts. The American Studies Program faculty, the Steering Committee for the Asian American Studies Minor, and the RCD consortium faculty fully support this proposed change.

Resource Requirements/ Curricular Adjustments. No additional resources or curricular
adjustments required.
Planning. No changes.
Chair Role Approval. Consultation

Item 13. COURSE CHANGE DESCRIPTION—Drama & Dance—DNC 0071
From: Renata Celichowska, 617.627.2555, renata.celichowska@tufts.edu
Department Chair: Heather Nathans, 617.627.2222, heather.nathans@tufts.edu
Current Number/Title: DNC 0071 Dance Movement & Creative Process
Current Bulletin Description: Vigorous non-level movement, group processes, and creative problem-solving, culminating in ensemble jamming. World dance videos provide a context for nonstylized materials. One-half or one course credit.
New Description: Explore the basic principles of movement: level, direction, speed, quality, rhythm, initiation. Learn to use unexpected sources to inspire movement. Safely experience close physical contact and learn how to take and give weight, how to lift and be lifted. Explore individual and group creative improvisational process. Includes diverse video viewings, readings, discussion and short written assignments on ideas as diverse as geography, cultural history, aesthetics, anthropology. 1.0 credit. .5 credit option.
Next Anticipated Offering: Spring 2016
Rationale. Because the course involves physical contact for new to dance students, we are finding that students need a better picture of what will be expected from them when they enter the class. The course might not be appropriate for students who are not prepared to work with students in improvisational movement exploration that involves close physical contact. The current description has caused some confusion regarding these issues.
Resource Requirements/ Curricular Adjustments. None.
Requirements. It is currently considered a core course for the Dance Minor and a gateway course for non-dancers.
Effects. We will be changing the Minor degree to make this course a requirement for fulfilling the Minor. It is currently considered a core course that fulfills the creative process requirement for the minor. But we are finding that it is really an entry level course for all minors.

Item 14. COURSE CHANGE DESCRIPTION—GRALL—HEB 0001
From: Hedda Harari-Spencer, 617-627-2069, hedda.harari_spencer@tufts.edu
Department Chair: Greg Carleton, 617-627-5962, Greg.Carleton@tufts.edu
Current Number/Title: HEB 0001 Elementary Hebrew
Current Bulletin Description: For students with no previous knowledge of Hebrew. Study of fundamental speech patterns. Listening comprehension and oral ability, using audiovisual method. Progressively greater emphasis placed on reading and writing skills. Fall Semester
New Description: For students with no previous knowledge of Hebrew. Learning the fundamental structures of Hebrew and its basic forms, as well as the necessary vocabulary for everyday conversations, reading and writing on a limited scale. Fall Semester
Next Anticipated Offering: Fall 2015
Rationale. The rationale for the course change is that it describes more accurately what we teach.

Effects. No change.

Item 15. COURSE CHANGE DESCRIPTION – GRALL—HEB 0002
From: Hedda Harari-Spencer, 617-627-2069, Hedda.Harari_Spencer@tufts.edu
Department Chair: Greg Carleton, 617-627-5962, Greg.Carleton@tufts.edu
Current Number/Title: HEB 0002 Elementary Hebrew

Current Bulletin Description: Study of fundamental speech patterns. Listening comprehension and oral ability, using audiovisual method. Progressively greater emphasis placed on reading and writing skills. Prerequisites: Hebrew 1 or equivalent. Spring Semester

New Description: Learning the fundamental structures of Hebrew and its basic forms, as well as the necessary vocabulary for everyday conversations, reading and writing on a limited scale. Prerequisites: Hebrew 1 or equivalent. Spring Semester

Next Anticipated Offering: Spring 2016

Rationale. The rationale for the course change is that it describes more accurately what we teach.

Effects. No change.

Item 16. COURSE CHANGE DESCRIPTION – GRALL—HEB 0003
From: Hedda Harari-Spencer, 617-627-2069, Hedda.Harari_Spencer@tufts.edu
Department Chair: Greg Carleton, 617-627-5962, Greg.Carleton@tufts.edu
Current Number/Title: HEB 0003 Intermediate Hebrew

New Number/Title: HEB 0005

Bulletin Description: Rapid oral review of structural principles. Written exercises. Reading and discussion based on selected materials from Hebrew literature. Conducted mainly in Hebrew. Prerequisites: Hebrew 2 or equivalent. Fall Semester

New Description: Broadens the grammatical structures and vocabulary studied in Hebrew 2. Reading and discussing articles from the press and scientific journals adapted into simplified Hebrew. Prerequisites: Hebrew 2 or equivalent. Fall Semester

Next Anticipated Offering: Fall 2015

Rationale. The rationale for the course change is that it describes more accurately what we teach.

Effects. No change.

Item 17. COURSE CHANGE DESCRIPTION – GRALL—HEB 0004
From: Hedda Harari-Spencer, 617-627-2069, Hedda.Harari_Spencer@tufts.edu
Department Chair: Greg Carleton, 617-627-5962, Greg.Carleton@tufts.edu
Current Number/Title: HEB 0004 Intermediate Hebrew

Current Bulletin Description: Rapid oral review of structural principles. Written exercises. Reading and discussion based on selected materials from Hebrew literature. Conducted mainly in Hebrew. Prerequisites: Hebrew 3 or equivalent. Fall Semester

New Description: Broadens the grammatical structures and vocabulary studied in Hebrew 3.
Reading and discussing articles from the press and scientific journals adapted into simplified Hebrew. Prerequisites: Hebrew 3 or equivalent. Spring Semester

Next Anticipated Offering: Spring 2016

Rationale. The rational for the course change is that it describes more accurately what we teach.

Effects. No change.

Item 18. COURSE CHANGE DESCRIPTION – GRALL—HEB 0021

From: Hedda Harari-Spencer, 617-627-2069, Hedda.Harari_Spencer@tufts.edu
Department Chair: Greg Carleton, 617-627-5962, Greg.Carleton@tufts.edu

Current Number/Title: HEB 0021 Conversation/Composition

Current Bulletin Description: Class conducted primarily in Hebrew. Readings will include contemporary Hebrew short stories and articles. Class discussions and compositions will be based on the literary texts, up-to-date news, and a selection of Israeli films. Prerequisites: Hebrew 4 or equivalent. Fall Semester

New Description: Reading and discussing adapted literary and scientific works as well as articles from the press. Becoming familiar with synonyms as well as expressions and idioms. Exposure to the Hebrew currently used in pop culture and everyday conversation. Focusing on the different verbal structures including exceptions to the rules, and becoming familiar with various syntactical structures. Prerequisites: Hebrew 4 or equivalent. Fall Semester

Next Anticipated Offering: Fall 2015

Rationale. The rational for the course change is that it describes more accurately what we teach.

Effects. No change.

Item 19. COURSE CHANGE DESCRIPTION – GRALL—HEB 0022

From: Hedda Harari-Spencer, 617-627-2069, Hedda.Harari_Spencer@tufts.edu
Department Chair: Greg Carleton, 617-627-5962, Greg.Carleton@tufts.edu

Current Number/Title: HEB 0022 Conversation/Composition

Current Bulletin Description: Continuation of Hebrew 21. The study of major works and problems of the twentieth century in Hebrew literature and in Jewish history. Readings will include works by Shahar, Liebrecht, Avnery, Levin, Hareven, and others. Discussions and compositions will follow the literary texts, films, and current events. Prerequisites: Hebrew 21 or equivalent. Spring Semester

New Description: Reading and discussing adapted literary and scientific works as well as articles from the press. Becoming familiar with synonyms as well as expressions and idioms. Exposure to the Hebrew currently used in pop culture and everyday conversation. Focusing on the different verbal structures including exceptions to the rules, and becoming familiar with various syntactical structures. Prerequisites: Hebrew 21 or equivalent. Spring Semester

Next Anticipated Offering: Spring 2016

Effects. No change.

Item 20. COURSE CHANGE DESCRIPTION – GRALL—HEB 0121
Current Number/Title: HEB 0121 Composition and Conversation

Current Bulletin Description: Class conducted primarily in Hebrew. Readings will include contemporary Hebrew short stories and articles. Class discussions and compositions will be based on the literary texts, up-to-date news, and a selection of Israeli films. Extra readings and written assignments. Prerequisites: Hebrew 22 or permission of instructor. Fall Semester

New Description: Reading and discussing unadapted literary and scientific texts. Focusing on controversial issues in the press. Expanding knowledge of synonyms. Watching films and TV series without subtitles. Substantially broaden the vocabulary. Prerequisites: Hebrew 22 or permission of instructor. Fall Semester

Next Anticipated Offering: Fall 2015

Rationale. The rational for the course change is that it describes more accurately what we teach.

Effects. No change.

Item 21. COURSE CHANGE DESCRIPTION – GRALL—HEB 0122

From: Hedda Harari-Spencer, 617-627-2069, Hedda.Harari_Spencer@tufts.edu
Department Chair: Greg Carleton, 617-627-5962, Greg.Carleton@tufts.edu

Current Number/Title: HEB 0122 Composition and Conversation

Current Bulletin Description: The study of major works and problems of the twentieth century in Hebrew literature and in Jewish history. Readings will include works by Shahar, Liebrecht, Avnery, Levin, Hareven, and others. Discussions and compositions will follow the literary texts, films, and current events. Extra readings and written assignments. Prerequisites: Hebrew 121 or permission of the instructor. Spring Semester

New Description: Reading and discussing unadapted literary and scientific texts. Focusing on controversial issues in the press. Expanding knowledge of synonyms. Watching films and TV series without subtitles. Substantially broaden the vocabulary. Prerequisites: Hebrew 121 or permission of the instructor. Spring Semester

Next Anticipated Offering: Spring 2016

Rationale. The rational for the course change is that it describes more accurately what we teach.

Effects. No change.
Item 22. COURSE CHANGE TITLE AND DESCRIPTION --Physics and Astronomy—PHY 0061
From: Krzysztof Sliwa, 7-3332, ksliwa@tufts.edu
Department Chair: Roger Tobin, 7-5461, roger.tobin@tufts.edu
Current Number/Title: PHY 0061 Quantum Theory
New Title: Quantum Theory I
Current Bulletin Description: Fundamental theoretical basis for quantum mechanics with selected applications. Wave-particle duality, Schrodinger wave equation, energy quantization in bound state problems, wave packets and scattering, quantization of angular momentum, spin, entangled states, Pauli exclusion principle. Other topics may include perturbation theory, atomic structure, Bell’s theorem, quantum cryptography and computation. Recommended: PHY 13 and MATH 51 (formerly MATH 38). MATH 70 (formerly MATH 46) or MATH 150 (cross-listed as ME 151) and at least one physics course more advanced than PHY 13 are desirable but not required.
New Description: Fundamental theoretical basis for quantum mechanics with selected applications. Wave-particle duality, Schrodinger wave equation, energy quantization in bound state problems, wave packets and scattering, quantization of angular momentum, spin, entangled states, Pauli exclusion principle. Recommended: PHY 13 and Linear Algebra (MATH 70). Differential Equations (MATH 51) or Applications of Advanced Calculus (MATH 151) and at least one physics course more advanced than PHY 13 are desirable but not required.
Next Anticipated Offering: Fall 2015
Rationale. We are creating a new course, Quantum Theory II, to follow the current Quantum Theory. We thus need to change the name of the current course to Quantum Theory I, to avoid ambiguities. In addition, in its current description, linear algebra (MATH 70), is suggested, but not required, while differential equation (MATH 51) is mandatory. From experience in teaching it, and following comments from multiple students, it became clear that MATH 70 should be required for Quantum Theory and MATH 51 only encouraged. Finally, we must remove from the current description what will be covered in Quantum Theory II. We thus want to change the description accordingly. This has no impact outside the department.
Effects. This change has no effect on other courses, nor on the place this course has within the physics major.
Item 23. COURSE CHANGE TITLE AND DESCRIPTION --Physics and Astronomy—PHY 0064  
From: Krzysztof Sliwa, 7-3332, kbsliwa@tufts.edu  
Department Chair: Roger Tobin, 7-5461, roger.tobin@tufts.edu  
Current Number/Title: PHY 0064 Experimental Modern Physics  
New Title: Advanced Experimental Physics  
Current Bulletin Description: An advanced laboratory course featuring six experiments performed at two-week intervals. Typical experiments are the Cavendish experiment, the Millikan oil-drop experiment, the Franck-Hertz experiment, the Compton effect, positron annihilation, and the muon lifetime. Recommended: PHY 13. 
New Description: An advanced laboratory course featuring six experiments performed at two-week intervals. Typical experiments are the Cavendish experiment, the Millikan oil-drop experiment, the Franck-Hertz experiment, the Compton effect, positron annihilation, and the muon lifetime. Intended primarily for juniors and seniors. Recommended: PHY 13.  
Next Anticipated Offering: Spring 2016  
Rationale. Too many students take this course early in their degree program (freshman or sophomore), while the course is intended more for junior and senior, in order to bring together what they learned in other classes. According to the students, the course title was suggesting to take this course directly after having taken PHY 13, which is an early course. Also, because it is one of the two mandatory courses required for a physics degree, students felt they have to take it earlier than later. This course can be taken earlier, but it is not necessarily in the interest of the students. To avoid that, a modification of the course title is proposed, and the description is modified to encourage students to wait for their junior or senior years to take this course. This change has no impact on any courses in the department or outside the physics department. Effects. This change has no effect on other courses, nor on the course place in the major.  

Item 24. COURSE CHANGE TITLE, NUMBER & DESCRIPTION - Physics and Astronomy—PHY 0082  
From: William Oliver, 7-5364, william.oliver@tufts.edu  
Department Chair: Roger Tobin, 7-5461, roger.tobin@tufts.edu  
Current Number & Title: PHY 0062 Particle Physics  
New Number & Title: PHY 0082 Nuclear and Particle Physics  
Current Bulletin Description: Nuclear properties, the deuteron, nuclear magnetic and electric moments, nuclear models, radioactivity, nuclear energy, fission and fusion processes; properties of the elementary particles; quarks and leptons. Recommended: PHY 13  
New Bulletin Description: Nuclear properties, the deuteron, nuclear magnetic and electric moments, nuclear models, radioactivity, nuclear energy, fission and fusion processes; properties of the elementary particles; quarks and leptons. Prerequisites: PHY 0013  
Next Anticipated Offering: Spring 2016  
Rationale. This course is already existing under the number PHY 0062 and entitled Particle Physics. However, we are creating a new course, Quantum Theory II, which will get the number PHY 0062, to match the physics courses numbering scheme (it is the second of the sequence PHY 0061 – PHY 0062). To adapt the particle physics course to the numbering scheme as well, we will use PHY 0082. We also want to introduce the word “nuclear” in the course title, because it reflects better the course content, as provided by the description in the bulletin. Finally, we
need to change this description to move PHY 0013 from being recommended, to being required.

**Overlap.** There is no overlap with other undergraduate courses at Tufts. The only department
that can offer such a high-level physics course is the physics department. This course does not
overlap with any other undergraduate course offered in the physics department. The changes
proposed above have been discussed in a departmental meeting, where all potential instructors
are present and have agreed on the changes.

**Resource Requirements/ Curricular Adjustments.** No new resources needed. The instructor
will be teaching the course and he/she will also be responsible for grading and course
management. This is not really a new course, just a renaming, renumbering and a small change
to the course description.

**Requirements.** This course is not a physics major requirement, but counts toward the physics
major.

**ARB Review:**

**Distribution Credit Natural Sciences**

**Item 25. CHANGE PROGRAM – Psychology—Cognitive and Brain Sciences Major**

*From: Sam Sommers, 7-5293, sam.sommers@tufts.edu*

*Department Chair: Lisa Shin, 7-2251, lisa.shin@tufts.edu*

**Bulletin Description:** This major consists 14 courses, including the following 6 requirements:

- Intro to Cognitive and Brain Sciences (PSY 9), Statistics (PSY 31 or CD 140), Experimental
  Psychology (PSY 32), Intro to Linguistics (Philosophy 16/Psychology 64), Intro to Computer
  Science (Computer Science 11), and Data Structures (Computer Science 15).

Three intermediate courses are required, one from each of the following groups:
- **Group A:** Psychology 11, 25, 26, 27, 28, 103, Child Development 51;
- **Group B:** Computer Science 131, 150BBR, 150MOD, 171;
- **Group C:** Philosophy 3, 33, 103, 191-02, Psychology 150, 151, 155.

Four advanced courses are required, drawn from at least two of the following groups:
- **Group 1:** Psychology 80, 103, 112, 117, 118, 122, 123, 124, 126, 127, 129, 131, 139, 140, 142,
  144, 145, 146, 148, 154;
- **Group 2:** Psychology 149, 150, 151, 152, 153, 155, 180, Child Development 152, 155, 156, 177,
  195, 243, Education 114;
- **Group 3:** Computer Science 86, 105, 131, 135, 150BRR, 150MOD, 170, 171;
- **Group 4:** Philosophy 38, 114, 117, 126, 132, 133, 134, 170, 191-02 (note that for all four groups,
courses may only be used if not counted as intermediate courses as described above).

Advanced research experience is also required. Three options are available, all of which
involve enrolling in Senior Seminar in Cognitive and Brain Sciences (Psychology 195).
Option 1 is a senior honors thesis in psychology, child development, computer science, or
philosophy.
Option 2 is a year- long research experience working with a faculty member from either
psychology, philosophy, child development, computer science, or the neuroscience department at
the medical school. Students pursuing this route will be required to present a final version of
their research during senior seminar.
Option 3 is a senior review paper of the literature in one of the areas listed above.

**New Description:** This major consists of 14 courses, including the following 8 requirements:

- Intro to Psychology (PSY 1), Intro to Cognitive and Brain Sciences (PSY 9), Statistics (PSY
  31 or CD 140), Experimental Psychology (PSY 32), Intro to Linguistics (Philosophy
16/Psychology 64), Intro to Computer Science (Computer Science 11), and Data Structures (Computer Science 15), Senior Seminar in Cognitive and Brain Sciences (PSY 195).

Three intermediate courses are required, one from each of the following groups:
Group A: Psychology 11, 25, 26, 27, 28, 103, Child Development 51;
Group B: Computer Science 131, 150BBR, 150CMCS (formerly 150MOD), 171;
Group C: Philosophy 3, 33 or 103, 191-02, Psychology 150, 151, 155.

Three advanced courses are required, drawn from at least two of the following groups (note that for all four groups, courses may only be used if not counted as intermediate courses as described above; only one course from the groups below may be independent study or directed research):
Group 1: Psychology 80, 91, 92, 103, 112, 117, 118, 122, 123, 124, 126, 127, 129, 131, 139, 140, 142, 144, 145, 146, 148, 154, 191, 192, 199;
Group 2: Psychology 149, 150, 151, 152, 153, 155, 180, Child Development 142, 152, 155, 156, 177, 195, 243, Education 114;
Group 3: Computer Science 86, 105, 131, 135, 150BBR, 150CMCS (formerly 150MOD), 171, 193, 194;
Group 4: Philosophy 38, 114, 117, 126, 132, 133, 134, 170, 191-02

Majors are encouraged to complete a senior research project which entails either (a) completing an honors thesis in Psychology, Child Development, Computer Science, or Philosophy; (b) completing a year-long research experience with a faculty member in one of these departments or with a faculty member in the Neuroscience Department of the Medical School; or (c) completing a faculty-supervised review paper of the literature on a particular issue within one of these areas.

Rationale. 1) The basis for the inclusion of PSY 1 as a required course is that a great deal of introductory-level psychology is needed for successful completion of PSY 9 and other required courses. Instructors of PSY 9 (and upper-level courses) have noted that students without PSY 1 (which was previously recommended but not required) often struggle given their lack of familiarity with basic concepts and approaches within the field of psychology. 2) These changes reflect new curricular additions in the different departments contributing to the major as well as updates to existing courses in those departments. 3) This senior research requirement has proven to be a challenge since the inception of the major. With steadily increasing numbers of students declaring the major, finding sufficient faculty supervisors for 25+ independent research projects and papers each year proves increasingly difficult. Moreover, there remains confusion as to what type of research experience does and not qualify for this requirement as written (i.e., working as a research assistant on an existing project versus creating a new, independent line of inquiry). The general psychology concentration does not require research from its majors--it encourages such experience, while requiring proficiency with research design and analysis by virtue of completing courses such as PSY 31 and 32. The current revisions will apply the same, still-high standards to CBS majors, while continuing to recommend independent research experience. Those students will plans for graduate study will still, no doubt, pursue such opportunities. Those with other career objectives may decide not to.

Overlap. N/A

Resource Requirements/ Curricular Adjustments. Slight increases to enrollment of PSY 1. If anything, change 3) above will reduce the currently untenable demand on faculty (mostly in Psychology) with regard to supervision of required senior research.

Planning. These changes have been approved by a vote of the faculty of Psychology and vetted
with department chairs and key stakeholders in the departments of Child Development, 
Computer Science, and Philosophy.

**Chair Role Approval.** The proposed changes have been approved by a vote of the faculty of 
Psychology and vetted with department chairs and key stakeholders in the departments of Child 
Development, Computer Science, and Philosophy.
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