Wartburg College Educational Policies Committee
REQUEST FOR NEW COURSES/COURSE CHANGES

SIGNATURE PAGE

Type of Request (Check one)

_XX__ **New course** including new special topics (NOTE: attach a course syllabus and statement of rationale. If this is an essential education course, please describe how it will meet the goals of essential education. Syllabus should contain the description, objectives, and requirements of the course, including the factors used to determine the final grade.)

_____ **Change in Existing Course** including course deletions (Complete items on both the right and the left hand columns)

_____ **Program Change**

Course Identification (Prefix/Number)
NSC 461

Course Title (35 character limit)
Neuroscience Seminar

Recommendation

Samantha Lorraine Bousquet			11/13/15
Submitted By			Date
	X		11/13/2015
Department Chair	Yes	No	Date
Writing Across the Curriculum Coor.	Yes	No	Date
IS 201/DAC Coordinator	Yes	No	Date
Global Multicultural Committee	Yes	No	Date
General Education Committee	Yes	No	Date

Approval

EPC Chair	Yes	No	Date
Dean of the Faculty	Yes	No	Date

____ EPC recommends this request be reviewed by Faculty Council for Resource Implications

EPC # 24 Page _____ Gen Ed # 9 Page _____

EPC Form 2008-2009
Vice President for Academic Affairs and Dean of the Faculty
Educational Policies Committee

For Existing Courses **Please complete this column with current information AND enter changes in the right hand column.**	**For New Course Information or Changes to existing courses** **Please complete this column**
Course Identification (Prefix/Number)	**Course Identification** (Prefix/Number) NSC 461
Course Title	**Course Title** (35 character limit) Neuroscience Seminar
Abbreviated Title	**Abbreviated Title** (15 character limit)
Course Description	**Course Description** (35 word limit) Weekly seminar sequence exploring the historical roots of neuroscience and future directions. Ethical implications of the field will also be explored. P/D/F only. **Essential Ed Requirement:** Capstone. **Prerequisite(s):** Third- or fourth-year standing.
Course Credit	**Course Credit** 0.5
Classroom Hours per term for lab or studio class	**Classroom Hours per term for lab or studio class** Once per week (1 h, 40 min) all semester
Prerequisite/corequisite requirements	**Prerequisite/corequisite requirements** Neuroscience major in junior or senior year, NSC 335 or instructor permission
Enrollment Cap	**Enrollment Cap** 18
Terms Offered and rotation	**Terms Offered and rotation** Winter every year
Grading (A-F or P-D-F)	**Grading (A-F or P-D-F)** P, D, F
Wartburg Plan	**Wartburg Plan** **___X__Yes _____ No** **Identify which part of the plan:** Capstone
Cultural Immersion Course	**Cultural Immersion Course** **_____Yes ___X___ No**

Program Status (Major requirement, minor requirements, program elective, degree elective)	**Program Status** __X_ Major requirement_(Neuroscience)___ _____Minor requirement_____ _____Major elective _____ _____Minor elective_____ _____General elective _____
	Effective Dates (Term/Year) Fall 2016

1. **Reason for Requested Change**:

When the new neuroscience major was approved (winter 2013), it had no resource implications, as we managed to craft it from courses that already existed on campus. There are two courses that we debated creating, but we didn't know what kind of demand there would be for the major and we didn't want to create courses that weren't good stewards of the college's resources. There are now 10-15 majors per class year, making it the 10th largest major on campus. Thus, we believe we have student numbers to fully support the two new courses. This change is for one of those two courses.

Currently the capstone requirement for neuroscience majors is to take either the psychology capstone or the biology capstone. However, it became clear during our assessment process this past year that ethics and an understanding of the challenges that will be presented to neuroscientists over the next few decades do not get adequate classroom exposure. A capstone is the appropriate place for such topics. (There are only two courses in the major dedicated to neuroscience topics – NSC 135 [see second proposal for more info on that] and NSC 335. The limited opportunities for neuroscience content make it ill-advised for us to pull content from those courses to make more space for ethics.)

10-15 neuroscience majors per year justify an annual meeting of a senior seminar course.

2. **In an effort to keep the curriculum as lean and effective as possible, EPC requests that with each new course departments evaluate current offerings. If proposing a new course, what course(s) could be deleted?**

Currently neuroscience majors choose between the biology capstone or the psychology capstone. Now, they would take this course instead, so the size of the major for students will not change. (All three courses are 0.5 credits.) For students double majoring with neuroscience and either biology or psychology, it will add one more half credit course to their schedules. However, students who are double majoring shouldn't expect to necessarily be able to double dip; any overlap is just a bonus (to the extent that less academic exposure is a bonus).

3. **Resource Implications:** IF THIS IS A NEW COURSE, you must provide a list of teaching assignments in the department to demonstrate that no adjunct faculty are required to teach this course. You may also submit a request to delete a course. New courses will not be considered without a clear understanding of faculty resources necessary to offer the course.

This course would be an additional offering in the biology department. The majority of neuroscience majors took the biology capstone, and thus NSC 461 will help shrink the number of students in the biology capstone course (taking it, on average, from 36 students/semester to 30 students). However, fewer students in the course won't affect faculty teaching loads as the course is currently structured. (Biology may be turning in a proposal to alter the structure of the course; in that situation, pulling students out for NSC 461 may indeed decrease slots necessary for BI 461.)

However, the biology department feels that it is important to have a capstone experience for our new major, and this course would be the only course that was added for the neuroscience major to exist. (The other proposal appears to create a new class, but it is essentially shifting spots for non-majors from one course to another, and thus we don't see it as an additional load for the department.) An additional course of 0.5 credits seems a small price to pay for a new major that is bringing in as many students as the neuroscience major is. (It is obviously hard to quantify how many neuroscience majors would have come to Wartburg if the major hadn't existed, but anecdotal evidence from some students suggests that the existence of the major was the primary reason some students originally added Wartburg to their list and/or made their final decision to attend. There are currently 46 neuroscience majors.)

NSC 461: Neuroscience Seminar

Course timing: Tuesday, 7:45 (all winter semester)
Instructor: Dr. Samantha Larimer Bousquet
Office Hours:
Email: Samantha.Larimer@wartburg.edu

Student Learning Outcomes

1) Students will understand what ethical issues arise in the study of neuroscience and how the field currently handles these ethical concerns.
2) Students will develop tools for considering your own ethical stance on neuroscience issues.
3) Students will advance oral literacy and confidence.
4) Students will improve their ability to critically evaluate scientific literature.

Academic integrity

Honor code: As a matter of personal commitment, students, faculty, and staff of Wartburg College are expected to demonstrate four simple principles: 1) All work submitted be your own. 2) When using the work or ideas of others, including fellow students, give full credit through accurate citations. 3) Maintain academic honesty both on examinations and class assignments. 4) If you are uncertain about the ground rules on a particular assignment, ask for clarification. All are responsible for abiding by these guidelines and opposing academic dishonesty by reporting any act that goes against these guidelines.

In this course: Traditional issues with academic integrity (cheating on tests, plagiarizing papers) are unlikely to arise in this course. Untrue statements are the most likely ethical temptation. Admitting that you don't know something is far better than making something up that is not true, just to have an answer. Be very clear on what you know from a source and what you are suggesting on your own. In this class you will be responsible for teaching your classmates; they rely on your honesty for their accurate understanding of the topic.

Students Needing Special Accommodations

Students Needing Special Accommodations Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, and the ADA Amendment Act of 2008 provides protection from illegal discrimination for qualified individuals with disabilities. Students requesting academic accommodations due to disabilities must arrange for such accommodations by contacting Kelly Beck, Pathways Academic Success Associate. She can be reached at the Pathways Office, (319) 352-8230 or by e-mail kelly.beck@wartburg.edu. Accommodations should be requested PRIOR to affected assignment due dates. Accommodations cannot be made retroactively.

Evaluation in course

Participation in class discussions	150	≥ 245 pts	P
Reflective papers	50	210 - 244 pts	D
Large presentation assignment	150	≤ 209 pts	F

Note: There may be quizzes to ensure that you are coming to class prepared to participate and that you are appropriately engaging with (learning from) the material while in class. Quiz points will be part of your participation points, as their goal is to ensure participation.

Commented [SL1]: EPC: These would be both over aspects of their Wartburg career as they head out into the world and over neuroscience ethics topics.

Format of the course

This class is primarily discussion based. Class periods will be divided into two "halves". Each half will be led by either a pair of students or by the professor, depending on the week.

Neuroethics (60 min) – You will prepare for each class period by reading something and possibly answering some thought questions or looking into some additional information on your own. In class, we'll delve deeper into the topic. Depending on the class period, I or a classmate of yours will lead the classroom discussion.

Current findings (40 min) – You will prepare for each class period by reading a primary journal article describing some new finding in neuroscience. We will discuss the article, learning appropriate background and tools as necessary. Critique of the article and putting the article in context (past findings and future possibilities) will be a part of these discussions.

Schedule

Week 1:
Logistics of the course
Brainstorming and personal rankings of ethical concerns in neuroscience
Comparing neuroethics to ethics in other disciplines: what challenges are unique vs universal?

Week 2:
Topic (and partner, if applicable) due
Discussion of the Trolley Problem and how to think about ethical decisions

Weeks 3-13:
The schedule for these class periods will be determined after topics have been assigned.

Commented [SL2]: EPC: My plan is to have 1-2 neuroethics readings per week, either ones I've chosen or as assigned from students (and 1 current journal article on a neuroscience finding, not further described below). There currently aren't any popular press books that I like on the topic, but new ones are coming out every year. If a good one comes out in the next year, I'll assign that as part of the readings. Otherwise, sources of readings will include selections from the below sources. Representative topics are in the assignment below. (I don't want to declare specific readings at this point, as my plan would be to have as current of ones as possible.):

Chapters from various ethics/neuroscience books.

Journal articles from:
American Journal of Bioethics Neuroscience
Neuroethics
Journal of Ethics in Mental Health
Trends in Cognitive Sciences

Articles from various websites:
Dana Foundation
The Oxford Center for Neuroethics
Brain Ethics
International Neuroethics Society
NeuLaw
The Neuroethics Blog (Emory University)
Center for Neuroscience and Society (U. Penn)

Commented [SL3]: EPC: Some of these will be class periods run by students, some will be run by me, depending on the number of students in the course. I would do at least the first few to show them how it is done.

Large Presentation Assignment

You will work with a partner of your choosing and be responsible for one hour of the class period. Your goal is to do what I do most other class periods. In short, you are responsible for finding a reading assignment for your classmates to read beforehand (aim for something that will take them 1-2 hours) and then leading them through engagement with that topic in class. Below are some examples of ethical issues. Some of them might be fine as a topic as they're written. However, you should feel free to craft your own idea using the ideas below for inspiration. At the start of the second week of class you will claim a topic so that I can fill in other topics that students won't cover and we can craft a schedule for the rest of the semester.

In preparing for your presentation, you want to become familiar with what is currently being done, what new things are on the horizon, and what others are talking about concerning the ethics surrounding the topic. Depending on your topic, there may be more information available in some areas than others. If you're concerned whether you're fully considering the topic, talk to me about what you have found or not found.

Note: You are NOT to choose a topic you've researched already for another class. This course is your opportunity to learn new material. If you've researched a similar topic before and would like to expand on it, please consult with the instructor first to make sure that your extension is adequately unique from your original topic.

<u>Pieces of this assignment are listed below, followed by their deadline:</u>
Claim a topic – 2nd week of class
Reading for your classmates – 1 week before you present
Meeting with me to go over your plan – at least 3 days before you present
Your presentation in class – day of presentation
A bibliography of sources used in preparation – day of presentation
A reflection of how the presentation went and how you would differently prep in the future – 1 week after you present

<u>Some possible topics:</u>
Learning and memory
- How should we structure the classroom for optimal learning?
- Memory erasing or altering procedures: current status, advantages and disadvantages
- Cognitive enhancement (genetic, implants of tissue or electronics, drugs) in healthy populations
- Cognitive enhancement (genetic, implants of tissue or electronics, drugs) in aging populations

Medical implications
- Understanding of consciousness/pain and how it influences end of life and quality of life decisions
- Understanding of consciousness/pain and how it influences abortion
- Where is the line between what we can do and what we should do medically?
- When do we know enough? (US permissions can be slow, causing people to travel abroad for procedures that have not been satisfactorily been tested)
- How do we test medications on populations with neurodisorders that prevent consent?

Mental health
- How do treatments alter who one really is? Is that ok or even good?
- What benefits and drawbacks are there to understanding the underlying biology?
- What about modern society is leading to ill mental health?

Legal implications
- Understanding of mental health and thus how it should or should not count as a defense
- How does understanding sexuality (and related issues) influence policies (or public opinion)?
- Brain imaging as a lie detector or mind reading device in court cases
- Determining sentences based on genetic predispositions or biochemistry
- What information do private citizens have the right to keep private?

Commercial implications
- What are the advantages and drawbacks of "mind reading" in sales and marketing?

Stem cells

The nature of humanity
- If we are biologically pre-disposed to something (like violence or a specific personality), how does that influence societal rules or treatment of those that break them? How does knowing help determine what you actually become?
- Is there free will? (What does it mean, and why do we care?)
- As artificial intelligence in machines improves, how do we distinguish what it means to be human?
- How do interactions change if you know more about the individual you're interacting with? (Do you really want to know if your spouse always loves you?)

Accessibility
- Will cost of any of the above set up bigger disparities between the have and have nots?

Animal ethics
- How understanding pain and consciousness could change our views on animal research
- What rules are already in place, and what are the advantages and disadvantages of these rules?

Creative alternatives to consider for your class period(s):

Debate: Split classmates into two groups that each get different readings and then structure the class period as a debate that you moderate. You're still expected to be the expert in this case, and you should expect to be able to address questions that come up from students, but you're ensuring that there will be support from the class for both sides of the issue.

Fiction: Science Fiction and bioethics have a lot of overlap. If there are appropriate fiction examples for your classmates to consider that will lead to very meaningful conversations, those may be appropriate for assigning. There may be interesting options for you to create relevant science fiction for part of this assignment (check with me on ideas). You may want to have students imagine alternate realities or project into the future under various paradigms.

Public opinion polls: Ethics lend themselves well to "what do you think" kinds of situations. You may choose to collect information from people before coming to class, or you may consider using something like the Clickers to anonymously collect information from your classmates during the class period. (If you think the questions you're asking could potentially be something that you shouldn't be asking, please first check with me to help you evaluate the ethics of asking them.)

You will be graded in large part on how effectively the class engages with and learns the material. I encourage you to be creative, but always ask yourself if it is worth spending the time that the innovative activity takes. Video clips can be used well or poorly, for instance, as may various games or activities. As a professor, I always ask myself what I hope a given class activity will accomplish and whether or not it is a respectful use of my students' time; I recommend that you do the same.