Clear Form

Washington University in St. Louis
Arts & Sciences

# Applied Numeracy Proposal Form

Department / Program: Date:

Contact Name: Email Address:

## Proposed Applied Numeracy Course:

| Dept (L#) | Course # | Title | Last Offered | Frequency |
|---|---|---|---|---|
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Applied Numeracy Guidelines:

Numeracy is the ability to use numbers and numerical analysis in connection with problems involving statistical analyses, judgments of probability, and evaluations of quantifiable evidential support. AN courses include those using real-world applications of numerical relationships and those that employ mathematical modeling of natural and social phenomena.

There could be many possible courses, including ones that deal to a significant extent with:

i. Organizing data and using it for evidence or to gain new insights. This would involve using many different tools (such as tables, graphs, formulas) to represent data clearly, to summarize features of the data (measures of central tendency and dispersion in data), to test hypotheses, make forecasts, and to recognize the limitations and possible abuses of the methods.

ii. Working with mathematical models, either discrete or continuous, to describe real world phenomena and to make predictions, and to recognize the limits and possible abuses of the methods. For specific examples, see the end of this form.

**PLEASE RESPOND TO THE QUESTIONS BELOW. ATTACH TO THIS PROPOSAL FORM A COMPLETE SYLLABUS AND A FEW SPECIFIC PROBLEMS OR ASSIGNMENTS OF THE TYPE AND LEVEL OF DIFFICULTY APPROPRIATE FOR THIS COURSE.**

What portion of the course will be devoted specifically to teaching elements of Applied Numeracy?

Which elements of numeracy are the students in this course expected to master?

List the types of majors for which this might be an appropriate AN course?

What prerequisites, mathematical (algebra, trigonometry, calculus) or other, are required and/or recommended?

**Additional notes**:
Use this area to describe any other information about the course that might be helpful to students and advisors.

Approximately how many students can you accommodate in this course per year?

Examples of courses that might be used to fulfill this requirement, ideally at the 100- or 200-level, include:

- A game theory course in economics or political science, perhaps a freshman seminar
- A course on personal finance in mathematics or economics
- A course in the history department on immigration history that employs a statistical methodology
- A seminar akin to *Godel, Escher, Bach* (Hofstadter)
- A biology course that deals with populations and extinctions in a quantitative fashion
- An anthropology course that examines statistical evidence in instances drawn from case studies in the field of public health
- A course on energy: how much we use; where it comes from; environmental costs; etc.
- An applied math course in networks and networking from a statistical viewpoint
- The history of baseball by the numbers, a chapter of US social history
- "Numeracy 1": an across-the-board parallel to Writing 1 specifically designed to address this requirement and taught in small sections of 12-14 students

Department Chair or Program Director Signature

Date

**Please attach a syllabus that makes clear to the student what you expect them to know and be able to do by the end of the semester, as well as the ways in which the student will demonstrate their acquired knowledge or skills. Include at a minimum:**

1. a substantial course description.
2. a schedule of topics, assigned readings, and graded assignments (homework, quizzes, presentations, papers, exams, etc.)
3. criteria for evaluating student work, including evaluation of class participation (if applicable)
4. how the final grade will be calculated

**Please do not submit paper copies. Email the completed pdf, along with the syllabus to Bernard Cummings at bcummings@wustl.edu.**