

## Independent Study Course

# Neuromorphic Chip Design

Summer and Fall 2005

**Description:** Students will get the opportunity to design, fabricate, and test a neuromorphic circuit (similar to those on the classchip). This independent study course will be offered in the fall but the design will begin in the summer, as chips must be submitted for fabrication 10 weeks in advance. *The time-table is as follows:*

May 16<sup>th</sup> to July 5<sup>th</sup> 2005: Design, simulate and layout circuits. Submit for fabrication.  
Sept 19<sup>th</sup> to October 17<sup>th</sup> 2005: Test circuits and write report.

**Prerequisites:** BE526 *Neuromorphing*.

**Instructor:** Kwabena Boahen, Bioengineering Dept ([boahen@seas.upenn.edu](mailto:boahen@seas.upenn.edu)).

**Website:** [www.neuroengineering.upenn.edu/curriculum/be526.htm](http://www.neuroengineering.upenn.edu/curriculum/be526.htm)

**Tools:** Chips will be designed using *Tanner tools*.

**Grading:** Based on final report.

**Target Audience:** This course is intended for students who have taken BE526 and wish to learn how to design neuromorphic chips or to try out their own circuit designs.

Revised 1/7/05