Timothy Hickey
    Computer Science

    Affiliations
        Film, Television and Interactive Media
        Volen National Center for Complex Systems

Instructional Activities

Term	Course Number	Course Description	Enrollment
Summer 2012	COSI 293G 2	MASTERS RESEARCH INTERNSHIP	1
Summer 2012	COSI 154AJ 1	JBS INCUBATOR	11
Summer 2012	COSI 293A 1	GRADUATE RESEARCH INTERNSHIP	1
Summer 2012	COSI 152BJ 1	WEB APP DEV SOCIAL NETWORKS	11
Summer 2012	COSI 210A 1	INDEPENDENT STUDY	1
Summer 2012	COSI 152AJ 1	WEB APPLICATION PROGRAMMING	11
Fall 2012	COSI 89AJ 1	RESEARCH INTERNSHIP	1
Fall 2012	COSI 400D 1	DISSERTATION RESEARCH	1
Fall 2012	COSI 98AJ 1	INDEPENDENT STUDY	1
Spring 2013	COSI 400D 1	DISSERTATION RESEARCH	1
Spring 2013	COSI 12B 1	ADV. PROGRAMMING TECHNIQUES	107
Spring 2013	COSI 98B 1	INDEPENDENT STUDY	1
Spring 2013	TYP 6A 1	TYP: COMPUTER SCIENCE	18

Teaching innovations:

I developed a new approach to teaching 3D Game Design based on the notion of teaching
concepts with GameKits where each GameKit si a full game together with a series of
exercises involving modification of one particular part of the gamekit. I've posted many
of these online and published a paper about this approach and I've used the GameKit
approach in two classes this Spring - a TYP class at Brandeis and a High School class
taught with students from four Boston Public Schools.

Reading courses, theses, dissertations, research projects (undergraduate and graduate):

I have one graduate students that is starting his dissertation work William Tarimo
studying computer assisted teaching tools for gauging student's affect during large
lectures.

I directed one student's independent study course where he is developing at a new Internet
application for teaching English as a second language to elementary and middle school age
kids. He will be testing his tool at a summer program in India this summer.

**Advising and Mentoring (undergraduate advisees, graduate advisees, teaching fellows, other
interactions, office hours):**

        Undergraduate Students: 19   **Graduate Students:** 1

I have been supervising one teaching fellow, William Tarimo, who has been developing a
tool for use in my large lecture class. The tool allows students to indicate (using a
google form) whether they are bored, confused, or engaged and to give a comment. The
students response over the past five minutes is displayed in a pie chart that I post in
the corner of the screen as I'm lecturing. I screen record the lectures and this allows
me to see in real time where students are bored or confused and also to review the class
to think about ways to improve the presentation in the future. We're planning on running
an experiment next Fall in my 3D Animation class.

My office hours are Thursday 2:30-4:00 and Friday 10:00-11:30.

Scholarship

Conference Proceedings

Hickey, Timothy J and Salas, Pito. <u>The Entrepreneur's Bootcamp: A New Model For Teaching Web /Mobile Development and Software Entrepreneurship</u>. Proc. of ", The 44th ACM Technical Symposium on Computer Science Education, SIGCSE'13</U>. Denver, Colorado, USA: ACM, 2013.

Journal Article(s)

Hickey, Timothy J. "Physics-based 3D Game Design as a First Course in Computing." <u>the Journal of Computing Sciences in Colleges</u> 28. 8 (2013): 35-41.

Ongoing Work
I have several ongoing projects:

 * I'm working on a Journal paper on Collaborative Editing which should be completed this summer.

 * I'm also beginning a new project studying software tools that can help teachers during a large lecture class

 * I'm developing new approaches for teaching Computer Science and Entrepreneurship

    based on 3D Game Design and Mobile App Development. The goal is to find an inexpensive approach

    that can be effective in providing opportunities for students from low-income neighborhoods

Service

Interdepartmental Programs

From: 01/01/2007   Through:08/30/2012 Member

Other

  Flim Studies Faculty Committee

University Activity

From: 09/01/2009   Through:08/31/2012 Member

Faculty Senate

From: 09/01/2011   Through:12/31/2012 Member

Other

  Strategic Planning Steering Committee

From: 09/01/2009   Through:06/01/2012 Member

Other

  Faculty Development Committee

From: 09/01/2010   Through:08/31/2012 Chair

Faculty Senate

  I have been chair of the Faculty Senate for two years

From: 09/01/2010   Through: 08/31/2012   Member

University Advisory Council

  I serve on the UAC due to my position as chair of the Faculty Senate

From: 07/01/2006   Through: 06/30/2012   Member

Library and Technology Advisory Committee

From: 09/01/2009   Through: 08/31/2012   Member

Faculty Senate Council

  As chair of the Senate, I'm automatically on the Senate Council

Other Service
  I helped moderate one of the sessions in Jordan Pollack's Cosi Alumni Recognition Day
  event last Fall.
  I helped organize the Cosi Alumni get together last June during the reunion (and we're
  organizing it again this June).

  I've been working with the Office of High School Programs at Brandeis to develop a High
  School Summer Camp in 3D Game Design and we will be running it this summer. We have 12
  students who have enrolled and put down a deposit and 6 or so that may yet join. This is
  part of a big effort I'm undertaking to create a new pathway into Computer Science through
  3D Game Design and/or Entrepreneurship.

Grant Activity

Grant Proposals

  Title: BP: 3D Game Design Pipelines into Computer Science

  Role: Principal Investigator   **Sponsor:** NSF

  Total Cost: $ 596,478   **Start Date:** 01/01/2013 **End Date:** 12/31/2015

  Grant Awards

Honors and Awards

Title	From		Thru
the Jeanette Lerman-Neubauer '69 and Joseph Neubauer Prize for Excellence in Teaching and	April	2012	

Intellectual Property

Intellectual Propery

Professional Activities Outside the University

Professional activities (delegate, invited presenter, organizer, moderator, etc. at academic conferences, lectures, speeches and presentations) given outside the university.
I organized the 5th Annual New England Undergraduate Computing Symposium, but it had to be cancelled because of the Marathon Bombing lockdown the day before ....

I gave a talk at the CUNY Graduate Center in November 2012.

Editorial work, reviews of publications, and membership on selection committees for national fellowship and grant programs

Society memberships
Association for Computing Machinery

Work Outside the University

Courses taught at other institutions.
I taught a 3D Game Design course for inner city High School students using computer lab space donated by the BU Computer Science Department. This is part of my effort to develop a new approach to providing opportunities for students from low income neighborhoods to discover computer science. This was not a paid position, I think of it as part of a research project.

Employment and/or consultant arrangements

Management of fiduciary activities in which you have a role as an officer, director, trustee, supervisor, or founder with respect to any corporation, organization, or group

Intellectual property which has been developed by you outside of Brandeis University

Other

Additional Comments

Over the past few years I've started to change my research focus to Computer Supported Education and Computer Science Education. I'm interested in studying the effectiveness of new tools such as MOOCS as well as new ways of developing technology for use in traditional classrooms. I'm also interested in exploring the feasibility and effectiveness of combining Computer Science Education with Entrepreneurship as a method of creating a new pipeline into Computer Science.