**Appcology: New Commerce Infrastructure Systems (NCIS)**

**Design of mobile apps; Internet of Things/M2M, 3D Printing**

The course deals with the ecology and design of apps in the mobile commerce infrastructure. The course is heavily project oriented involving development.

NCIS has three main levels of focus:

**One third** of the class is focused on the design and implementation of apps in mobile edge devices (smartphones and tablets).

**One third** of the class is focused on the growing systems and networks of devices that communicate. As of 2005, the race for growth in humans versus machines on the internet was lost forever as devices on the internet exploded. Though there are almost 2 Billion people on the internet, there will be forever more “things” than people communicating. The rise of sensors that see/hear/feel and that now are ever more able to remember, communicate, analyze is an astounding trend. For the next 5-10 years, this will be a battleground of commerce. So the second third of the weight of the course is about the internet-of-things, machine-to-machine communications and dealing with “smarter” devices in commerce practice.

**Then what is the third-third of the course?**

The third aspect of the course is exploration of the new commerce environments for “rendering” and fabrication and implications to market practice. This ranges from 3D printers that completely disrupt production and supply chains to the production of eBooks and distribution of digital content. This means the creation of both physical and digital assets. Here there are new forms of intermediation, disintermediation that significantly reduce the numbers of players in a market. So, eBooks and 3d printing are metaphors for new markets of the future. These discussions go way beyond current capabilities and implications for commerce.

**What do you mean when you say that the course is a workshop-oriented course?**

This means that:
- The course is a “flip” course – much of the work is project-oriented
- Students leave with a portfolio, not just a certificate
- They are able to identify skills and accomplishments in these tech environments
- Class sessions are focused on skills, references and status/learnings reports
- Outside speakers and presenters present in each session
- Work product of the term lies in project presentations
- In the end we hold a “venture voting” with angels, VCs and developers evaluating their plans and products

Then, what are the projects for students in workshop mode?

You will design and build demonstrable app ecosystems, systems involving multiple devices and publish a small book or produce a 3D object from scratch. Some will do a macro project that demonstrates all three elements – apps, devices and publication. The option is yours to work on separate projects in each of the three “sandboxes.” The key is to “achieve” in each of these exciting and important domains.

What are some examples of the kinds of guests?

We have guests that represent all three domains. We have an app developer who has developed, on her own, dozens of apps, some that have reached the top downloaded apps. Several “living cases” of app projects that are in development stages. We have an author of mystery books come in on Skype from Florida talking about her experiences in the print world and the eBook arenas. A physician who deals with technology innovations in medical practice. Designers of machine-to-machine communications. An inventor of sensor devices that analyze and communicate device conditions. The presenters range from experienced entrepreneurs to startups that are seeking feedback and critique.