

Services Science at UC Berkeley

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History of SSME at UC Berkeley

Several faculty members from different schools have been "service scientists" for many years without knowing it

Starting in 2004, some "nudging" by IBM -- invitations to workshops, faculty \$ awards -- brought us together to contemplate some coordinated SSME effort

In 2005 we met occasionally, read each others' work, attended each others' courses

In 2006 we got more serious about developing new courses and the university hired an Executive Director for SSME

The first SSME course developed collaboratively from "first principles" is being taught this semester

We have additional new courses and SSME-related programs starting next semester

Designing A Discipline vs Designing a Curriculum

A *discipline* is a principled model of a coherent body of research and practice

A *curriculum* is a program of study leading to a degree or certificate

Fundamental decision we made was that we wouldn't put "old wine in new bottles" and simply repackage existing courses as SSME

This might create an SSME curriculum, but it would be biased and not easily comparable to SSME efforts elsewhere

So we needed to think about what an SSME discipline might be

Designing A Discipline

Don't start from any existing curriculum or courses

Instead, ask "What are the key concepts, themes, and challenges that a SSME discipline should encompass"

Treat every participant's discipline as an equal partner until you have a principled reason not to do so

Examples of Cross-Disciplinary Questions

Candidate disciplines: economics, law, organizational sociology, business strategy, business operations, information science, user-centered design, computer science...

- Does the discipline have a theory about how firms change over time?
- What mechanisms does each discipline propose that firms use to seek and maintain advantages?
- How does each discipline evaluate the success of innovations or adaptations?
- How does each discipline propose that firms encode what they learn in new mechanisms, organizational forms, or information technology?
- How does each discipline explain why and how services combine, standardize, and evolve?
- How does each discipline propose to evaluate and optimize a service?

Designing a Curriculum

We designed "The Information and Services Economy" [course](#) to address these questions and are teaching it this semester

Other new or substantially redesigned courses that address these issues include "Web-based Services" (this semester), "Document Engineering and Information Architecture," "Service Implementation," and "Service Innovation" (next semester)

We are also establishing an "Information Systems Clinic" to give students practical experience in designing and delivering "information-intensive" services and applications

- Primary client base will be organizations on the UC Berkeley campus, but the Clinic will also work with campus IT organizations and industry partners
- Many projects will involve business process analysis, document modeling, and web services. Organizational capability assessment, technology transfer, and change management will also be important themes

We have a weekly [SSME Lecture Series](#) mostly with outside speakers from the Bay Area

Positive Lessons Learned

It has been provocative and intellectually exciting to take this more abstract approach to design a discipline and courses

This disciplinary analysis about what we might want to teach rather than what we can currently teach provides a clear hiring/partnership roadmap for "getting there from here"

The ISE and SSME lecture courses have attracted dozens of students from diverse backgrounds

Negative Lessons Learned

It is intellectually scary to think we can do this -- we have topics in our ISE course syllabus that the instructors have barely studied, let alone taught. Are we overly ambitious?

Not all disciplines are equally accessible to "novice" service scientists... some of our students have struggled with economic and organizational theory and others will struggle when we get to computer science

We tried to synch the ISE course and the public lecture series but gave up because "real world" schedules aren't that malleable

We are "true believers" who see SSME as interesting enough to dedicate some "career cycles" to it, but many faculty are skeptical

- There are limited incentives for faculty to adapt existing courses to support the SSME disciplinary vision
- Some have expressed "support" but what they really mean is "I want to teach my existing courses and continue my existing research program but at the same time jump on the SSME bandwagon if it develops into a lucrative funding source"