Proposed Guidelines for Evaluating a Service Science Master's Program

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A Service Science Master's degree is an advanced degree in any discipline which is grounded in a single discipline (such as engineering or finance) while also developing the students' ability to understand and communicate across / among multiple disciplines.

Note: The graduates of a service science master's program are considered to become multi-disciplinary skilled, but are *not* necessarily interdisciplinary skilled.

The total number of credits should equal that of a standard master's degree (e.g. 2 years full time equivalent, including projects or internships).

Service context

The course content must be multi-disciplinary. The program must provide an integrated educational experience in a *context of services* that develops the ability of graduates to apply pertinent knowledge to solving problems working across / among multiple disciplines.

Program outcomes

I .Professional skills

Each program must demonstrate that graduates have:
  a. an ability to function effectively on multi-cultural and virtual teams and lead such teams
  b. a recognition of the value of collaboration and the ability to collaborate
  c. an ability to work within a project management structure and contribute to business case based decision making
  d. a recognition of the need for, and an ability to engage in lifelong learning
  e. an ability to understand professional, ethical and social responsibilities
  f. a respect for diversity and a knowledge of contemporary professional, societal and global issues
  g. a commitment to quality, timeliness, continuous improvement and innovation
  h. the ability to use multiple communications mechanisms; to plan, organize, prepare, and deliver effective reports in written, oral, and other formats
  i. the ability to utilize the appropriate literature and use it as a principal means of staying current in one discipline and one system

II. Disciplinary field and system

The program must demonstrate that graduates are able to
  • apply masters level knowledge to be able to understand and communicate across / among three or more disciplines (at least one from each of the groups: technology, people and business)
  • apply masters level knowledge to demonstrate analytic thinking and problem solving within one discipline and for one system

Definitions

This guide uses the following basic definitions:

1. An interdisciplinary skilled person

A person with a degree(s) from one or more academic disciplines; has acquired additional interactional expertise in another or more additional academic discipline(s), and new knowledge that is claimed by more than one discipline.

2. System

A system is a set of entities involved in relationships and interactions. We think of service systems as dynamic human centered value co-creation systems. Every day nearly every person is a customer explicitly or implicitly of the following groups of systems:

1. Systems that meet routine daily needs for everyone (moving material, energy, information)
2. Systems for people's life planning (places and life-styles services)
3. Systems for governing (public services, rules and policies)

3. Program outcomes

Program outcomes are statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire in their matriculation through the program.

4. "T" shaped skills

We characterize the student's depth of knowledge in one area of study in conjunction with broadness among multiple areas as "T" shaped. The stem of the T represents depth, while the cross represents the spanning of multiple areas.

Illustration
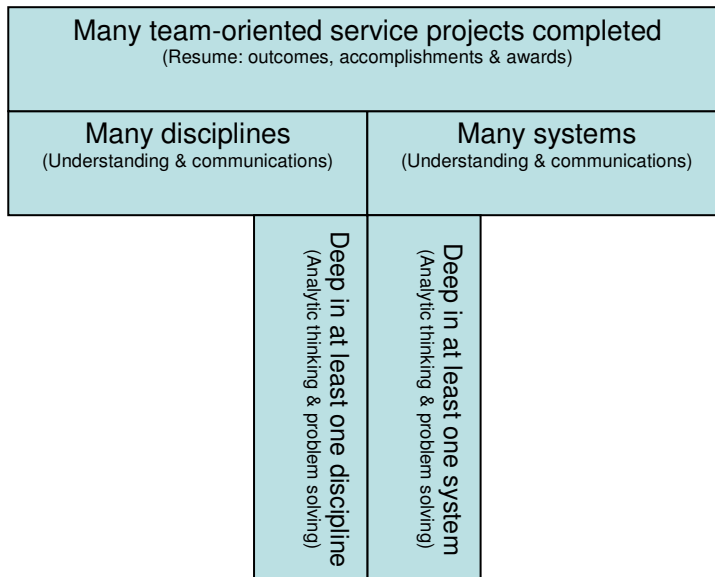
Details of the guide

Below is a matrix to inventory the disciplines covered in your curricula and the depth to which they are taught.

Depth for disciplines

The program should
- Cover any three (or more) of the disciplines below; including one (minimum) from each of the groups: technology; people and business in order to enable students to understand and communicate across / among disciplines and systems
- Enable students to solve problems and demonstrate analytic thinking in one discipline (and for one system – see the matrix for systems)

The guide matrix for disciplines:

Discipline	Understand and communicate	Analytical thinking and problem solving
Technology		
Computer science		
Information science		
Decision science, data mining & analysis		
Systems engineering		
Systems science		
People		
Government, political science, law, sociology, ethics		
Human factors engineering		
Organizational science, leadership		
Psychology, cognitive science		
Learning science, strategy		
Service marketing, behavioral science		
Business		
Innovation management		
Project management		
Service design		
Service operations		
Business management, process management, service management		

Discipline	Understand and communicate	Analytical thinking and problem solving
Economics, finance		

Depth for systems

The program should
- Cover any one (or more) of the systems below; in order to enable students to understand and communicate across / among systems
- Enable students to solve problems and demonstrate analytic thinking in one system (and for one discipline – see the matrix for disciplines)

The guide matrix for systems:

System	Understand and communicate	Analytical thinking and problem solving
1. Daily Life		
Transportation and Supply Chain		
Water and Waste Recycling		
Food and Product Manufacturing		
Energy and Electric Grid		
Information - Communication- Technologies		
2. Life planning		
Buildings and Construction		
Financial and Banking		
Retail & Hospitality, Media & Entertainment		
Healthcare and Family Life		
Education and Professional Life		
3. Governing		
City Government & Security		
Regional Government & Development		
National Government & Laws/Policies		

Directions

Analyze your program by checking the intersections in the table. For each checked box, write a short paragraph explaining how the depth of knowledge is achieved by the student. (What readings, exercises, projects, activities, tests, etc. are used? How is the service context considered?) The minimum number of checked boxes to be considered a service science master's program is 5 (five) and there needs to be at least 1 (one) in each area of people, technology and business. There is no upper limit to the number of boxes you can check, as long as you include the explanation for each.

Example:

As a result of this program, Student A has the ability to:
- Solve problems and perform analytic thinking in one discipline and one system.
    - E.g. computer science (discipline) and healthcare (system)
- Understand and communicate across / among at least three disciplines; inclusive of their primary discipline
    - E.g. Service design, human factors engineering and computer science

Test the guide

If you would like to see how your program compares to this guide; use the tables of disciplines and systems to inventory your curricula, and compose a paragraph supporting each selection you identify. Send your work to the author along with suggestions to improve or enhance the guide or process.