
SERVICE SCIENCE, MANAGEMENT & ENGINEERING (SSME)

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INTRODUCTION

Service Science, Management & Engineering (SSME) is the current wave – no question. World has started taking service availability for granted. Think of your own appetite for the ever increasing consumption of service in every aspect of life-style. Economic numbers speak the truth about the phenomenal growth of services. For instance, over 70% of people working in the US are employed in service activities and the sector accounts for over 80% of US GDP. Growing economies like India and China, Africa later, are starting to assert the role of service economy in their growth leading a shift in economic power. The shift of service as the driver of economic growth is sending the paradigm of “who are global economic powers” for renewal – and the results are stupefying.

SSME

SSME is a new multi-disciplinary effort that integrates aspects of established fields such as operations research, engineering, management sciences, business strategy, social and cognitive sciences, computer science, and legal sciences to train business leaders for a service mindset.

IBM

The significance of SSME field can be even more validated by knowing that IBM has committed itself to the definition and growth of the field as it had done for Computer Science some years back. IBM is a very profit-oriented company – they sense huge business value in SSME in years to come and that’s why they are investing their resources in it.

WHY SSME CLASS?

India and China are set for service sector growth like never before. What does this mean for business? Following lists some example questions that one will be able to answer and understand better after a thorough overview of SSME discipline – leading to opportunities in growing service sector:

Manufacturing Industry

1. Can manufacturing exist without any services? Or, have services been always there and just did not get appropriate attention?
2. How does a manager balance a hard number driven factor like operational efficiency with something as soft as customer experience?
3. How to get more involvement of customer in the manufacturing process? Is that a service in itself? Does it create un-realized value? How?

Banking Industry

1. What local customization might lead to better customer service and, hence, overall retention? Who pays the extra costs?
2. What is the impact of automation on a manager’s job and on customer? Does automation always lead to better service?

3. Is better service always necessary for all customer segments? Why or why not? Where is the threshold?

Retail Industry

1. “Big Bazaar” culture is changing Indian consumer habits, why? Are there any lessons from matured West that need to be addressed in the sector?
2. Can a retailer’s supply chain include customer as an integral part? What’s the service for customer in this case?
3. What’s next after Big Bazaar? Who is left underserved? Can service pay for itself in retail industry?

Telecom Industry

1. What’s next in telecom experience that will attract customers? What’s beyond functionality convergence in this business?
2. Why one-billing is going to be a huge service for the customers? A cell phone is a service or a product?
3. Rural service differs from its urban counterpart, how? What can businesses do to address such divergent segments?

One overall question that will span the whole class will be: for any given transaction, how can we classify three parts (service science, management, and engineering) that make up SSME?

Of course, this question applies to all the above questions as an umbrella question.

Proportionally, consumers are ready to pay or are paying more for experience, advice, information, assurances, use of infrastructures and leasing etc. – these have become a part of the offering for all transactions consumers make. Specifically, in India, Service Science Management and Engineering has the potential to transform the much lacking service sector. This emerging yet booming industry still suffers from gaps but also offers a huge potential for technology and services to come up with a win-win solution.

SUMMARIZED COURSE CONTENT

SESSION	CONTENT	READING	ASSIGNMENT
1	Introduction/course outline Clarifying the rationale and defining the domain Service sector in global economies Global trends and service innovation Multi-disciplinary branch	Article 1 Article 2	#1
2	Service enterprise and systems Goods-dominant (G-D) and Service-dominant (S-D) logics Little's formula Case 1	Article 3 Article 4	
3	Service innovation Service innovation framework Service concept Case 2 Caselet topics	Article 5 Article 6	
4	Service designing - I Service strategy	Article 7	#2
5	Service designing - II Self-service systems Service delivery Case 3	Article 8	
6	Service supply chain Case 4	Article 9	
7	Service factor and automation model Evolution to a service based life-style Case 5	Article 10	#3
8	Service Modeling: Simulation techniques BPM; Process modeling Simu8	Article 11	
9	Service Modeling: Simulation techniques BPM; Process modeling Inn0v8	Article 12	
10	Student presentations - Caselets		

Obviously, the division of sessions over the allotted classes will depend on our speed and mutual clarity on what we are able to learn. As a deliberate effort, I would include more cases if class prefers – this increases interaction in the class.

COURSE MATERIAL

Text

- Service Management: Operations, Strategy, Information Technology, 5th Edition, J.A. Fitzsimmons and M.J. Fitzsimmons, McGraw Hill

Reading Material, Cases

- These will be shared online or in the class.

Additional Readings

- Service Modeling, Principles and Applications. Vilho Raisanen, Wiley
- Understanding Service Business, S.E. Sampson, Wiley
- Managing Services, Alan Nankervis, Cambridge Press

GRADING

The overall grade will be based on the following four components:

Class participation	10%
Assignments	5%
Caselet – 1 (individual)	15%
Caselet – 2 (team-based)	20%
Term Project (team-based)	20%
End-term Test	30%

CLASS PARTICIPATION

Heaviest possible interaction will be the learning method in this class. Pedagogically, this course will rely very heavily on experiential learning built around the following elements: class discussion of cases, thought sharing, and video supplements. For the course to be useful to you, it is essential that, besides reading assigned chapters/articles from the book and the conceptual articles, you come to each class well prepared to discuss your analysis of the assigned material. I would strongly encourage active class participation.

- My experience has been that students generally tend to under- (rather than over) estimate the worth of what they have to say. Thus, if you are ever in doubt, I would encourage you to participate rather than to keep quiet.
- Note that probing questions are as useful a form of class participation as presentations of logical analyses.
- Finally, needless to add, the quantity of your class participation would count positively only if the substantive quality of your comments and/or questions adds value to the class discussions.

CASELET

The two caselets should focus on services – topics will be decided in due course of time. Each caselet should be well written for complete clarity. Caselets are brief – so any extraneous contents must be removed to make room for more valuable thoughts. Two pages, single line, Ariel 10 font should suffice for each caselet. Relevant questions should follow the situation and a very brief abstract should be included as a separate item.

One caselet will be done on individual basis while the other will be completed within a team. This team based caselet will be the topic for the term project and final presentation.

TERM PROJECT

Each team should present the caselet that they have designed. Class will confirm topics early on in the course. Every team will share their topic and tentative flow of contents in an early class. Last class of the course will be dedicated for the team presentation. Make the

presentations as formal as you can, as business-like as you can. Abiding by business etiquettes might gain extra points. Each presentation should be accompanied with a brief one page report with salient points – a simple format will be discussed in the class.

ATTENDANCE POLICY

A very significant portion of your learning is likely to take place in the classroom as you participate in and listen to conceptual discussion and case analyses. Therefore, it is essential that, barring a job-related or personal crisis, each student attend every class. In case of any such exigencies, you must let me know either ex-ante or ex-post. Also, please note that if you miss more than two classes – for any reason – you run the risk of getting an “incomplete” grade in the course.

ACADEMIC INTEGRITY

Any breach of integrity sensed by the instructor may result in a Fail grade for the class – the decision will be final in such cases.

SPECIAL NEEDS

Any student with special needs should bring this to the attention of the instructor as soon as possible, but not later than the second week of class.