Course title: Methodologies II: Decision-making in Public Policy – Analytical and Empirical Tools			
Course code: PPS 172	**No. of credits:** 2	**L-T-P:** 22-4-4	**Learning hours:** 28
Pre-requisite course code and title: NA			
Faculty: Faculty of Policy and Planning		**Department:**	
Course coordinator: L N Venkataraman		**Course instructor:** L N Venkataraman	
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Course type: Compulsory		**Course offered in:** Semester 2	

Course Description

Effective decision-making by public administrators is the key to successful formulation and implementation of public policy. Recently, new insights have come from diverse fields such as behavioral economics, psychology, neuro-science, and organizational theory to help us better understand the influence of heuristics and biases on decision-makers' choices. The practice of decision-making in public policy needs to incorporate these insights and, accordingly, the course seeks to acquaint participants with the relevant models, methods and tools. Thus, in choosing the "right" intervention, institution and policy instrument to address specific policy goal(s) in a specific context, the course expects to provide guidance on the relevant approach – for example, in dealing with climate change, what information do integrated assessment models provide to policy makers towards the design of mitigation mechanisms? Or, in dealing with a potential public health epidemic with trans-boundary origin, why does it help to have scenario-based planning of interventions? Or, how is complexity in a policy challenge addressed through strategic engagement of stakeholders to have their 'buy-in' for the decision?

Course objectives

- To acquaint the participants with various models, methods and tools of decision making and to provide guidance in the relevant approach in a specific public policy context.
- To introduce to single criterion and multi-criteria based evaluation of the alternatives that a decision maker may be facing in a given policy context.

Course content

Module	Topic	L	T	P
1.	**Module 1: Models of decision-making in public policy** • Overview: Rational choice; Incrementalism; Organizational process (SOPs); Systems theory; Collective choice • Intuition and behaviour in decision-making: Book discussions of "Blink" by Malcolm Gladwell and "Nudge" by Richard Thaler and Cass Sunstein	4	0	0
2.	**Module 2: Importance of data and analytics** • "Evidence-based" decision-making – what kind of evidence? Example: opinion polls • Models and Decision Support Systems (DSS): Example of GIS-based urban planning; Example of the use of IAMs in climate policy making • Tutorial: Introduction to a DSS software	2	0	0
3.	**Module 3: Optimization in planning**	4	2	2

	• Mathematical programming concepts (linear, integer, non-linear): • Examples of some strategy generation/evaluation tools from operations research: planning of urban services, inventory management in public health, and resource allocation • Tutorial: Data Envelopment Analysis			
4.	**Module 4: Evaluation methods** • Integrated impact assessment: key concepts, use of indicators, and the example of Lake Chilika • Tutorial on index construction, Factor Analysis, etc: software based • Strategic Environmental Assessment: key concepts and the example of Power Sector Reforms in India • Cost benefit analysis: basic theory and a case study • Multi-criteria decision making: an introduction to AHP and a case study • Tutorial on CBA and MCA: software based	8	2	2
5.	**Module 5: Risk and uncertainty** • Typology of uncertainty in public policy: illustrative case studies from public health, rural development, nuclear energy, and climate change • Use of model-generated and 'what if' scenarios: Example of India's energy futures (TERI, 2010)	4	0	0
	Total	**22**	**4**	**4**

Evaluation criteria

Quiz:	25%
Individual presentations of case studies in application of decision making/ evaluation methodologies in public policy:	65%
Contribution to discussions (through-semester):	10%

Learning outcomes

By the end of the course, it is expected that the students will develop:

- Ability to appreciate various decision making tools and use the relevant tool in a specific public policy context
- Ability to appreciate analytical literature and develop a critical and rigorous approach to policy making

Pedagogical approach

In addition to lectures, a lot emphasis will be given on discussions on identified books, reports and articles. Hands on experience will be provided in various decision making software.

Materials

Suggested Readings

Books

Ayres, I. (2007). Super crunchers: Why thinking-by-numbers is the new way to be smart. New York: Bantam Dell.
Allison, G.T. (1971). Essence of decision making. Boston: Little, Brown and Co.
Gladwell, M. (2005). Blink: The power of thinking without thinking. New Delhi: Penguin.
Stone, D. (2002). Policy paradox: The art of political decision-making. New York: W.W.Norton &Company.
Thaler, R. and Sunstein C. (2008). Nudge: Improving decisions about health, wealth, and happiness. New Haven: Yale University Press.

Journal articles

Lindblom, C.E. (1959). The Science of 'Muddling Through'. Public Administration Review, 19 (2), 79-88.
Kahneman, D. (2002). Maps of bounded rationality: A perspective on intuitive judgment and choice. Nobel Prize Lecture, 8.
Davenport, T.H. (2009). Make better decisions. Harvard Business Review.
Bond, R., Curran, J., Kirkpatrick, C., Lee, N., and Francis, P. (2001). Integrated impact assessment for sustainable development: A case study approach. World Development, 29 (6), 1011-1024.
Arrow, Kenneth, Maureen Cropper, George Eads, Robert Hahn, Lester Lave, Roger Noll, Paul Portney, Milton Russell, Richard Schmalensee, Kerry Smith, and Robert Stavins (1996). Is there a role for benefit-cost analysis in environmental, health, and safety regulation? Science, 272(5259), 221-222.
Barberis, Nicholas C. 2013. Thirty years of prospect theory in economics: A review and assessment. Journal of Economic Perspectives, 27(1): 173-96.
Wiktorowicz, Mary ;Deber, Raisa (May 1997). Regulating biotechnology: A rational political model of policy development". Health Policy Journal 40 (2), 115–138.
Morgan M.G., Kandlikar M., Risbey J., Dowlatabadi H. (1999). Why conventional tools for policy analysis are often inadequate for problems of global change". Climatic Change, 41 (3-4), 271–281.
Ryan L., Convery F., Ferreira S. (2006). Stimulating the use of biofuels in the European Union: Implications for climate change policy. Energy Policy, 34 (17), 3184–94.

Additional information (if any)

Student responsibilities

Students are expected to come prepared for class, having done the required reading and be able to participate in class discussions.

Course Reviewers

Dr. Prodipto Ghosh, Distinguished Fellow, TERI, New Delhi.
Dr. Subir Sen, Department of Humanities and Social Sciences, IIT Roorkie.