

Programa Analítico de Disciplina

ECO 675 - Lógica da Ação Coletiva, Instituições e Dinâmica de Sistemas

Departamento de Economia - Centro de Ciências Humanas, Letras e Artes

Catálogo: 2024

Número de créditos: 4

Carga horária semestral: 60h

Carga horária semanal teórica: 2h

Carga horária semanal prática: 2h

Semestres: II

Ementa

Introdução à Dinâmica de Sistemas Complexos
Instituições em Ambientes Complexos
Complexidade e Padrões de Interação Humana
Modelagem de Sistemas Complexos com Dinâmica de Sistemas
Modelos para Processos Econômicos e Dinâmica Institucional
Comportamento Coletivo, Epidemias Sociais e Pontos de Virada
Generalizações e Dinâmica de Sistemas

Conteúdo

Unidade	T	P	To
1. Introdução à Dinâmica de Sistemas Complexos 1. Tomada de decisão em ambientes dinâmicos 2. Características dos sistemas complexos 3. Implicações políticas da complexidade 4. Processos sistêmicos: estratégias e desafios 5. Diagramas causais na Dinâmica de Sistemas	4h	4h	8h
2. Instituições em Ambientes Complexos 1. Instituições e compromissos críveis 2. Nova economia das instituições 3. Perspectivas de Coase e Williamson 4. Teoria das macroinstituições 5. Diversidade institucional contemporânea sob a ótica de North 6. Análise da ação coletiva 7. Enfoque de Ostrom	6h	6h	12h
3. Complexidade e Padrões de Interação Humana	4h	4h	8h

A autenticidade deste documento pode ser conferida no site <https://siadoc.ufv.br/validar-documento> com o código: 1FA1.O2GZ.QELJ

<ul style="list-style-type: none"> 1. Entendendo a complexidade em Dinâmica de Sistemas 2. Sistemas complexos: estudo de caso 3. Visão inicial de arquétipos sistêmicos 4. Abordagem prática dos arquétipos 5. Implicações e aplicações dos arquétipos 6. Modelo sistêmico mundial 			
<p>4. Modelagem de Sistemas Complexos com Dinâmica de Sistemas</p> <ul style="list-style-type: none"> 1. Fundamentos de estoques e fluxos em Dinâmica de Sistemas 2. Dinâmica de banheira: um exemplo prático 3. Modelando reservas pesqueiras: estudo de caso 4. Efeitos sistêmicos inesperados e defasagens temporais 5. Tipos de comportamentos sistêmicos 6. Análise da transição demográfica: estudo de caso 7. Simulações de modelos com Dinâmica de Sistemas 	6h	6h	12h
<p>5. Modelos para Processos Econômicos e Dinâmica Institucional</p> <ul style="list-style-type: none"> 1. Estratégias de maximização de lucros 2. Instituições e processos de maximização 3. Variáveis não observáveis e variáveis de efeito 4. Tragédia dos comuns: estudo de caso 	4h	4h	8h
<p>6. Comportamento Coletivo, Epidemias Sociais e Pontos de Virada</p> <ul style="list-style-type: none"> 1. Modelo epidêmico: aplicações e análises 2. Sustentabilidade em sistemas socioecológicos 3. Exigências de manutenção 4. Sustentabilidade de diferentes contextos sistêmicos 5. Teste da sustentabilidade de um sistema 	4h	4h	8h
<p>7. Generalizações e Dinâmica de Sistemas</p> <ul style="list-style-type: none"> 1. A teoria econômica moderna e o paradigma da complexidade 2. Dinâmica geral para sistemas complexos 	2h	2h	4h
Total	30h	30h	60h

Teórica (T); Prática (P); Total (To);

ECO 675 - Lógica da Ação Coletiva, Instituições e Dinâmica de Sistemas

Bibliografias básicas

Descrição	Exemplares
ACEMOGLU, D.; ROBINSON, J. Why Nations Fail. New York: Crown Business. 2012. 529 p.	0
BUENO, N. P. Introdução à Dinâmica de Sistemas: com aplicações para a Economia. Viçosa: Editora UFV, 2011. 203 p.	3
DIXIT, A.; NALEBUFF, B. Thinking Strategically: The Competitive Edge in Business, Politics, and Everyday Life. New York: Norton & Company. 1991. 393 p.	0
EASLEY, D.; KLEINBERG, J. Networks, Crowds and Markets. Cambridge University Press, 2010. 727 p.	0
FORD, A. Modeling the Environment: An Introduction to System Dynamics Modeling of Environmental Systems. Washington, D. C.: Island Press, 2009. 402 p.	1
LEONARDI, R.; NANETTI, R. Y.; PUTTNAN, R. Making Democracy Work: Civic Traditions in Modern Italy. Princeton: Princeton University Press, 2001. 320 p.	0
NORTH, D. Institutions, Institutional Change and Economic Performance. New York: Cambridge University Press, 1996. 150 p.	0
OLSON, M. The Logic of Collective Action: Public Goods and the Theory of Groups. Cambridge: Harvard University Press, 1995. 186 p.	1
OSTROM, E. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge: Cambridge University Press, 2008. 250 p.	2
THALER, R.; SUNSTEIN, C. Nudge: Improving Decisions About Health, Wealth and Happiness. Yale: Yale University Press, 2008. 312 p.	0
WILKINSON, N. An Introduction to Behavioral Economics. New York: Palgrave Macmillan, 2008. 511 p.	0

Bibliografias complementares

Descrição	Exemplares
ANDINA, T.; BOJANIC, P. (eds.). Institutions in Action: The Nature and the Role of Institutions in the Real World. Springer Nature, 2020. 150 p. (Studies in the Philosophy of Sociality, 2542-9108). Disponível em: https://link.springer.com/book/10.1007/978-3-030-32618-0 . Acesso em: 17 abr. 2024.	99
BERNASCHI, D. Collective Actions of Solidarity Against Food Insecurity: The Impact in Terms of Capabilities. 2020. 92 p. (Raumfragen: Stadt-Region-Landschaft, 2625-7009). Disponível em: https://link.springer.com/book/10.1007/978-3-658-31375-3 . Acesso em: 17 abr. 2024.	99
BIANCHI, C.; LUNA-REYES, L. F.; RICH, E. (eds.). Enabling Collaborative Governance Through Systems Modeling Methods: Public Policy Design and Implementation. 2020. 340 p. (System Dynamics for Performance Management & Governance, 2367-0959; 4). Disponível em: https://link.springer.com/book/10.1007/978-3-030-42970-6 . Acesso em: 17 abr. 2024.	99

A autenticidade deste documento pode ser conferida no site <https://siadoc.ufv.br/validar-documento> com o código: 1FA1.02GZ.QELJ

BORSHCHEV, A. The Big Book of Simulation Modeling: Multimethod Modeling with AnyLogic 6. AnyLogic North America, 2013. 612 p.	1
BUENO, N. P. Visitando vizinhos: uma análise da série histórica de produção de bens de capital no Brasil utilizando diagramas de recorrência. Economia e Sociedade. v. 18, n. 2 (36), p. 399-416, ago. 2009. Disponível em: https://www.eco.unicamp.br/economia-e-sociedade/vol-18-n-2-f-36-p-1-1-ago-2009 . Acesso em: 17 abr. 2024.	99
CRAMER, C. B. et al. (eds.). Network Science in Education: Transformational Approaches in Teaching and Learning. Springer Nature, 2018. 205 p. Disponível em: https://link.springer.com/book/10.1007/978-3-319-77237-0 . Acesso em: 17 abr. 2024.	99
DUKES, R. L. Worlds Apart: Collective Action in Simulated Agrarian and Industrial Societies. 1990. 194 p (Theory and Decision Library A., Rational Choice in Practical Philosophy and Philosophy of Science, 0921-3384; 14) . Disponível em: https://link.springer.com/book/10.1007/978-94-009-1962-4 . Acesso em: 17 abr. 2024.	99
DURLAUF, S. N.; YOUNG, H. P. (eds.). Social Dynamics. Washington, D. C.: Brookings Institution, 2001. 238 p. (Economic Learning and Social Evolution, 4).	1
EPSTEIN, J. M.; AXTELL, R. Growing Artificial Societies: Social Science from the Bottom Up. Washington, D. C.: Brookings Institution, 1996. 208 p.	1
EPSTEIN, J. M. Generative Social Science: Studies in Agent-Based Computational Modeling. Princeton: Princeton University Press, 2006. 356 p. (Princeton Studies in Complexity, 10).	1
GIBSON, C. C. et al. The Samaritan's Dilemma: The Political Economy of Development Aid. New York: Oxford University Press, 2005. 264 p.	1
MELUCCI, A. Challenging Codes: Collective Action in the Information Age. Cambridge: Cambridge University Press, 2001. 441 p.	1
MYERSON, R. B. Probability Models for Economic Decisions. Belmont: Thomson, 2005. 397 p. (Duxbury Applied Series).	1
MORECROFT, J. D. W. Strategic Modelling and Business Dynamics: A Feedback Systems Approach. Chichester: Wiley, 2008. 430 p.	1
NAGY, C. I. Collective Actions in Europe: A Comparative, Economic and Transsystemic Analysis. 2019. 122 p (SpringerBriefs in Law, 2192-855X) Disponível em: https://link.springer.com/book/10.1007/978-3-030-24222-0 . Acesso em: 17 abr. 2024.	99
NORTH, D. C. Understanding the Process of Economic Change. Princeton: Princeton University, 2005. 187 p. (Princeton Economic History of the Western World).	1
OSTROM, E. Understanding Institutional Diversity. Princeton: Princeton University, 2009. 357 p.	1
POTEETE, A. R.; JANSSEN, M. A.; OSTROM E. Working Together: Collective Action, the Commons, and Multiple Methods in Practice. Princeton: Princeton University, 2010. 346 p.	1
PUASCHUNDER, J. Behavioral Economics and Finance Leadership: Nudging and Winking to Make Better Choices. Springer Nature, 2020. 183 p. Disponível em: https://link.springer.com/book/10.1007/978-3-030-54330-3 . Acesso em: 17 abr. 2024.	99
RAUSCHER, S. Nudging in Management Accounting: Assessment of the Relevance of Nudging in the Corporate Context. 2019. 130 p. (BestMasters, 2625-3615). Disponível em: https://link.springer.com/book/10.1007/978-3-658-28017-8 . Acesso em: 17 abr. 2024.	99
TESFATSION, L. JUDD, K. L. (eds.). Handbook of Computational Economics: Agent-Based	1

A autenticidade deste documento pode ser conferida no site <https://siadoc.ufv.br/validar-documento> com o código: 1FA1.O2GZ.QELJ

Computational Economics. Oxford: North-Holland, v. 2, 2008. 1698 p. (Handbooks in Economics, 13).

Syllabus

ECO 675 - Logic of Collective Action, Institutions, and System Dynamics

Departamento de Economia - Centro de Ciências Humanas, Letras e Artes

Catalog: 2024

Number of credits: 4

Total hours: 60h

Weekly workload - Theoretical: 2h

Weekly workload - Practical: 2h

Period: II

Content

Introduction to Complex Systems Dynamics
Institutions in Complex Environments
Complexity and Patterns of Human Interaction
Modeling Complex Systems with System Dynamics
Modeling Economic Processes and Institutional Dynamics
Collective Behavior, Social Epidemics, and Turning Points
Generalizations and System Dynamics

Course program

Unit	T	P	To
1. Introduction to Complex Systems Dynamics 1. Decision-making in Dynamic Environments 2. Characteristics of Complex Systems 3. Political Implications of Complexity 4. Systemic Processes: Strategies and Challenges 5. Causal Diagrams in System Dynamics	4h	4h	8h
2. Institutions in Complex Environments 1. Institutions and Credible Commitments 2. New Institutional Economics 3. Coase and Williamson Perspectives 4. Theory of Macroinstitutions 5. Contemporary Institutional Diversity through the Lens of North 6. Analysis of Collective Action 7. Ostrom's Approach	6h	6h	12h
3. Complexity and Patterns of Human Interaction	4h	4h	8h

A autenticidade deste documento pode ser conferida no site <https://siadoc.ufv.br/validar-documento> com o código: 1FA1.O2GZ.QELJ

<ul style="list-style-type: none"> 1. Understanding Complexity in System Dynamics 2. Complex Systems: A Case Study 3. Initial View of Systemic Archetypes 4. Practical Approach to Archetypes 5. Implications and Applications of Archetypes 6. Global Systemic Model 			
<p>4. Modeling Complex Systems with System Dynamics</p> <ul style="list-style-type: none"> 1. Fundamentals of Stocks and Flows in System Dynamics 2. Bathtub Dynamics: A Practical Example 3. Modeling Fisheries Reserves: A Case Study 4. Unexpected Systemic Effects and Time Delays 5. Types of Systemic Behaviors 6. Analysis of Demographic Transition: A Case Study 7. Simulations of Models with System Dynamics 	6h	6h	12h
<p>5. Modeling Economic Processes and Institutional Dynamics</p> <ul style="list-style-type: none"> 1. Profit Maximization Strategies 2. Institutions and Maximization Processes 3. Unobservable and Effect Variables 4. Tragedy of the Commons: A Case Study 	4h	4h	8h
<p>6. Collective Behavior, Social Epidemics, and Turning Points</p> <ul style="list-style-type: none"> 1. Epidemic Model: Applications and Analyses 2. Sustainability in Socioecological Systems 3. Maintenance Requirements 4. Sustainability across Different Systemic Contexts 5. Testing System Sustainability 	4h	4h	8h
<p>7. Generalizations and System Dynamics</p> <ul style="list-style-type: none"> 1. Modern Economic Theory and the Complexity Paradigm 2. General Dynamics for Complex Systems 	2h	2h	4h
Total	30h	30h	60h

Theoretical (T); Practical (P); Total (To);

ECO 675 - Logic of Collective Action, Institutions, and System Dynamics

Fundamental references	
Description	Copies
ACEMOGLU, D.; ROBINSON, J. Why Nations Fail. New York: Crown Business. 2012. 529 p.	0
BUENO, N. P. Introdução à Dinâmica de Sistemas: com aplicações para a Economia. Viçosa: Editora UFV, 2011. 203 p.	3
DIXIT, A.; NALEBUFF, B. Thinking Strategically: The Competitive Edge in Business, Politics, and Everyday Life. New York: Norton & Company. 1991. 393 p.	0
EASLEY, D.; KLEINBERG, J. Networks, Crowds and Markets. Cambridge University Press, 2010. 727 p.	0
FORD, A. Modeling the Environment: An Introduction to System Dynamics Modeling of Environmental Systems. Washington, D. C.: Island Press, 2009. 402 p.	1
LEONARDI, R.; NANETTI, R. Y.; PUTTNAN, R. Making Democracy Work: Civic Traditions in Modern Italy. Princeton: Princeton University Press, 2001. 320 p.	0
NORTH, D. Institutions, Institutional Change and Economic Performance. New York: Cambridge University Press, 1996. 150 p.	0
OLSON, M. The Logic of Collective Action: Public Goods and the Theory of Groups. Cambridge: Harvard University Press, 1995. 186 p.	1
OSTROM, E. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge: Cambridge University Press, 2008. 250 p.	2
THALER, R.; SUNSTEIN, C. Nudge: Improving Decisions About Health, Wealth and Happiness. Yale: Yale University Press, 2008. 312 p.	0
WILKINSON, N. An Introduction to Behavioral Economics. New York: Palgrave Macmillan, 2008. 511 p.	0

Complementary references	
Description	Copies
ANDINA, T.; BOJANIC, P. (eds.). Institutions in Action: The Nature and the Role of Institutions in the Real World. Springer Nature, 2020. 150 p. (Studies in the Philosophy of Sociality, 2542-9108). Disponível em: https://link.springer.com/book/10.1007/978-3-030-32618-0 . Acesso em: 17 abr. 2024.	99
BERNASCHI, D. Collective Actions of Solidarity Against Food Insecurity: The Impact in Terms of Capabilities. 2020. 92 p. (Raumfragen: Stadt-Region-Landschaft, 2625-7009). Disponível em: https://link.springer.com/book/10.1007/978-3-658-31375-3 . Acesso em: 17 abr. 2024.	99
BIANCHI, C.; LUNA-REYES, L. F.; RICH, E. (eds.). Enabling Collaborative Governance Through Systems Modeling Methods: Public Policy Design and Implementation. 2020. 340 p. (System Dynamics for Performance Management & Governance, 2367-0959; 4). Disponível em: https://link.springer.com/book/10.1007/978-3-030-42970-6 . Acesso em: 17 abr. 2024.	99

A autenticidade deste documento pode ser conferida no site <https://siadoc.ufv.br/validar-documento> com o código: 1FA1.02GZ.QELJ

BORSHCHEV, A. The Big Book of Simulation Modeling: Multimethod Modeling with AnyLogic 6. AnyLogic North America, 2013. 612 p.	1
BUENO, N. P. Visitando vizinhos: uma análise da série histórica de produção de bens de capital no Brasil utilizando diagramas de recorrência. Economia e Sociedade. v. 18, n. 2 (36), p. 399-416, ago. 2009. Disponível em: https://www.eco.unicamp.br/economia-e-sociedade/vol-18-n-2-f-36-p-1-1-ago-2009 . Acesso em: 17 abr. 2024.	99
CRAMER, C. B. et al. (eds.). Network Science in Education: Transformational Approaches in Teaching and Learning. Springer Nature, 2018. 205 p. Disponível em: https://link.springer.com/book/10.1007/978-3-319-77237-0 . Acesso em: 17 abr. 2024.	99
DUKES, R. L. Worlds Apart: Collective Action in Simulated Agrarian and Industrial Societies. 1990. 194 p (Theory and Decision Library A., Rational Choice in Practical Philosophy and Philosophy of Science, 0921-3384; 14) . Disponível em: https://link.springer.com/book/10.1007/978-94-009-1962-4 . Acesso em: 17 abr. 2024.	99
DURLAUF, S. N.; YOUNG, H. P. (eds.). Social Dynamics. Washington, D. C.: Brookings Institution, 2001. 238 p. (Economic Learning and Social Evolution, 4).	1
EPSTEIN, J. M.; AXTELL, R. Growing Artificial Societies: Social Science from the Bottom Up. Washington, D. C.: Brookings Institution, 1996. 208 p.	1
EPSTEIN, J. M. Generative Social Science: Studies in Agent-Based Computational Modeling. Princeton: Princeton University Press, 2006. 356 p. (Princeton Studies in Complexity, 10).	1
GIBSON, C. C. et al. The Samaritan's Dilemma: The Political Economy of Development Aid. New York: Oxford University Press, 2005. 264 p.	1
MELUCCI, A. Challenging Codes: Collective Action in the Information Age. Cambridge: Cambridge University Press, 2001. 441 p.	1
MYERSON, R. B. Probability Models for Economic Decisions. Belmont: Thomson, 2005. 397 p. (Duxbury Applied Series).	1
MORECROFT, J. D. W. Strategic Modelling and Business Dynamics: A Feedback Systems Approach. Chichester: Wiley, 2008. 430 p.	1
NAGY, C. I. Collective Actions in Europe: A Comparative, Economic and Transsystemic Analysis. 2019. 122 p (SpringerBriefs in Law, 2192-855X) Disponível em: https://link.springer.com/book/10.1007/978-3-030-24222-0 . Acesso em: 17 abr. 2024.	99
NORTH, D. C. Understanding the Process of Economic Change. Princeton: Princeton University, 2005. 187 p. (Princeton Economic History of the Western World).	1
OSTROM, E. Understanding Institutional Diversity. Princeton: Princeton University, 2009. 357 p.	1
POTEETE, A. R.; JANSSEN, M. A.; OSTROM E. Working Together: Collective Action, the Commons, and Multiple Methods in Practice. Princeton: Princeton University, 2010. 346 p.	1
PUASCHUNDER, J. Behavioral Economics and Finance Leadership: Nudging and Winking to Make Better Choices. Springer Nature, 2020. 183 p. Disponível em: https://link.springer.com/book/10.1007/978-3-030-54330-3 . Acesso em: 17 abr. 2024.	99
RAUSCHER, S. Nudging in Management Accounting: Assessment of the Relevance of Nudging in the Corporate Context. 2019. 130 p. (BestMasters, 2625-3615). Disponível em: https://link.springer.com/book/10.1007/978-3-658-28017-8 . Acesso em: 17 abr. 2024.	99
TESFATSION, L. JUDD, K. L. (eds.). Handbook of Computational Economics: Agent-Based	1

A autenticidade deste documento pode ser conferida no site <https://siadoc.ufv.br/validar-documento> com o código: 1FA1.O2GZ.QELJ

Computational Economics. Oxford: North-Holland, v. 2, 2008. 1698 p. (Handbooks in Economics, 13).