

DATA, SYSTEMS, AND SOCIETY (IDS)

IDS.012[J] Statistics, Computation and Applications

Same subject as 6.419[J]

Subject meets with 6.439[J], IDS.131[J]

Prereq: ((2.087, 6.0002, 6.01, 18.03, or 18.06) and (6.008, 6.041B, 14.30, 16.09, or 18.05)) or permission of instructor
U (Fall)

3-1-8 units

Hands-on analysis of data demonstrates the interplay between statistics and computation. Includes four modules, each centered on a specific data set, and introduced by a domain expert. Provides instruction in specific, relevant analysis methods and corresponding algorithmic aspects. Potential modules may include medical data, gene regulation, social networks, finance data (time series), traffic, transportation, weather forecasting, policy, or industrial web applications. Projects address a large-scale data analysis question. Students taking graduate version complete additional assignments. Enrollment limited; priority to Statistics and Data Science minors, and to juniors and seniors.

S. Jegelka, C. Uhler

IDS.013[J] Statistical Thinking and Data Analysis

Same subject as 15.075[J]

Prereq: 6.041B or 15.0791

U (Spring)

3-1-8 units. Institute LAB

Credit cannot also be received for 18.650[J], 18.6501, IDS.014[J]

See description under subject 15.075[J].

R. Mazumder

IDS.014[J] Fundamentals of Statistics

Same subject as 18.650[J]

Subject meets with 18.6501

Prereq: 6.041B or 18.600

U (Fall, Spring)

4-0-8 units

Credit cannot also be received for 15.075[J], IDS.013[J]

See description under subject 18.650[J].

Fall: P. Rigollet. Spring: P. Kempthorne

IDS.045[J] System Safety (New)

Same subject as 16.63[J]

Prereq: None

Acad Year 2018-2019: Not offered

Acad Year 2019-2020: U (Fall)

3-0-9 units. REST

See description under subject 16.63[J].

N. Leveson

IDS.055[J] Science, Technology, and Public Policy

Same subject as 17.309[J], STS.082[J]

Prereq: None

U (Spring)

4-0-8 units. HASS-S; CI-H

Credit cannot also be received for 17.310[J], IDS.412[J], STS.482[J]

See description under subject 17.309[J].

K. Oye, N. Selin

IDS.060[J] Environmental Law, Policy, and Economics: Pollution Prevention and Control

Same subject as 1.801[J], 11.021[J], 17.393[J]

Subject meets with 1.811[J], 11.630[J], 15.663[J], IDS.540[J]

Prereq: None

U (Fall)

3-0-9 units. HASS-S

Reviews and analyzes federal and state regulation of air and water pollution, hazardous waste, green-house gas emissions, and the production and use of toxic chemicals. Analyzes pollution as an economic problem and the failure of markets. Explores the role of science and economics in legal decisions. Emphasizes use of legal mechanisms and alternative approaches (such as economic incentives and voluntary approaches) to control pollution and encourage chemical accident and pollution prevention. Focuses on the major federal legislation, the underlying administrative system, and the common law in analyzing environmental policy, economic consequences, and the role of the courts. Discusses classical pollutants and toxic industrial chemicals, green-house gas emissions, community right-to-know, and environmental justice. Develops basic legal skills: how to read/understand cases, regulations, and statutes. Students taking graduate version are expected to explore the subject in greater depth.

N. Ashford, C. Caldart

IDS.061[] Regulation of Chemicals, Radiation, and Biotechnology

Same subject as 1.802[], 11.022[]
 Subject meets with 1.812[], 10.805[], 11.631[], IDS.436[], IDS.541[]
 Prereq: IDS.060[] or permission of instructor
 U (Spring)
 Not offered regularly; consult department
 3-0-9 units

Focuses on policy design and evaluation in the regulation of hazardous substances and processes. Includes risk assessment, industrial chemicals, pesticides, food contaminants, pharmaceuticals, radiation and radioactive wastes, product safety, workplace hazards, indoor air pollution, biotechnology, victims' compensation, and administrative law. Health and economic consequences of regulation, as well as its potential to spur technological change, are discussed for each regulatory regime. Students taking the graduate version are expected to explore the subject in greater depth.

N. Ashford, C. Caldart

IDS.062[] Global Environmental Negotiations

Same subject as 12.346[]
 Subject meets with 12.846[], IDS.525[]
 Prereq: Permission of instructor
 U (Fall)
 Not offered regularly; consult department
 2-0-4 units

Practical introduction to global environmental negotiations designed for science and engineering students. Covers basic issues in international negotiations, such as North-South conflict, implementation and compliance, trade, and historical perspective on global environmental treaties. Offers hands-on practice in developing and interpreting international agreements through role-play simulations and observation of ongoing climate change negotiating processes. Students taking graduate version complete additional assignments.

N. E. Selin

IDS.063[] People and the Planet: Environmental Governance and Science

Same subject as 12.387[], 15.874[]
 Prereq: None
 Acad Year 2018-2019: Not offered
 Acad Year 2019-2020: U (Fall)
 3-0-6 units

See description under subject 12.387[].

N. Selin, S. Solomon, J. Sterman

IDS.064 Engineering, Economics and Regulation of the Electric Power Sector

Subject meets with 6.695[], 15.032[], IDS.505[]
 Prereq: 14.01, 22.081[], IDS.060[], or permission of instructor
 U (Spring)
 3-0-9 units

Provides an in-depth and interdisciplinary look at electric power systems, focusing on regulation as the link among engineering, economic, legal, and environmental viewpoints. Topics include electricity markets, incentive regulation of network utilities, retail competition, tariff design, distributed generation, rural electrification, multinational electricity markets, environmental impacts, and the future of utilities and strategic sustainability issues under both traditional and competitive regulatory frameworks. Background in policy, microeconomics, or engineering desirable. Students taking graduate version complete additional assignments.

I. Perez-Arriaga

IDS.131[] Statistics, Computation and Applications

Same subject as 6.439[]
 Subject meets with 6.419[], IDS.012[]
 Prereq: ((2.087, 6.0002, 6.01, 18.03, or 18.06) and (6.008, 6.041B, 14.30, 16.09, or 18.05)) or permission of instructor
 G (Fall)
 3-1-8 units

Hands-on analysis of data demonstrates the interplay between statistics and computation. Includes four modules, each centered on a specific data set, and introduced by a domain expert. Provides instruction in specific, relevant analysis methods and corresponding algorithmic aspects. Potential modules may include medical data, gene regulation, social networks, finance data (time series), traffic, transportation, weather forecasting, policy, or industrial web applications. Projects address a large-scale data analysis question. Students taking graduate version complete additional assignments. Limited enrollment; priority to Statistics and Data Science minors and to juniors and seniors.

S. Jegelka, C. Uhler

IDS.136[J] Graphical Models: A Geometric, Algebraic, and Combinatorial Perspective (New)

Same subject as 6.244[J]

Prereq: 6.431B and 18.06

Acad Year 2018-2019: G (Spring)

Acad Year 2019-2020: Not offered

3-0-9 units

Provides instruction in the geometric, algebraic and combinatorial perspective on graphical models. Presents methods for learning the underlying graph and inferring its parameters. Topics include exponential families, duality theory, conic duality, polyhedral geometry, undirected graphical models, Bayesian networks, Markov properties, total positivity of distributions, hidden variables, and tensor decompositions.

C. Uhler

IDS.145[J] Data Mining: Finding the Models and Predictions that Create Value

Same subject as 15.062[J]

Subject meets with 15.0621

Prereq: 15.060, 15.075[J], or permission of instructor

G (Fall; second half of term)

2-0-4 units

See description under subject 15.062[J].

R. E. Welsch

IDS.147[J] Statistical Learning and Data Mining

Same subject as 15.077[J]

Prereq: Permission of instructor

G (Spring)

4-0-8 units

See description under subject 15.077[J].

R. E. Welsch

IDS.190 Doctoral Seminar in Statistics and Data Science (New)

Prereq: None

G (Fall)

Not offered regularly; consult department

1-0-2 units

Interdisciplinary seminar explores diverse topics in statistics and data science. Restricted to students in the Interdisciplinary Doctoral Program in Statistics.

Consult D. Shah

IDS.200[J] Optimization Methods

Same subject as 6.255[J], 15.093[J]

Subject meets with 6.215

Prereq: 18.06

G (Fall)

4-0-8 units

See description under subject 15.093[J].

D. Bertsimas, P. Parrilo

IDS.250[J] The Theory of Operations Management

Same subject as 1.271[J], 15.764[J]

Prereq: (6.436[J] and (6.251[J] or 6.251[J])) or permission of instructor

G (Spring)

3-0-9 units

Can be repeated for credit.

See description under subject 15.764[J].

D. Simchi-Levi, N. Trichakis, K. Zheng

IDS.305[J] Business and Operations Analytics

Same subject as 1.275[J]

Prereq: Permission of instructor

G (Spring; first half of term)

2-0-4 units

Provides instruction on identifying, evaluating, and capturing business analytics opportunities that create value. Also provides basic instruction in analytics methods and case study analysis of organizations that successfully deployed these techniques.

D. Simchi-Levi

IDS.330 Real Options for Product and Systems Design

Prereq: IDS.333 or permission of instructor

G (Spring; second half of term)

3-0-3 units

Focuses on implementation of flexibility (real options) in the design of products and systems. Applies the methods presented in IDS.333: recognition of uncertainty, identification of best opportunities for flexibility, and valuation of these options and their effective implementation. Students' work culminates in a dynamic business plan for design and deployment of products, start-ups, ongoing management of operations, or policy plans. Students bring their own project concept, which they will analyze during the class. Useful complement to thesis or research projects.

R. de Neufville

IDS.332 Engineering Systems Analysis for Design

Engineering School-Wide Elective Subject.
 Offered under: 1.146, 16.861, IDS.332
 Prereq: Permission of instructor
 G (Fall)
 3-0-9 units
 Credit cannot also be received for IDS.333

Covers theory and methods to identify, value, and implement flexibility in design, also known as "real options." Topics include definition of uncertainties, simulation of performance for scenarios, screening models to identify desirable flexibility, decision and lattice analysis, and multidimensional economic evaluation. Students demonstrate proficiency through an extended application to a systems design of their choice. Provides a complement to research or thesis projects. Meets with IDS.333 first half of term. Enrollment limited.

R. de Neufville

IDS.333 Risk and Decision Analysis

Prereq: None
 G (Fall; first half of term)
 3-0-3 units
 Credit cannot also be received for 1.146, 16.861, IDS.332

Focuses on design choices and decisions under uncertainty. Topics include identification and description of uncertainties using probability distributions; the calculation of commensurate measures of value, such as expected net present values; Monte Carlo simulation and risk analysis; and the use of decision analysis to explore alternative strategies and identify optimal initial choices. Presents applied analysis of practical examples from a variety of engineering systems using spreadsheet and decision analysis software. Meets with IDS.332 first half of term.

R. de Neufville

IDS.336[J] Systems Architecting Applied to Enterprises

Same subject as 16.855[J]
 Prereq: Permission of instructor
 G (Spring)
 3-0-9 units

Focuses on principles and practices for architecting new and evolving sociotechnical enterprises. Includes reading and discussions of enterprise theory, contemporary challenges, and case studies of evolving enterprises. Covers frameworks and methods for ecosystem analysis, stakeholder analysis, architecture design and evaluation, and implementation strategies. Students work in small teams on projects to design a future architecture for a selected real-world enterprise.

D. Rhodes

IDS.337[J] Aerospace Biomedical and Life Support Engineering

Same subject as 16.423[J], HST.515[J]
 Prereq: 16.06, 16.400, or permission of instructor
 G (Spring)
 3-0-9 units

See description under subject 16.423[J].

D. J. Newman

IDS.338[J] Multidisciplinary Design Optimization

Same subject as 16.888[J]
 Prereq: 18.085 or permission of instructor
 Acad Year 2018-2019: Not offered
 Acad Year 2019-2020: G (Spring)
 3-1-8 units

Systems modeling for design and optimization. Selection of design variables, objective functions and constraints. Overview of principles, methods and tools in multidisciplinary design optimization (MDO). Subsystem identification, development and interface design. Design of experiments (DOE). Review of linear (LP) and non-linear (NLP) constrained optimization formulations. Scalar versus vector optimization problems. Karush-Kuhn-Tucker (KKT) conditions of optimality, Lagrange multipliers, adjoints, gradient search methods, sensitivity analysis, geometric programming, simulated annealing, genetic algorithms and particle swarm optimization. Constraint satisfaction problems and isoperformance. Non-dominance and Pareto frontiers. Surrogate models and multifidelity optimization strategies. System design for value. Students execute a term project in small teams related to their area of interest.

O. de Weck

IDS.339[J] Space Systems Engineering

Same subject as 16.89[J]
 Prereq: 16.851 or permission of instructor
 Acad Year 2018-2019: Not offered
 Acad Year 2019-2020: G (Spring)
 4-2-6 units

See description under subject 16.89[J].

E. F. Crawley, J. A. Hoffman

IDS.340[J] System Safety Concepts

Same subject as 16.863[J]
 Prereq: Permission of instructor
 Acad Year 2018-2019: Not offered
 Acad Year 2019-2020: G (Fall)
 3-0-9 units

See description under subject 16.863[J].

N. G. Leveson

IDS.341[J] Concepts in the Engineering of Software

Same subject as 16.355[J]
 Prereq: Permission of instructor
 Acad Year 2018-2019: Not offered
 Acad Year 2019-2020: G (Spring)
 3-0-9 units

See description under subject 16.355[J].
N. G. Leveson

IDS.345[J] Digital Evolution: Managing Web 3.0

Same subject as 15.565[J]
 Prereq: Permission of instructor
 Acad Year 2018-2019: Not offered
 Acad Year 2019-2020: G (Fall)
 3-0-6 units

See description under subject 15.565[J].
S. Madnick

IDS.410 Modeling and Assessment for Policy

Prereq: None
 G (Spring)
 Not offered regularly; consult department
 3-0-6 units

Explores how scientific information and quantitative models can be used to inform policy decision-making. Develops an understanding of quantitative modeling techniques and their role in the policy process through case studies and interactive activities. Addresses issues such as analysis of scientific assessment processes, uses of integrated assessment models, public perception of quantitative information, methods for dealing with uncertainties, and design choices in building policy-relevant models. Examples focus on models and information used in Earth system governance.
N. E. Selin

IDS.411 Concepts and Research in Technology and Policy

Prereq: 17.310[J] and permission of instructor
 G (Fall)
 3-0-6 units

Core integrative subject, with substantive participation from a series of guest faculty lecturers, examines key technology-policy concepts. Explores alternative framings of roles of technology in policy, emphasizing the implications of these alternatives upon problem-solving in the area. Exercises prepare students to apply these concepts in the framing of their thesis research. Preference to first-year students in the Technology and Policy Program.
F. Field

IDS.412[J] Science, Technology, and Public Policy

Same subject as 17.310[J], STS.482[J]
 Prereq: Permission of instructor
 G (Spring)
 4-0-8 units
 Credit cannot also be received for 17.309[J], IDS.055[J], STS.082[J]

See description under subject 17.310[J].
K. Oye, N. Selin

IDS.435[J] Law, Technology, and Public Policy

Same subject as 15.655[J]
 Prereq: None
 G (Spring)
 3-0-9 units

Examines the relationship between law and technological change, and the ways in which law, economics, and technological change shape public policy. Addresses how law can be used to influence and guide technological change; responses of the legal system to environmental, safety, social and ethical problems created by new or existing technology; how law and markets interact to limit or encourage technological development; and how law can affect distribution of wealth and social justice. Covers climate change; genetic engineering; telecommunications; industrial automation; the effect of health, safety, and environmental regulation on technological innovation; the impacts of intellectual property law on innovation and equity; pharmaceuticals; nanotechnology; cost/benefit analysis as a decision tool; public participation in governmental decisions affecting science and technology; corporate influence on technology; and law and economics as competing paradigms to encourage sustainability. Permission of instructor required for freshmen and sophomores.
N. Ashford, C. Caldart

IDS.436[J] Technology, Law, and the Working Environment

Same subject as 10.805[J]

Subject meets with 1.802[J], 1.812[J], 11.022[J], 11.631[J], IDS.061[J], IDS.541[J]

Prereq: Permission of instructor

G (Spring)

Not offered regularly; consult department

3-0-6 units

Addresses relationship between technology-related problems and the law applicable to work environment. National Labor Relations Act, Occupational Safety and Health Act. Toxic Substances Control Act, state worker's compensation, and suits by workers in the courts discussed. Problems related to occupational health and safety, collective bargaining as a mechanism for altering technology in the workplace, job alienation, productivity, and the organization of work addressed. Prior courses or experience in the environmental, public health, or law-related areas.

N. A. Ashford, C. C. Caldart

IDS.437[J] Technology, Globalization, and Sustainable Development

Same subject as 1.813[J], 11.466[J], 15.657[J]

Prereq: Permission of instructor

G (Fall)

3-0-9 units

Investigates sustainable development, taking a broad view to include not only a healthy economic base, but also a sound environment, stable employment, adequate purchasing power, distributional equity, national self-reliance, and maintenance of cultural integrity. Explores national, multinational, and international political and legal mechanisms to further sustainable development through transformation of the industrial state. Addresses the importance of technological innovation and the financial crisis of 2008.

N. Ashford

IDS.449 Technology Policy Internship Seminar

Prereq: IDS.411 or permission of instructor

G (Fall)

1-1-1 units

Can be repeated for credit.

Seminar examines what technology policy is in practice. Considers the question of "Who achieves what, when, how, and why?" regarding technology policy. Students who completed summer internships present and dissect their experiences with special reference to specific cases in which they participated.

F. Field

IDS.505[J] Engineering, Economics and Regulation of the Electric Power Sector

Same subject as 6.695[J], 15.032[J]

Subject meets with IDS.064

Prereq: 14.01, 22.081[J], IDS.060[J], or permission of instructor

G (Spring)

3-0-9 units

Provides an in-depth and interdisciplinary look at electric power systems, focusing on regulation as the link among engineering, economic, legal, and environmental viewpoints. Topics include electricity markets, incentive regulation of network utilities, retail competition, tariff design, distributed generation, rural electrification, multinational electricity markets, environmental impacts, and the future of utilities and strategic sustainability issues under both traditional and competitive regulatory frameworks. Background in policy, microeconomics, or engineering desirable. Students taking graduate version complete additional assignments.

I. Perez-Arriaga

IDS.521 Energy Systems and Climate Change Mitigation

Prereq: Permission of instructor

G (Spring)

Not offered regularly; consult department

3-0-9 units

Explores the contributions of energy systems to global greenhouse gas emissions and the potential levers for reducing emissions. Lectures and projects focus on decomposing contributions to greenhouse gas emissions, with emphasis on technology related variables such as per unit cost and carbon intensity of energy. Reviews other performance attributes of energy technologies. Student projects explore pathways for realizing emissions reduction scenarios.

J. Trancik

IDS.522 Mapping and Evaluating New Energy Technologies

Prereq: Permission of instructor
 Acad Year 2018-2019: Not offered
 Acad Year 2019-2020: G (Fall)
 3-0-9 units

Project-based seminar covers recent developments in energy conversion and storage technologies. Merits of alternative technologies are debated based on their environmental performance and cost, and their potential improvement and scalability. Project teams develop quantitative models and interactive visualization tools to inform the future development of these technologies. Models may probe how the impact of a technology depends on assumptions about future advancements in materials or device design. Other projects may develop models for rational design choices (the selection of a particular material or processing technique) based on economic and environmental performance and physical constraints.

J. Trancik

IDS.524[J] People and the Planet: Environmental Histories and Engineering (New)

Same subject as 11.204[J]
 Subject meets with 11.004[J], STS.033[J]
 Prereq: None
 G (Spring)
 3-3-6 units

See description under subject 11.204[J].

J. Knox-Hayes, A. Slocum, R. Scheffler, J. Trancik

IDS.525[J] Global Environmental Negotiations

Same subject as 12.846[J]
 Subject meets with 12.346[J], IDS.062[J]
 Prereq: None
 G (Fall)
 Not offered regularly; consult department
 2-0-4 units

Practical introduction to global environmental negotiations designed for science and engineering students. Covers basic issues in international negotiations, such as North-South conflict, implementation and compliance, trade, and historical perspective on global environmental treaties. Offers hands-on practice in developing and interpreting international agreements through role-play simulations and observation of ongoing climate change negotiating processes. Students taking graduate version complete additional assignments.

N. Selin

IDS.526[J] Sustainability Science and Engineering

Same subject as 12.845[J]
 Prereq: None
 G (Fall)
 Not offered regularly; consult department
 3-0-6 units

Introduces and develops core ideas and concepts in the field of sustainability science and engineering from an engineering systems perspective. Takes an interdisciplinary approach to discuss case studies of sustainability systems research. Exposes students to techniques for sustainability research across engineering, natural and social science disciplines. Term projects focus on applying techniques.

N. E. Selin

IDS.540[J] Environmental Law, Policy, and Economics: Pollution Prevention and Control

Same subject as 1.811[J], 11.630[J], 15.663[J]
 Subject meets with 1.801[J], 11.021[J], 17.393[J], IDS.060[J]
 Prereq: None
 G (Fall)
 3-0-9 units

Reviews and analyzes federal and state regulation of air and water pollution, hazardous waste, green-house gas emissions, and the production and use of toxic chemicals. Analyzes pollution as an economic problem and the failure of markets. Explores the role of science and economics in legal decisions. Emphasizes use of legal mechanisms and alternative approaches (such as economic incentives and voluntary approaches) to control pollution and encourage chemical accident and pollution prevention. Focuses on the major federal legislation, the underlying administrative system, and the common law in analyzing environmental policy, economic consequences, and the role of the courts. Discusses classical pollutants and toxic industrial chemicals, green-house gas emissions, community right-to-know, and environmental justice. Develops basic legal skills: how to read/understand cases, regulations, and statutes. Students taking graduate version are expected to explore the subject in greater depth.

N. Ashford, C. Caldart

IDS.541[] Regulation of Chemicals, Radiation, and Biotechnology

Same subject as 1.812[], 11.631[]
Subject meets with 1.802[], 10.805[], 11.022[], IDS.061[], IDS.436[]
Prereq: IDS.540[] or permission of instructor
G (Spring)
Not offered regularly; consult department
3-0-9 units

Focuses on policy design and evaluation in the regulation of hazardous substances and processes. Includes risk assessment, industrial chemicals, pesticides, food contaminants, pharmaceuticals, radiation and radioactive wastes, product safety, workplace hazards, indoor air pollution, biotechnology, victims' compensation, and administrative law. Health and economic consequences of regulation, as well as its potential to spur technological change, are discussed for each regulator regime. Students taking the graduate version are expected to explore the subject in greater depth.

N. Ashford, C. Caldart

IDS.620[] Principles and Practice of Drug Development

Same subject as 7.547[], 10.547[], 15.136[], HST.920[]
Prereq: Permission of instructor
G (Fall)
3-0-6 units

See description under subject 15.136[].

T. J. Allen, C. L. Cooney, S. N. Finkelstein, A. J. Sinskey, G. K. Raju

IDS.670[] Planning and Design of Airport Systems

Same subject as 1.231[], 16.781[]
Prereq: Permission of instructor
Acad Year 2018-2019: G (Fall)
Acad Year 2019-2020: Not offered
3-0-9 units

See description under subject 1.231[].

R. de Neufville, A. R. Odoni

IDS.700[] Applied Probability and Stochastic Models

Same subject as 1.203[], 15.073[]
Prereq: 6.041B or 18.600
G (Fall)
3-0-9 units

See description under subject 15.073[].

A. Barnett

IDS.720[] Tools for Analysis: Design for Real Estate and Infrastructure Development

Same subject as 11.434[], 15.428[]
Prereq: None
G (Spring; second half of term)
2-0-4 units

See description under subject 11.434[].

D. Geltner, R. de Neufville

IDS.730[] Logistics Systems

Same subject as 1.260[], 15.770[], SCM.260[]
Prereq: Permission of instructor
G (Fall)
3-0-9 units

See description under subject SCM.260[].

Y. Sheffi, C. Caplice

IDS.735[] Supply Chain Planning

Same subject as 1.273[], 15.762[]
Prereq: 15.761 or SCM.260[]
G (Spring; first half of term)
2-0-4 units

See description under subject 15.762[].

D. Simchi-Levi

IDS.736[] Manufacturing System and Supply Chain Design

Same subject as 1.274[], 15.763[]
Prereq: 15.761, 15.778, or SCM.260[]
G (Spring; second half of term)
2-0-4 units

See description under subject 15.763[].

D. Simchi-Levi

IDS.900 Doctoral Seminar in Social and Engineering Systems

Prereq: Permission of instructor
G (Fall)
2-0-1 units

Introduces doctoral students to IDSS research areas. Preference to first-year students in SES.

A. Abadie, A. Jadbabaie

IDS.910 Leadership Development

Prereq: Permission of instructor

G (Fall; partial term)

Not offered regularly; consult department

1-1-1 units

Seminar environment created to develop leadership capabilities, and to take advantage of leadership opportunities. An initial Outward Bound experience builds trust, teamwork and communications. Readings and assignments emphasize the characteristics of desired leadership skills. Global leaders participate in the Leadership Lunch series to share their experiences and recommendations. Discussions explore leadership development. Culminates in a personal leadership plan. Restricted to entering students in the Technology and Policy program or instructor permission.

Staff

IDS.950 Independent Study in Data, Systems, and Society

Prereq: Permission of IDSS Academic Office

G (Fall, IAP, Spring, Summer)

Units arranged [P/D/F]

Can be repeated for credit.

For graduate students in IDSS. Individual study in data, systems, and society. Intended to expose student to expert-level domain material. Supervised by a member of MIT's teaching staff.

Consult IDSS Academic Office

IDS.951 Independent Study in Technology and Policy

Prereq: Permission of TPP Education Office

G (Fall, IAP, Spring, Summer)

Units arranged [P/D/F]

Can be repeated for credit.

For graduate students in TPP. Individual study in technology and policy. Intended to expose student to expert-level domain material. Supervised by a member of MIT's teaching staff.

Consult TPP Education Office

IDS.955 Practical Experience in Data, Systems, and Society

Prereq: None

G (Fall, IAP, Spring, Summer)

Units arranged [P/D/F]

Can be repeated for credit.

For IDSS doctoral students participating in off-campus internship experiences in data, systems, and society. Before registering for this subject, students must have an employment offer from a company or organization, must identify a research supervisor, and must receive prior approval from the IDSS Academic Office. Upon completion of the experience, student must submit a letter from the employer describing the goals accomplished, along with a substantive final report from the student approved by the MIT supervisor.

Consult IDSS Academic Office

IDS.956 Practical Experience in Technology and Policy

Prereq: None

G (Fall, IAP, Spring, Summer)

Units arranged [P/D/F]

For TPP students participating in off-campus internship experiences in technology and policy. Before registering for this subject, students must have an employment offer from a company or organization, must identify a research supervisor, and must receive prior approval from the TPP Education Office. Upon completion of the internship, student must submit a letter from the employer describing the work accomplished, along with a substantive final report from the student approved by the MIT supervisor.

Consult TPP Education Office

IDS.960 Teaching in Data, Systems, and Society

Prereq: None

G (Fall, IAP, Spring)

Units arranged [P/D/F]

Can be repeated for credit.

For Teaching Assistants in IDSS, in cases where teaching assignment is approved for academic credit. Laboratory, tutorial, or classroom teaching under supervision of a faculty member. Credit for this subject may not be used for any degree granted by IDSS.

Consult IDSS Academic Office

IDS.961 Teaching in Technology and Policy

Prereq: None

G (Fall, IAP, Spring)

Units arranged [P/D/F]

Can be repeated for credit.

For Teaching Assistants in TPP, in cases where teaching assignment is approved for academic credit. Laboratory, tutorial, or classroom teaching under supervision of a faculty member. Credit for this subject may not be used for any degree granted by IDSS.

Consult TPP Academic Office

IDS.970 Research in Data, Systems, and Society

Prereq: None

G (Fall, Spring, Summer)

Units arranged [P/D/F]

Can be repeated for credit.

For Research Assistants in IDSS when assigned research is not used for thesis, but is approved for academic credit. Credit for this subject may not be used for any degree granted by IDSS.

Consult IDSS Academic Office

IDS.971 Research in Technology and Policy

Prereq: None

G (Fall, Spring, Summer)

Units arranged [P/D/F]

Can be repeated for credit.

For research assistants in TPP when assigned research is not used for thesis, but is approved for academic credit. Credit for this subject may not be used for any degree granted by IDSS.

Consult TPP Academic Office

IDS.S00 Special Undergraduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

U (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged

Can be repeated for credit.

Opportunity for study of topics in Data, Systems, and Society not otherwise included in the curriculum. Offerings initiated by faculty on an ad hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S01 Special Undergraduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

U (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged

Can be repeated for credit.

Opportunity for study of topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S10 Special Undergraduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

U (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged [P/D/F]

Can be repeated for credit.

Opportunity for study of topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S11 Special Undergraduate Subject in Data, Systems, and Society

Prereq: None

U (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged [P/D/F]

Can be repeated for credit.

Opportunity for study of topics in Data, Systems, and Society not otherwise included in the curriculum. Offerings initiated by faculty on an ad hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S20 Special Graduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged

Can be repeated for credit.

Opportunity for study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S21 Special Graduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged

Can be repeated for credit.

Opportunity for study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Information: Consult IDSS Academic Office

IDS.S22 Special Graduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged

Can be repeated for credit.

Opportunity for study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S23 Special Graduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged

Can be repeated for credit.

Opportunity for study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S24 Special Graduate Subject in Data, Systems, and Society

Prereq: Permission of instructor

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged

Can be repeated for credit.

Opportunity for study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S30 Special Graduate Subject in Data, Systems, and Society

Prereq: None

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged [P/D/F]

Can be repeated for credit.

Opportunity for study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Staff

IDS.S31 Special Graduate Subject in Data, Systems, and Society

Prereq: None

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged [P/D/F]

Can be repeated for credit.

Opportunity for individual or group study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.S32 Special Graduate Subject in Data, Systems, and Society

Prereq: None

G (Fall, IAP, Spring, Summer)

Not offered regularly; consult department

Units arranged [P/D/F]

Can be repeated for credit.

Opportunity for individual or group study of advanced topics in Data, Systems, and Society not otherwise included in the curriculum at MIT. Offerings are initiated by faculty on an ad-hoc basis subject to IDSS approval.

Consult IDSS Academic Office

IDS.THG Graduate Thesis

Prereq: Permission of instructor

G (Fall, IAP, Spring, Summer)

Units arranged

Can be repeated for credit.

Program of research, leading to the writing of an SM or PhD thesis to be arranged by the student with a member of the IDSS faculty. A minimum of 24 thesis units are required for the SM degree.

Consult IDSS Academic Office

IDS.UR Undergraduate Research

Prereq: None

U (Fall, IAP, Spring, Summer)

Units arranged [P/D/F]

Can be repeated for credit.

Undergraduate research opportunities in Data, Systems, and Society.

IDSS Academic Office

IDS.URG Undergraduate Research

Prereq: None

U (Fall, IAP, Spring, Summer)

Units arranged

Can be repeated for credit.

Undergraduate research opportunities in Data, Systems, and Society.

Consult IDSS Academic Office