Interdisciplinary Studies in Social Sciences and Humanities (INSH)

INSH 1000. Social Sciences and Humanities at Northeastern. (1 Hour)
Intended for freshmen in the College of Social Sciences and Humanities. Introduces freshmen to the liberal arts in general. Offers students an opportunity to become familiar with their major, to develop the academic skills necessary to succeed (analytical ability and critical thinking), to become grounded in the culture and values of the university community, and to develop interpersonal skills—in short, to become familiar with all the skills needed to become a successful university student.

INSH 1102. Food in Contemporary Context. (4 Hours)
Offers a multidisciplinary set of perspectives on an intrinsic part of daily life—food. Food is not just about survival—it is about being human. Producing it, making it, eating it, obsessing about it is woven throughout our lives. It defines, and is defined by, culture. It is the basis of economies, has produced great fortunes, defines entire communities, and is the cause of conflicts. It is at once natural and artificial, grown and manufactured. It nourishes us and makes us sick. It is the source of sublime pleasure and no small anxiety. Food defines us, as much as we define it. With these considerations, this course uses food as a lens into contemporary life.

Attribute(s): NUpath Societies/Institutions

INSH 1300. Introduction to Health and Humanities. (4 Hours)
Explores the ways in which narrative and other forms of creative and cultural expression help shape conceptions of illness, healing, and the body. Offers students opportunities to consider the health and humanities through a variety of interdisciplinary perspectives and genres. Includes small-group and classwide experiential field outings. Culminates in the composition of reflective responses, a medical ethics/medical journalism piece, and a team-based experiential e-portfolio project. Course objectives include differentiating between healing and curing; knowing how to elicit, listen to, and analyze stories to determine how participants in the healthcare system experience illness and healing; being able to articulate the ways health is a cultural construct; and using this analysis to identify an empathic response as a future professional.

Attribute(s): NUpath Interpreting Culture

INSH 1500. Digital Methods for Social Sciences and Humanities. (4 Hours)
Introduces programming skills and computational methods through application to topics in the social sciences and humanities. Methods include computational text analysis, network analysis, mapping software and analysis, computational approaches to data, big data, and/or social simulation. Offers students an opportunity to develop an understanding of the use and significance of computational tools for social sciences and humanities. No previous programming experience required.

Attribute(s): NUpath Analyzing/Using Data, NUpath Natural/Designed World

INSH 1600. Cultures of London - Abroad. (4 Hours)
Offers students in London an opportunity to learn about and interact with visual art and architecture and literary representations of the city. Examines how different peoples and different art forms have helped to shape the culture of this multicultural city over a span of some 400 years (from the Renaissance to contemporary London). Students read poetry, prose, and drama; attend theatrical events; and explore the city through walking tours and visits to historic sites. Seeks to develop familiarity with the critical, historical, and theoretical tools necessary to to understand how imperial and colonial histories have shaped the cultures of London and the experiences of its citizens of diverse races, ethnicities, and regional or national identities.

Attribute(s): NUpath Difference/Diversity, NUpath Interpreting Culture

INSH 1990. Elective. (1-4 Hours)
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

INSH 2101. Love and Hate: Social, Psychological, and Literary Approaches. (4 Hours)
Studies materials that define and describe love and hate from the fields of literature and literary criticism, social psychology, and criminology and criminal justice. "Love" and "hate" are small words describing powerful emotions with profound effects on individuals and on social groups. Focusing largely on contemporary examples, offers students an opportunity to analyze the differences and areas of overlap in the above fields' approaches to love and hate, to discuss societal responses to these emotions, and to apply the methodologies of each field to research questions of their own. INSH 2101 and PSYC 2101 are cross-listed.

Prerequisite(s): ENGW 1111 (may be taken concurrently) with a minimum grade of C or ENGW 1102 with a minimum grade of C or ENGL 1111 with a minimum grade of C or ENGL 1102 with a minimum grade of C
Attribute(s): NUpath Interpreting Culture, NUpath Societies/Institutions

INSH 2102. Bostonography: The City through Data, Texts, Maps, and Networks. (4 Hours)
Uses Boston as a case study for integrating computational methods with the social sciences and humanities to provide new insights into major cultural, historical, and societal questions as they relate to and extend beyond the city of Boston. Through lectures, discussions, and labs, the course examines a variety of data sets that measure geographic, historical, literary, political, civic, and institutional landscapes. Offers students an opportunity to combine analytical tools, such as geospatial mapping, data visualization, and network science, with readings, hands-on class activities, and museum or site visits, enabling a comprehensive view of complex cultural and social phenomena.

Prerequisite(s): CS 2500 (may be taken concurrently) with a minimum grade of D- or (DS 2000 (may be taken concurrently) with a minimum grade of D- ; DS 2001 (may be taken concurrently) with a minimum grade of D-)
Attribute(s): NUpath Interpreting Culture, NUpath Societies/Institutions

INSH 2110. Culture and Resilience. (4 Hours)
Examines how communities draw on cultural resources to develop resilience in response to adverse events or trauma, whether institutional, political, or environmental. Focuses on creative and expressive production—such as literature, visual arts, and performing arts—that aims to repair or resist trauma. Offers students tools and opportunities to research, analyze, and share examples of such cultural resilience.

Prerequisite(s): ENGW 1111 with a minimum grade of C or ENGW 1102 with a minimum grade of C or ENGL 1111 with a minimum grade of C or ENGL 1102 with a minimum grade of C
Attribute(s): NUpath Interpreting Culture

INSH 2300. Culture, Technology, and the Future of Health. (4 Hours)
Introduces the challenges posed by the data-heavy medicine of the future to privacy, the appropriate collection of medical data, and the ways that patients and healthcare workers alike think about health. Offers students an opportunity to learn how to use critical and ethical theories, analyze health narratives, and use historical and contemporary data about health disparities to forecast how new technologies might pose social and cultural challenges. Takes a humanities perspective to critically evaluate social and cultural aspects of a healthcare system shaped by emerging technologies and the data they produce.

Attribute(s): NUpath Difference/Diversity, NUpath Societies/Institutions

INSH 2963. Topics. (1,2 Hours)
Offers undergraduate students an opportunity to learn about timely issues, develop new skills, or explore areas of broad interest in an immersive, short-course format. Content and instructors vary by offering.

INSH 2964. Experiential Project. (0 Hours)
Offers students an applied project setting in which to apply their curricular learning. Working with a sponsor, students refine an applied research topic, perform research, develop recommendations that are shared with a partner sponsor, and create a plan for implementing their recommendations. Seeks to benefit students with a curriculum that supports the development of key business communication skills, project and client management skills, and frameworks for business analysis. Offers students an opportunity to learn from sponsor feedback, review 'lessons learned,' and incorporate suggestions from this review to improve and further develop their career development and professional plan.

INSH 2990. Elective. (1-4 Hours)
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

INSH 2992. Research. (0 Hours)
Offers an opportunity to document student contributions to research projects or creative endeavors.

INSH 3101. Research Methods in the Social Sciences. (4 Hours)
Introduces the basic concepts involved in conducting research in the social sciences. Familiarizes students with the scientific methods that are necessary for systematic analysis of social behavior, societal trends, program effectiveness, and public attitudes through readings, lectures, group discussions, and research assignments. Offers students an opportunity to learn how to formulate a research question, investigate and critique how questions are researched, develop a research design, and obtain the critical thinking skills necessary to consume interdisciplinary research across the social sciences.

Attribute(s): NUpath Analyzing/Using Data, NUpath Writing Intensive

INSH 3102. Introduction to Statistics in the Social Sciences. (4 Hours)
Presents a foundation in different statistical techniques that may be utilized to answer research questions in the social sciences. Examines a range of computational social science techniques across data platforms to address societal problems. Emphasizes existing databases that may inform questions in the social sciences. Also introduces students to different ways to display or visualize quantitative data. Offers students an opportunity to learn how to produce and consume quantitative information.

Attribute(s): NUpath Analyzing/Using Data, NUpath Formal/Quant Reasoning

INSH 3990. Elective. (1-4 Hours)
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

INSH 4990. Elective. (1-4 Hours)
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

INSH 4998. Research. (0 Hours)
Offers an opportunity to document student contributions to research projects or creative endeavors.

INSH 5183. Interdisciplinary Special Topics: Pop-up Course. (1,2 Hours)
Addresses timely trends, issues, and events as they unfold. Offers students an opportunity to learn about and respond to issues of the day in an immersive, interdisciplinary, short-course format. Content and instructors vary by offering.

INSH 5301. Introduction to Computational Statistics. (4 Hours)
Introduces the fundamental techniques of quantitative data analysis, ranging from foundational skills—such as data description and visualization, probability, and statistics—to the workhorse of data analysis and regression, to more advanced topics—such as machine learning and networks. Emphasizes real-world data and applications using the R statistical computing language. Analyzing and understanding complex data has become an essential component of numerous fields: business and economics, health and medicine, marketing, public policy, computer science, engineering, and many more. Offers students an opportunity to finish the course ready to apply a wide variety of analytic methods to data problems, present their results to nonexperts, and progress to more advanced course work delving into the many topics introduced here.

INSH 5302. Information Design and Visual Analytics. (4 Hours)
Introduces the systematic use of visualization techniques for supporting the discovery of new information as well as the effective presentation of known facts. Based on principles from art, graphic design, perceptual psychology, and rhetoric, offers students an opportunity to learn how to successfully choose appropriate visual languages for representing various kinds of data to support insights relevant to the user's goals. Covers visual data mining techniques and algorithms for supporting the knowledge-discovery process; principles of visual perception and color theory for revealing patterns in data, semiotics, and the epistemology of visual representation; narrative strategies for communicating and presenting information and evidence; and the critical evaluation and critique of data visualizations. Requires proficiency in R.

INSH 5303. Machine Learning in the Social Sciences. (4 Hours)
Offers a comprehensive overview of machine learning as a tool as it applies to a number of social science domains, including political science, sociology, economics, criminal justice, and public policy. Compares machine-learning approaches and more traditional regression-based approaches in the social sciences. Examines key applications in the domain of the social sciences through cases and examples, using social science data sets.

INSH 5304. Social Network Analysis. (4 Hours)
Offers an overview of the analytic methods and conceptual perspectives of a social network approach to social science and humanities research. Using the R statistical computing language, covers techniques for collecting, formatting, and visualizing network data, as well as tools for calculating the mathematical properties of social networks, such as centrality, clustering, transitivity, and structural equivalence. Introduces statistical methods for social network analysis, such as exponential random graph models and stochastic actor-oriented models.

INSH 5500. Basic Principles of Statistical Analysis in the Social Sciences. (1 Hour)
Examines the basic principles of probability and statistical analysis. Investigates levels of measurement, measures of central tendency and dispersion, the central limit theorem, standard errors, and confidence intervals. Introduces statistical software and dataset visualization and manipulation. Designed to prepare students for entry-level graduate statistics courses.

INSH 5501. The R Statistical Computing Platform. (1 Hour)
Introduces the R statistical computing platform. Offers students an opportunity to learn the foundations of R, including installing R and using the RStudio graphical user interface; use built-in statistical functions and install new packages; write loops, scripts, and programs; work with data types and manipulate datasets; and visualize data.

INSH 5502. Introduction to Probability and Statistics. (1 Hour)
Introduces the fundamentals of probability and statistical tests. Offers students an opportunity to learn about the laws of probability; probability distributions; the central limit theorem; and using the normal and t distributions to estimate population parameters. The final portion of the course introduces hypothesis testing, including differences in means tests and chi-square tests.

INSH 5503. Multivariate Regression. (1 Hour)
Introduces multiple regression, the foundation of most multivariate statistical analysis. Offers students an opportunity to learn correlation and bivariate regressions between two variables; multiple regression with multiple independent variables; model estimation by hand and in R; and modeling with quadratic terms, interactions, and binary independent variables.

INSH 5505. From Data to Information: Making Sense of "Found" Data. (1 Hour)
Investigates how "found" or "naturally occurring" data can be leveraged to better understand the dynamics and behaviors of individuals, communities, and business processes. Offers students an opportunity to learn the skills to manipulate, analyze, and visualize the content of large, complicated datasets, as well as to think critically about the interpretation of the data, based on how it is generated and the biases that might follow.

INSH 5506. From Information to Measurement: Using "Found" Data to Describe Objects, People, and Places. (1 Hour)
Offers students an opportunity to work with "found" or "naturally occurring" data to generate knowledge, with a focus on how we use detailed records to describe the objects, people, and places that they reference. This includes building the skills of aggregation, analysis, and visualization in order to construct and communicate such measures and the patterns they capture. In doing so, the course encourages students to think critically about how the data are generated, what biases they might contain, and the implications for interpretation of the data.

INSH 5509. Spatio-Temporal Data Representations. (1 Hour)
Focuses on visualization methods for data that involve geographic and temporal information. Visualizing temporal processes in geographic space is a difficult problem that requires careful consideration of the specific goals and circumstances of the representation. Starts with the design principles of cartographic communication and examines how maps can help to communicate, persuade, and possibly mislead. Uses geographic information systems and explores interactive techniques for analyzing spatial data across multiple scales.

Prerequisite(s): INSH 5508 with a minimum grade of B or INSH 5508 with a minimum grade of B

INSH 5510. Visualizing Relational Data. (1 Hour)
Focuses on the visualization of relationships between entities. Involves tasks such as navigating hierarchical structures, assessing the properties and structure of networks, or extracting meaning from the relationships between words in textual analysis. Relational data can be challenging to visually organize, explore, and present; the course examines a wide range of interactive techniques for this purpose.

Prerequisite(s): INSH 5509 with a minimum grade of B or INSH 5509 with a minimum grade of B

INSH 5602. Documenting Fieldwork Narratives: Oral History, Ethnography, Archival Practices. (4 Hours)
Examines the ethics, politics, and social aspects of three primary areas of interdisciplinary research and knowledge production at the intersection of the social sciences and humanities: oral history, ethnography, and archiving. Offers students an opportunity to learn to conduct oral history, ethnography, and archiving; gain experience collecting and formatting information collected through these qualitative techniques; and be introduced to digital platforms for oral history, ethnography, and archiving. Offers instruction in critiquing examples of how researchers collect and analyze qualitative information. Studies the critical thinking skills necessary to build a research project from the formulation of a research idea through the research design planning process.

INSH 5963. Topics. (1,2 Hours)
Offers students an opportunity to learn about timely issues, develop new skills, or explore areas of broad interest in an immersive, short-course format. Content and instructors vary by offering.

INSH 5964. Projects for Professionals. (0 Hours)
Offers students an applied project setting in which to apply their curricular learning. Working with a sponsor, students refine an applied research topic, perform research, develop recommendations that are shared with a partner sponsor, and create a plan for implementing their recommendations. Seeks to benefit students with a curriculum that supports the development of key business communication skills, project and client management skills, and frameworks for business analysis. Offers students an opportunity to learn from sponsor feedback, review 'lessons learned,' and incorporate suggestions from this review to improve and further develop their career development and professional plan.

INSH 5965. Engaging with Industry Partners for Rising Professionals. (0 Hours)
Offers students an enhanced applied project setting in which to apply their curricular learning. Working with a partner sponsor, students refine an applied research topic, perform research, develop recommendations that are shared with the partner sponsor, and create a plan for implementing their recommendations. Curriculum supports students as they develop key business communication skills, project and client management skills, and frameworks for business analysis. Offers students an opportunity to learn from sponsor feedback, review lessons learned, and incorporate suggestions to improve and further hone their career development and professional plan. Career development opportunities through skill-building workshops, panels, and interview preparation are available. Partner-student interactions, including a culminating project presentation, allow partners to assess student potential for co-op, internship, or other employment opportunities with the partner.

INSH 6101. Agent-Based Modeling for Applied and Social Sciences. (4 Hours)
Introduces complexity-based models, most notably agent-based models, and their possible applications to a range of planning and public policy issues. Exposes students to complexity theory and methods, including interactions, adaptation, and evolution; cellular automata, agents, networks, and genetic algorithms; and epistemology—the meaning and applications of models. Focuses on modeling and software, including building on sample models; running experiments and analyzing results; and verification, sensitivity, and validation.

INSH 6300. Research Methods in the Social Sciences. (4 Hours)
Surveys methods of social research, including field study and participant observation techniques, survey techniques, interviewing and questionnaire construction, sampling procedures, experimental design, content analysis, and use of available data.

INSH 6302. Qualitative Methods. (4 Hours)
Introduces the principles and use of common qualitative methods with a particular focus on their application in the social sciences. Offers students an opportunity to engage in primary data collection and to learn how to use a variety of analytic techniques, including transcription, field-note preparation, memos, development of coding schemes and conceptual frameworks, and data-verifying techniques.

INSH 6406. Analyzing Complex Digitized Data. (4 Hours)
Introduces cutting-edge ways of structuring and analyzing complex data or digitized text-as-data using the open-source programming language Python. Scholars across multiple disciplines are finding themselves face-to-face with massive amounts of digitized data. In the humanities and social sciences, these data are often in the form of unstructured text and un- or under-structured data. Encourages students to think about novel ways they can apply these techniques to their own data and research questions and to apply the methods in their own research, whether it be in academia or in industry.

INSH 6500. Statistical Analysis. (4 Hours)
Studies the use of social science quantitative techniques, emphasizing applications of value to public-sector analysts and scholars alike. Introduces probability and statistical analysis. Topics include measures of central tendency and dispersion, probability and probability distributions, sampling distributions and hypothesis testing, bivariate correlation, regression, and forecasting. Examines how to generate and interpret statistical analyses.

INSH 6864. Experiential Integration. (1 Hour)
Offers an integration course providing an opportunity for students on experiential placement to connect conceptual course material to experiential components. Students are expected to: interact with students from other disciplines, apply knowledge and skills across educational and experiential contexts; connect experiential components to different disciplines and domains of knowledge; and situate experiential components in the context of their own field and beyond. Requires department signature.

INSH 6964. Co-op Work Experience. (0 Hours)
Provides eligible students with an opportunity for work experience. May be repeated once.

INSH 7300. Advanced Research Methods in the Social Sciences and Humanities. (4 Hours)
Provides instruction in all aspects of research methodology in the social sciences and humanities, including causality; the measurement process; sampling procedures; scaling; use of available data; research designs, such as quantitative and qualitative survey methods, experimental design, and evaluation research; and methodological complexities such as mediation, moderation, and nonlinear processes.

INSH 7400. Quantitative Analysis. (4 Hours)
Studies the use of social science quantitative techniques and how to generate and interpret statistical analyses. Topics include measures of central tendency and dispersion, probability and probability distributions, sampling distributions and hypothesis testing, bivariate correlation, regression, and forecasting. Builds upon the concepts of correlation and inference to present analytic procedures involving several variables (including multiple regression, logistic regression, causal analysis, and multiway ANOVA) and introduces more advanced multivariate analytic methods.

INSH 7500. Advanced Quantitative Analysis. (4 Hours)
Designed to build upon the foundations provided by INSH 6404, INSH 6500, or an equivalent introductory statistics course with the goal of students becoming proficient with selected quantitative multivariate analysis techniques. Covers the ordinary least squares (OLS) regression model and the assumptions underlying it in detail, as well as the techniques for analyzing data when OLS assumptions do not apply, such as simultaneous equation models, time-series models, and maximum likelihood techniques for limited and discrete dependent variables. Requires prior completion of INSH 6404, INSH 6500, or an equivalent introductory statistics course. PhD students only or by permission.

INSH 7600. Advanced Methodological and Quantitative Techniques. (4 Hours)
Builds upon the foundations provided by INSH 7400 and INSH 7500 (and their equivalents) with the goal of students becoming proficient with selected advanced specialized quantitative analysis techniques or platforms. Taught throughout the semesterby different faculty members with expertise in particular statistical methods. Example modules include hierarchical linear modeling, structural equation modeling, path analysis, and time-series analysis.

INSH 7910. NULab Project Seminar. (2 Hours)
Offers students an opportunity to learn and use digital humanities methods with others in groups and across disciplines in the collaborative space of the NULab seminar. May be repeated up to three times.

INSH 9980. Experiential PhD Research Residency. (0 Hours)
Comprises a research residency experience in an organization whose mission and activities are aligned with the College of Social Sciences and Humanities PhD programs. The research residency is designed to help develop dissertation ideas or research papers or to obtain access to resources helpful to dissertation development or research. A faculty member serves as an advisor for the residency experience, but individuals within the organization in which the student is working are asked to serve as formal mentors for the student residency experience.