NATIONAL INSTITUTE OF ADVANCED STUDIES

COURSE OFFERINGS

Second Semester -January - April 2018

(1) School of Conflict and Security Studies

(1)Course Title: Trade Networks in Indian Ocean, 1500-1800

Course Instructor(s): Prakash Panneerselvam (Email: panprakash@gmail.com)

Credit Hours: 1 (Reading course, 1 contact hours/week)

Course Description:

The Indian Ocean is the first cosmopolitan maritime arena. It is world's third largest Ocean after Atlantic and the pacific, and covers 20 per cent of the world's total sea area. The coastline which runs approximately 66,526 kilometers compromises forty per cent of the globe's total coastline. It includes, amongst others, the Red Sea, the Persian Gulf, the Arabian Sea and the Bay of Bengal. The Indian Ocean is connected to global oceans and surrounded by three different continents viz., Africa, Asia and Australia. The Ocean has been centre of human progress, a great arena in which many races have mingled, fought and traded for thousands of years. The enormous flow of energy, goods and knowledge via the Indian Ocean historically marks the region as a discourse in social sciences. However, economics and trade was undoubtedly a critical element. The constant flow of goods to littorals of Indian Ocean societies has led to formation of markets and cosmopolitan cities. What bound these together was the flow of goods, individuals and ideas mediated through extensive networks – Indians, Armenians, Chinese and Europeans all of whom formed a part of the largest trading system in Indian Ocean Region (IOR). The main aspect of this course is to analyze defining features of maritime trade in Indian Ocean during early modern period. The course will also introduce the expansion of colonialism in Asia and trade activity of English private companies in the IOR.

Learning Objectives:

The main objective of the reading course is to make student familiarize with the maritime space and role of maritime trade in the building modern society.

Expected Student Workload:

Reading course with 1 contact hours per week (discussions) with remaining 6 hours/week is for preparation, reading papers and research project execution. It is mandatory for enrolled student to take up a research project based on his/her area of interest (with one presentations and one term paper submission).

Course Duration:

January-May (We will start in the week of January 24, 2017).

Lecture Topics and Discussion

Indo-roman trade relations, The Indian Ocean before Europe, The early Portuguese trade connection with Indian Ocean, The Western Indian Ocean in 17th and 18th Centuries, Trade route and commerce in Southeast Asian, Chinese trade connectivity with Indian Ocean, European enterprise and Indian Ocean Region, Asian shipbuilding tradition in Indian Ocean, English private trade in Indian ocean.

Basis for Final Grades

In class participation/discussions: 40%

Research Project execution: 30%

Research Project presentation (1 presentation): 10%

Research Project Term paper: 20%

References/Reading Material

Following research paper/books chapter will be used for the reading course. This is not an exhaustive list and a full list of papers will be given during the start of the course.

1. Gwyn Campbell, Madagascar and the Slave Trade, 1810-1895, *The Journal of African History,* Vol. 22, No. 2 (1981), pp. 203-227.
2. Geoff Wade, An Early Age of Commerce in Southeast Asia, 900-1300 CE, *Journal of Southeast Asian Studies*, Vol. 40, No. 2 (Jun., 2009), pp. 221-265
3. Jason Neelis, Trade networks in Ancient South Asia in *Early Buddhist Transmission and Trade Networks,* Brill 2011.
4. Om Prakash, English Private Trade in the Western Indian Ocean, 1720-1740*, Journal of the Economic and Social History of the Orient, Vol. 50, No. 2/3, Spatial and Temporal Continuities of Merchant Networks in South Asia and the Indian Ocean*(2007), pp. 215-234.
5. Kirti N. Chaudhuri, The Portuguese Maritime Empire, Trade, and Society in the Indian Ocean During the Sixteenth Century, *Portuguese Studies, Vol. 8, Special Issue supported by the Comissão Nacional para as Comemorações dos Descobrimentos Portugueses* (1992), pp. 57-70.
6. Ranabir Chakravarti, Horse Trade and Piracy at Tana (Thana, Maharashtra, India): Gleanings from Marco Polo, *Journal of the Economic and Social History of the Orient*, Vol. 34, No. 3 (1991), pp.159-182.
7. Peter Ridgway, Indian Ocean Maritime History Atlas, *The Great Circle*, Vol. 27, No. 1 (2005), pp. 34-51.
8. Adam Clulow, Like Lambs in Japan and Devils outside Their Land: Diplomacy, Violence, and Japanese Merchants in Southeast Asia, *Journal of World History*, Vol. 24, No. 2 (June 2013), pp. 335-358.
9. Kenneth R. Hall, Local and International Trade and Traders in the Straits of Melaka Region: 600-1500, *Journal of the Economic and Social History of the Orient*, Vol. 47, No. 2 (2004), pp.213-260.

10. Hugh R. Clark, Maritime Diasporas in Asia before da Gama: An Introductory Commentary, *Journal of the Economic and Social History of the Orient*, Vol. 49, No. 4, Maritime Diasporas in the Indian Ocean and East and Southeast Asia (960-1775) (2006), pp. 385-394.
11. Victor Lieberman, Maritime influences in Southeast Asia, c. 900—1300: Some further thoughts, *Journal of Southeast Asian Studies*, Vol. 41, No. 3 (October 2010), pp. 529-539.
12. Matthew P. Fitzpatrick, Provincializing Rome: The Indian Ocean Trade Network and Roman Imperialism*, Journal of World History*, Vol. 22, No. 1 (March 2011), pp. 27-54.
13. S. Arasaratnam, Recent Trends in the Historiography of the Indian Ocean, 1500 to 1800, *Journal of World History*, Vol. 1, No. 2 (Fall, 1990), pp. 225-248.
14. Martin Ottenheimer, Social organization and Indian Ocean long-distance trade, Zeitschrift für Ethnologie, Bd. 116 (1991), pp. 125-134.
15. Anthony Webster, The Development of British Commercial and Political Networks in the Straits Settlements1800 to 1868: The Rise of a Colonial and Regional Economic Identity? *Modern Asian Studies*, Vol. 45, No. 4 (JULY 2011), pp. 899-929.
16. Tansen Sen, The Formation of Chinese Maritime Networks to Southern Asia, 1200-1450, *Journal of the Economic and Social History of the Orient*, Vol. 49, No. 4, Maritime Diasporas in the Indian Ocean and East and Southeast Asia (960-1775) (2006), pp. 421-453.
17. Giancarlo Casale, The Ottoman Administration of the Spice Trade in the Sixteenth-Century Red Sea and Persian Gulf, *Journal of the Economic and Social History of the Orient*, Vol. 49, No. 2 (2006), pp.170-198.
18. Craig A. Lockard, "The Sea Common to All": Maritime Frontiers, Port Cities, and Chinese Traders in the Southeast Asian Age of Commerce, ca. 1400-1750, *Journal of World History*, Vol. 21, No. 2 (June 2010), pp. 219-247

(1) School of Humanities

(1)Course Title: GIS for spatial data visualization and analysis

Course Instructor(s): M.B.Rajani (mbrajani.nias@gmail.com)

Credit Hours: 3

Course Description:

GIS is a powerful tool for organizing, visualizing and analysing any data which has a geo-spatial component. It therefore has applications in a variety of domains. This course will emphasize the applications of GIS for various sub-topics under the broad fields of culture and society. It will discuss several case studies, with lectures by the instructor and guest lectures by other experts, focusing on methodologies and resulting outcomes. Students will receive guidance to undertake a research project as part of this course, where they must investigate spatial components of data in their chosen domains. These findings will be discussed in seminars, as part of the course. Participants have to bring their own laptops for lab component. The software necessary can be freely downloaded, and usage will be demonstrated.

Probable starting date and schedule/ timings: 2nd week of Jan 2018.

(2) Course Title: Reading Landscape through archaeology and ecology

Course Instructor(s): Smriti Haricharan and Krishnpriya Tamma (smriti.haricharan@nias.res.in)

Credit Hours: 3 (Reading course, 3 contact hours/week)

Course Description:
The course is designed to look at landscapes from the perspective of both archaeologists and ecologists. It uses themes to help explore the varied ways in which each of these disciplines use landscape in their studies. In both disciplines the landscape is not only the 'field' where information is gathered but is also a space which is analysed. The course explores the ways in which the landscape is 'seen' in each of these disciplines and how that shapes the research.

Learning Objectives:
• How the independent trajectories of the two disciplines relationship with landscape shapes contemporary research questions
• Understanding not only the differences but also the similarities between the various approaches
• Explore the potential of landscape in research

Pre-requisites for registration/auditing: Interest in archaeology and or ecology-preferably both.

Expected Student Workload:
This is a reading course with 3 contact hours/week which will be in the form of discussions as well as take home reading/assignments. This will be exclusive of one presentation and two assignments which will be marked.

Course Duration: January-May-2018

Lecture Topics and Discussion
 The topics that will be covered include: How do ecologists and archaeologists understand the anthropocene, looking at the way time is used to understand the landscape. Use of tools such as GIS as forms to analyze information from the landscape, landscape also is an important aspect of understanding mortuary practices especially in archaeology. The course also covers aspects such as trade, dispersal/migration, cultural transmission, as well as subsistence and the landscape-including hunting technologies, agricultural practices.

Basis for Final Grades: In class participation/discussions: 15%

Research Project execution: 35%

Two presentations: 50%

References/Reading Material

The following research papers will be used for the reading course. This is not an exhaustive list and a full list of papers will be given during the start of the course.

Bender, Barbara. "Landscapes on-the-move." Journal of Social Archaeology 1, no. 1 (2001): 75-89.

David, Bruno, and Julian Thomas, eds. Handbook of landscape archaeology. Routledge, 2016.

Fuller, Dorian. "Ashmounds and hilltop villages: the search for early agriculture in southern India." Archaeology International (2000).

Gallant, Thomas W. ""Background noise" and site definition: a contribution to survey methodology." Journal of Field Archaeology 13, no. 4 (1986): 403-418.

Knapp, A. Bernard, and Wendy Ashmore. "Archaeological landscapes: constructed, conceptualized, ideational." Archaeologies of landscape: contemporary perspectives(1999): 1-30.

Morrison, Kathleen D. "Provincializing the anthropocene." Global Biogeochemical Cycles 12, no. 4 (1998): 667-685.

Rossignol, Jaqueline, and LuAnn Wandsnider, eds. Space, time, and archaeological landscapes. Springer Science & Business Media, 2013.

Solli, Brit, Mats Burström, Ewa Domanska, Matt Edgeworth, Alfredo GonzálezRuibal, Cornelius Holtorf, Gavin Lucas, Terje Oestigaard, Laurajane Smith, and Christopher Witmore. "Some reflections on heritage and archaeology in the Anthropocene." Norwegian archaeological review 44, no. 1 (2011): 40-88.

(3) Course title: Iconography and History of Art

Subject/ discipline: Art History & Archaeology (Heritage)

Level of course: Intermediate

Number of credits: 2

Type: (lecture, seminar, guided reading, etc): Guided Reading and Fieldwork

Name of instructor(s): Prof Sharada Srinivasan

Course description:

The guided Reading cum Fieldwork course would be oriented towards the understanding the elements of study and interpretation of visual images in the history of art particularly with respect to the concepts of an icon and what constitutes iconography and icons as artefacts. The related methodological aspects in terms of the identification, classification and description and further interpretations in terms of exploring issues of chronology or of provenance and findspot of the artefact are explored.   Apart from global examples from the ancient world such as Greece etc., the course would focus on the contexts of Hindu, Buddhist and Jaina iconography in relation to the manifestations in plastic and fine arts, and painting and the key art historical developments including technological dimensions. The syncretic influences from artistic practices of other religious or belief traditions such as Islam or Christianity in terms of artistic techniques or motifs are also touched upon.   The students would be expected to undertake case studies and fieldwork working with local collections.

Probable starting date and schedule/ timings: Starting 18th Jan with 2 hours per week

(4)Course Title: Causality Testing and Its Applications

Course Instructor(s): Nithin Nagaraj (Email: nithin.nagaraj@gmail.com), Consciousness Studies Programme, NIAS.

Credit Hours: 2 (Reading course, 2 contact hours/week)

Course Description:

Causality testing, the act of determining cause and effect from measurements, is widely used in physics, climatology, neuroscience, econometrics and other disciplines. As a result, a large number of causality testing methods have been developed such as Granger Causality, Transfer Entropy, Convergent Cross Mapping, Information Flow, Compression-Complexity Causality and others. In this reading course, we will discuss several causality testing methods, their underlying principles and applications.

Learning Objectives:

The primary objective is to familiarize the student with key ideas, principles and methods for Causality Testing and its applications in the sciences and engineering.

Pre-requisites for registration/auditing:

Probability, basic statistics, stochastic processes, linear algebra, and familiarity with MATLAB/Python or any equivalent programming language. Comfort with mathematical thinking, and rigor is expected.

Expected Student Workload:

This is a reading course with 2½ contact hours/week (discussion and in-class interaction) with remaining 6-8 hours/week of preparation, reading papers, books and research project execution. The student is expected to read the research paper for the week ahead of the class and the nature of the class will be more of interaction rather than lecture style. The student will be required to take up a research project with at least one in-class presentation and one term paper submission.

Course Duration:

Jan-May 2018 (Exact date will be circulated).

Topics for Discussion

Causality testing basics, Wiener-Granger causality, Non-linear Granger, Transfer entropy, Convergence Cross Mapping, Dynamic Causal Modeling, Information Flow, Compression-Complexity Causality, Casual emergence, links between Anticipating Synchronization & causality, Retrocausality. Applications of causality testing to fields such as climatology, econometrics, neuroscience and consciousness studies will be discussed.

Basis for Final Grades

In class participation/discussions/presentations: 45%
Research Project execution: 25%
Research Project presentations: 15%
Research Project Term paper: 15%

References/Reading Material

The following reading material will be used for this course. This is not an exhaustive list and a full list of papers will be given during the start of the course.

Papers (not an exhaustive list):

1. N. Ay and D. Polani, "Information Flows in Causal Networks," *Adv. Complex Syst,* vol. 11, no. 17, 2008.
2. L. Sommerlade, M. Eichler, M. Jachan, K. Henschel, J. Timmer and B. Schelte, "Estimating causal dependencies in networks of nonlinear stochastic dynamical systems," *Phys. Rev. E.,* vol. 80, no. 051128, 2009.
3. C. Granger, "Investigating causal relations by econometric models and cross-spectral methods," *Econometrica,* vol. 37, pp. 424-438, 1969.
4. T. Schreiber, "Measuring Information Transfer," *Physical Review Letters,* vol. 85, no. 2, pp. 461-464, 2000.
5. K. J. Friston, L. Harrison and W. Penny, "Dynamic causal modelling," *NeuroImage,* vol. 19, no. 4, pp. 1273-1302, 2003.
6. G. Sugihara, R. May, H. Ye, C. Hsieh and E. Deyle, "Detecting Causality in Complex Ecosystems," *Science,* vol. 338, pp. 496-500, 2012.
7. X. Liang, "Unraveling the cause-effect relation between time series," *Physical Review E.,* vol. 90, 2014.
8. X. Liang, "Information flow and causality as rigorous notions ab initio," *Physical Review E.,* vol. 94, 2016.
9. N. Wiener, The theory of prediction. Modern mathematics for the engineer, New York: McGraw-Hill, 1956.
10. Hoel, E. P., Albantakis, L., & Tononi, G. (2013). Quantifying causal emergence shows that macro can beat micro. *Proceedings of the National Academy of Sciences*, *110*(49), 19790-19795.
11. Hoel, E. P. (2017). When the map is better than the territory. *Entropy*, *19*(5), 188.
12. Seth AK, Dienes Z, Cleeremans A, Overgaard M, Pessoa L. Measuring consciousness: relating behavioural and neurophysiological approaches. Trends in cognitive sciences. 2008;12(8):314–321.
13. Tononi G. Integrated information theory of consciousness: an updated account. Arch Ital Biol. 2012;150(2-3):56–90.
14. Oizumi M, Albantakis L, Tononi G. From the Phenomenology to the Mechanisms of Consciousness: Integrated Information Theory 3.0. PLoS Comput Biol. 2014;10(5):1–25. doi:10.1371/journal.pcbi.1003588.

15. Seth AK, Izhikevich E, Reeke GN, Edelman GM. Theories and measures of consciousness: An extended framework. Proceedings of the National Academy of Sciences. 2006;103(28):10799–10804. doi:10.1073/pnas.0604347103.
16. Tononi G. An information integration theory of consciousness. BMC Neuroscience. 2004;5(1):1–22. doi:10.1186/1471-2202-5-42.
17. Tononi G, Edelman GM. Consciousness and complexity. science. 1998;282(5395):1846–1851.
18. Tononi G, Sporns O, Edelman GM. A measure for brain complexity: relating functional segregation and integration in the nervous system. Proceedings of the National Academy of Sciences. 1994;91(11):5033–5037.
19. Seth AK. Causal connectivity of evolved neural networks during behavior. Network: Computation in Neural Systems. 2005;16(1):35–54.
20. Seth AK, Barrett AB, Barnett L. Causal density and integrated information as measures of conscious level. Philosophical Transactions of the Royal Society of London A: Mathematical, Physical and Engineering Sciences. 2011;369(1952):3748–3767. doi:10.1098/rsta.2011.0079.
21. Tononi G, Sporns O. Measuring information integration. BMC Neuroscience. 2003;4(1):1–20. doi:10.1186/1471-2202-4-31.
22. Tononi G. Consciousness, information integration, and the brain. Progress in brain research. 2005;150:109–126.
23. Seth A. Explanatory correlates of consciousness: theoretical and computational challenges. Cognitive Computation. 2009;1(1):50–63.
24. Tononi G, Boly M, Massimini M, Koch C. Integrated information theory: from consciousness to its physical substrate. Nature Reviews Neuroscience. 2016.
25. Virmani, M., & Nagaraj, N. A Compression-Complexity Measure of Integrated Information. arXiv preprint arXiv:1608.08450. 2016.
26. Kathpalia, A., & Nagaraj, N. (2017). Causality Testing: A Data Compression Framework. *arXiv preprint arXiv:1710.04538*

(2) School of Social Sciences

(1)Seminar on Urban Political Ecology, Mobility and Informality

Course title: Seminar on Urban Political Ecology, Mobility and Informality

Subject/ discipline: Urban Studies / Urban Sociology/ Urban Anthropology/ Geography

Level of course: Intermediate

Number of credits: 3

Type: Seminar

Prerequisites: Some postgraduate coursework in social sciences is required

Name of instructor(s): Carol Upadhya

Course description:
In this seminar course we will read and discuss recent literature on urban informality, migration and urban political ecology in the Global South. The readings, which will be drawn from diverse bodies of work in urban anthropology and sociology, geography and urban studies with an ethnographic orientation, will explore the intersections between different forms of mobility; changing urban political economies; the growth of informal labour, settlements and housing; land use changes and rural-to-urban transitions in peri-urban areas; and the urban environmental crisis. We will examine critically diverse theoretical approaches to understanding these issues, particularly in the Indian context and from the perspectives of gender, caste and class, and explore new research methodologies and techniques.

Probable starting date and schedule/ timings:
The course will start in the third week of January, schedule tbd. The class will meet roughly twice a month, for a total of eight sessions of two hours each, plus a final session for presentation of the term papers.

Course requirements:
1. This is a seminar, not a lecture course. The course will be reading intensive, and students are expected to do ALL the required reading and other assignments prior to class and be prepared to actively discuss them. Marks (10 out of 100) will be given for classroom participation.
2. Students taking the course for credit will write and present in class *two* short essays (of 3-4 pages) on selected themes from the course (20 marks each). These essays will be posted in advance on the course blog, and students will be responsible for leading the classroom discussion on during those sessions.
3. Students will also write and present in class a final term paper, based on additional readings and original research, on a topic of their choice (50 marks).

(2)Course title: Ethnographic Dissertation Writing

Subject/ discipline: Education

Name of instructor: Leya Mathew

Number of credits: 1

Type: Seminar

Course description:

This seminar course is intended for advanced PhD candidates who have engaged in ethnographic fieldwork and have completed preliminary data analysis. The course will focus on two related aspects of dissertation writing 1) analytical rigor and 2) organization. In order to facilitate your specific dissertation projects, I will emphasize the formal elements of writing and expect you to fill out the content, which means that each of you will generate your own content readings. Participants are expected to circulate draft-abstracts of their thesis as well as of each proposed chapter.

Probable starting date and schedule/ timings: Jan 12, Friday mornings

(3)Course title: Ethnographies of Labor

Name of instructor: Leya Mathew

Number of credits: 2

Type: Seminar

Course description:

This seminar course explores some of the key preoccupations of ethnographies of labor: worker subjectivity, sociality, and forms of governance, control, and resistance/ ambivalence. After an introductory reading of Marx, Arendt, and Weeks, we will read ethnographies of labor, focusing on both factory labor and post-Fordist formations of affective, aesthetic, cultural, entrepreneurial, and cognitive labor. Rather than approach the work place as merely relations of exploitation between capital and labor, we will examine the situated social, affective, and symbolic relations entailed in producing textiles, electronics, back-end infrastructures, free software, glamor, and stock-market wealth. We will explore how these relations and processes produce particular kinds of relational bodies even as they assemble specific kinds of logics about their respective fields of production.

Probable starting date and schedule/ timings: Jan 15, Mondays, 10am-1pm

(4)Course title: Migration & Health

Name of instructor: Abha Rao

Number of credits: 2

Course description:

This course will focus on the relationship between migration and health, by focusing on the health of migrant populations. We will cover theories, substantive content areas, and policy related to migration and health, with a focus on the Indian context. Some of the topics include rural-to-urban migration, economic and distress migration, maternal health, child health, systems of health delivery, access to healthcare services, barriers and facilitators to healthcare, socio-cultural factors, environmental factors, intersection with labour and economic inequalities, role of remittances, and finally, recommendations for interventions and policy. The assessment will include a brief research study in a design of the student's choosing.

Course workload:

12 weeks, 3 hours lecture/contact hours each week.

Course duration: February-April 2018