Social Network Analysis in Political Science Training Course

Professional Development Training Course Outline

Category	Political Science and International Relations	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Social Network Analysis in Political Science Training Course provides a comprehensive introduction to **Social Network Analysis (SNA)**, a powerful methodology for understanding political processes and structures. It moves beyond traditional political science methods that focus solely on individual attributes, instead emphasizing the **relational data** that reveals how actors, institutions, and ideas are interconnected. Participants will learn to map and analyze political networks, identifying key influencers, detecting factions, and tracing the flow of information and influence. The curriculum integrates **computational methods** with core political science theory, enabling participants to apply cutting-edge techniques to real-world political phenomena, from legislative voting patterns and policy-making to social movements and online disinformation campaigns.

In an increasingly **data-driven political landscape**, the ability to analyze complex networks is a critical skill. This course demystifies the technical aspects of SNA, providing a hands-on learning environment where participants will use popular software packages to conduct their own analyses. The training is structured to build from foundational concepts to advanced **network modeling**, ensuring that participants not only master the tools but also develop a deep theoretical understanding of **network dynamics**. By the end of this course, participants will be equipped to conduct original research, inform strategic decision-making, and contribute to the growing field of **computational political science**.

Programme Curriculum

Social Network Analysis in Political Science Training Course

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Course Duration

10 days

Course Objectives

1. Define Core SNA Concepts: Understand foundational terms like nodes, edges, centrality, and network density.
2. Collect Relational Data: Master methods for gathering network data from diverse sources, including surveys, archives, and social media.
3. Visualize Political Networks: Use specialized software to create clear and compelling visualizations of complex political relationships.
4. Measure Network Centrality: Calculate and interpret various centrality measures (degree, betweenness, closeness, eigenvector) to identify influential actors.
5. Detect Communities and Cliques: Apply algorithms to find hidden subgroups, factions, and echo chambers within political networks.
6. Analyze Power and Influence: Use network metrics to quantify and explain the distribution of power and influence in political systems.
7. Model Network Dynamics: Explore how political networks evolve over time, from formation to change.
8. Trace Information Diffusion: Understand how ideas, policies, and disinformation spread through political communication networks.
9. Conduct Policy Network Analysis: Map and analyze the relationships between government agencies, interest groups, and policymakers.
10. Study Electoral Campaigns: Apply SNA to analyze co-sponsorship networks, campaign donation ties, and voter mobilization strategies.
11. Assess Social Movement Mobilization: Use network theory to understand how activists build coalitions and mobilize support.
12. Analyze Online Disinformation: Identify and analyze coordinated networks of bots and troll accounts on social media platforms.
13. Integrate SNA with Other Methods: Combine network analysis with other quantitative and qualitative research methods.

Target Audience

1. Political Science Researchers and PhD Students
2. Data Scientists and Analysts
3. Policy Analysts and Public Sector Professionals.
4. Campaign Managers and Political Strategists
5. Journalists and Media Analysts.
6. Sociologists and Communication Scholars
7. International Relations Specialists: Who want to analyze state and non-state actor relationships.
8. Academics and Students in Social Sciences

Course Modules

Module 1: Introduction to Network Thinking

- What is Social Network Analysis? Why is it relevant to political science?
- Distinguishing between relational and attribute data.
- Core concepts: Nodes (actors), Edges (ties), and Networks.
- Types of networks in political science: electoral, policy, and protest networks.
- **Case Study:** The "Six Degrees of Separation" concept and its application to political connections.

Module 2: Network Data and Data Collection

- Methods for collecting network data: surveys, archives, and online sources.
- Introduction to network data formats (e.g., adjacency matrices, edgelists).
- Data cleaning and preparation for analysis.
- Ethical considerations in political network data collection.
- **Case Study:** Collecting and preparing data on US Senate co-sponsorship networks from legislative archives.

Module 3: Network Visualization

- Principles of effective network visualization.
- Using network software (e.g., Gephi, R).
- Understanding different layout algorithms (e.g., Force Atlas, Fruchterman-Reingold).
- Interpreting visual patterns like network hubs and clusters.
- **Case Study:** Visualizing a network of political donations to reveal key donors and their connected recipients.

Module 4: Centrality Measures

- Understanding different types of network centrality.
- Degree Centrality: Identifying the most connected actors.
- Betweenness Centrality: Finding key intermediaries or "brokers."
- Closeness and Eigenvector Centrality: Measuring reach and influence.
- **Case Study:** Identifying the most influential legislators in a national parliament based on their centrality in co-sponsorship networks.

Module 5: Subgroup and Community Detection

- Introduction to the concept of network communities.
- Modularity and clustering algorithms.
- Identifying political factions, voting blocs, and interest group coalitions.
- Analyzing the role of "bridges" between different communities.

- **Case Study:** Detecting hidden communities within a network of political blogs to identify politically aligned echo chambers.

Module 6: Policy Network Analysis

- Mapping and analyzing the relationships between policy actors.
- Identifying the structure of policy-making networks.
- Analyzing stakeholder influence and power dynamics.
- Using networks to assess policy diffusion.
- **Case Study:** Mapping the network of government agencies, NGOs, and corporations involved in climate policy to identify key alliances and conflicts.

Module 7: Social Movements and Collective Action

- Network structure of social movements.
- The role of "weak ties" and "strong ties" in mobilization.
- Analyzing the spread of collective action and protest.
- Identifying key organizers and activists.
- **Case Study:** Examining the network of protest events and participating organizations during a major social movement to understand its spread and cohesion.

Module 8: Electoral Politics and Campaign Analysis

- SNA of voter mobilization and campaign strategies.
- Analyzing campaign donation networks.
- Co-sponsorship networks and legislative voting patterns.
- Understanding political polarization through network analysis.
- **Case Study:** Analyzing a network of campaign donations in a recent election to uncover patterns of influence from PACs and special interest groups.

Module 9: Social Media and Political Communication

- Using SNA to analyze social media platforms (Twitter/X, Facebook).
- Identifying information cascades and opinion leaders.
- Detecting bot networks and coordinated inauthentic behavior.
- Analyzing hashtag networks and online discourse.
- **Case Study:** Mapping the network of accounts and their interactions during a national election to identify a foreign disinformation campaign.

Module 10: Advanced Statistical Network Models

- Introduction to advanced network modeling.
- Exponential Random Graph Models (ERGMs) for network formation.
- Stochastic Actor-Oriented Models (SAOMs) for network change.
- Interpreting model outputs.
- Comparing different network models.
- **Case Study:** Using an ERGM to determine which actor attributes (e.g., political party, ideology) predict the formation of ties in a political network.

Module 11: Network Resilience and Vulnerability

- Understanding network robustness and fragility.

- Identifying critical nodes and ties.
- The impact of targeted attacks or node removal on network function.
- Analyzing the resilience of communication and supply chains.
- **Case Study:** Simulating the removal of key political figures from a network to assess its vulnerability and identify potential points of failure.

Module 12: Qualitative and Mixed-Methods SNA

- Combining qualitative insights with quantitative network analysis.
- Using interviews and archival data to enrich network data.
- Visualizing qualitative data in a network context.
- Interpreting network diagrams with contextual knowledge.
- **Case Study:** Using interviews with policymakers to understand the reasons behind the ties in a policy network, complementing a quantitative analysis of meeting attendance records.

Module 13: Ethical Considerations in SNA

- Privacy and data anonymization.
- The potential for surveillance and misuse of network data.
- Ethical guidelines for social media research.
- Responsible reporting and visualization of sensitive data.
- **Case Study:** Discussing the ethical implications of using network analysis to study online extremist groups, balancing research goals with potential harm.

Module 14: Practical Toolkit: R and Python

- Introduction to R (igraph, statnet) and Python (NetworkX, nxviz) for SNA.
- Hands-on exercises for data import, analysis, and visualization.
- Writing and sharing reproducible network analysis code.
- Troubleshooting common coding issues.
- **Case Study:** Replicating a classic political science network analysis study using a provided dataset and code in either R or Python.

Module 15: Final Project and Presentation

- Participants apply their skills to an original research question.
- Designing a political network analysis study.
- Data collection, analysis, and visualization.
- Presenting findings in a clear, compelling manner.
- **Case Study:** Participants choose a topic (e.g., international relations, public opinion, local politics) to conduct a full SNA project, culminating in a final report and presentation.

Training Methodology

- **Interactive Lectures:** Core concepts are delivered through concise, lecture-style sessions.
- **Hands-on Workshops:** Practical, computer-based sessions where participants apply concepts using network analysis software and coding languages.
- **Real-World Case Studies:** Each module is anchored by a relevant case study, connecting theory to practical application.
- **Group Discussions and Peer Review:** Participants discuss findings, share code, and provide feedback on each other's work.

- **Individual Project:** A culminating project allows for in-depth application of learned skills to a topic of personal interest.
- **Expert-Led Instruction:** The course is led by instructors with deep academic and practical experience in both political science and computational methods.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

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