

# Inside Innovation Information Concentration

## Overview

This two-course series provides an opportunity for creative problem-solving through innovative research partnerships including hands-on exercises participating in an R&D project support to joint stakeholders. The course topics support the CJCS special areas of emphasis: Globally Integrated Operations in the Information Environment (GIOIE) and Great Power Competition.

Over the span of a 2-elective series track, students share their domain expertise to shape real-world research while partners share technical expertise in emerging technology solutions in the information/influence space. Working closely with partner organizations and stakeholders, the fall course scopes and plans the project, and the spring course executes and evaluates the project.

**Project Track A)** “Understanding Chinese Influence” supported with funding from OSD Minerva’s DECUR research award to support INDOPACOM, AFRICOM, JS J39 with technical partners in University of Washington’s Informatics department.

**Project Track B)** “Countering Malign Influence” in partnership with the Global Engagement Center (GEC) and J39 organizations leverages GEC’s DisInfo Cloud technologies and commercial technical partners

**Project Track A (6044A + 6693A):** Students are participating in the Defense Education and Civilian University Research (DECUR) Partnership, supporting fundamental research and professional military education. This partnership aims to develop collaborative basic research relationships between Defense Professional Military Education (PME) Institutions and Civilian Research Universities and achieve the following: 1) support basic research projects that improve capacities in security-related basic social science; 2) inform Department of Defense policymakers; 3) train future military leaders in social science methods; and 4) enhance scientific cooperation between civilian and military educational institutions. The Minerva Research Initiative, funded by the Basic Research Office, under the Director of Defense for Research and Engineering, Research and Technology, supports basic research that focuses on topics of particular relevance to U.S. national security. Through these partnerships, NDU students strengthen the department’s connections with the social science community and help DoD better understand and prepare for future challenges, particularly those prioritized in the National Defense Strategy including Information and Influence.

**Project Track B (6044B + 6693B):** The Global Engagement Center and their DisInfo technology development will partner with NDU to test current technologies for new questions. NDU will develop and evaluate applied research with a commercial partner. Learning through research partnerships is the foundation of critical thinking, communication, strategic planning, and ethical leadership that supports topic-centered learning in Information and Influence. Through these concentration courses, students will be instructed by numerous experts toward the

successful completion academic and research outcomes. Partnerships include: INDOPACOM J9 Office of Strategic Partnerships providing regional connections; NDU alumni relations, who are focused on INDOPACOM for 2020/21 is a wide network connecting with leaders in the region; and the Global Engagement Center's analysis team members who will facilitate the use and testing of newly developed Disinfo Cloud technologies from commercial partners.

#### Value:

Education and training are only effective insofar as they are built upon accurate and comprehensive models of how the world works. While we know something about how information spreads in the GIOIE, we know much less about the impact of that information, how evolving information platforms interact with human psychology that may result in new diffusion dynamics, and the most powerful mechanisms for countering disinformation. Given the dynamic nature of information and cyber technologies, these gaps can only be addressed by continuous research that can credibly inform the material from which training and education is drawn, deployed, and updated. In the absence of research, education and training will invariably be based on limited, intuitive, and potentially inaccurate models, leading to unintended consequences that can include poor policies, counter-productive investments, new vulnerabilities, and competitive disadvantage.

The partnership research approach purposefully integrates PME students and defense community domain expertise in each phase. The National Defense Strategy as well as subsequent implementation documents, including the Chairman's Globally Integrated Operations in the Information Environment (GIOIE) and Great Power Competition Strategy, necessitate a deeper focus on behavioral and social sciences in order to understand decision-making of competitors, adversaries, and partners leveraging information as an instrument of national power. The recent National Academies of Sciences report developed in partnership with ODNI, A Decadal Survey on Social and Behavioral Sciences: A Research Agenda for Advancing Intelligence Analysis noted the lack of integration of social sciences leads to errors, re-treading of old ground, and poor fit of findings to National Security (NS) use cases. These elective tracks are built around projects which merge academic strength and NS expertise through a joint project into a more effective, more comprehensive, more strategic whole.

These research partnerships translate the direct utility of behavioral and social sciences, understanding what human beings do, how, and why, into the strategic skillset of PME students. Additionally, the technical expertise and resources of partners allow NDU students to integrate and apply Information and Influence with emerging technologies such as AI/ML, cyber, and visualization tools. Students are not only be exposed to leading-edge research, but they will learn how to call on it, how to evaluate it, and where it can enhance their strategic objectives. Additionally, the development of a shared lexicon and analytic perspectives may facilitate future research to incorporate NS impact with more awareness of end-users and state-of-the-field knowledge gaps. NDU students will directly contribute to the advancement of science and technology in strategic influence which can increase agility by being, Inside Innovation.

## Concentration and Course Learning Objectives

- Understand emerging technologies used to analyze and operate in the information environment. (GIOIE)
- Strategically test hypotheses about the use of Influence contributing to new scientific knowledge. (GIOIE, Great Power Competition)
- Increase creative problem-solving and critical reasoning through participation in research outcomes that leverage Information as an Instrument of Power. (GIOIE, Great Power Competition)
- Evaluate evidence against standards in order to defend statements and questions with critical reasoning in both speaking and writing, demonstrating knowledge of information, influence, and emerging technology.
- Structure and build teams to benefit from diverse thinking and problem-solving.