
INENTR X90

Innovation & Entrepreneurship Fundamentals and Global Immersion Summer 2019



Dates / course meeting time: July 21-August 9, 2019 (3 weeks) detailed meeting date and time are listed in the course schedule./ 3 academic contact hours per day, 15 hours per week, 45 contact hours in total for 3 weeks

Academic credit: 2 credits

Course format: Lectures, readings, case studies and site visits

Instructor's Information

Denis Simon, Ph.D. Executive Vice Chancellor of DKU, Professor of China Business and Technology Affairs in the Fuqua School of Business at Duke University

Dr. Simon previously held international affairs leadership positions and faculty appointments at several universities in the United States and China. An expert on the role of science and technology in international relations, he also has extensive private sector experience, having held China-based leadership roles at both Monitor Consulting Group and Andersen Consulting (now Accenture). He has written and lectured widely regarding innovation, high technology development, foreign investment and corporate strategy in the Pacific-Rim and is frequently quoted in the Western and Asian business press regarding commercial and technology trends in China, Hong Kong and the Asia-Pacific region.

Junjie Zhang, Ph.D. Associate Professor at Duke & DKU, Director of Environmental Research Center, DKU

Junjie Zhang is Director of Environmental Research Center and Master of Environmental Policy (iMEP) Program at Duke Kunshan University, Associate Professor of Environmental Economics at Duke Kunshan University and in the Nicholas School of the Environment at Duke University. He is also a Senior Adviser of Asia Society. Zhang's research centers on empirical issues in environmental and resource economics. He adopts an interdisciplinary approach that integrates social sciences, engineering and natural sciences to deal with environmental policy problems. His research topics cover air pollution, water resources, energy and climate change.

Jesko von Winham, Ph.D. Professor of the Practice of Environmental Innovation and Entrepreneurship, Duke University

Jesko von Windheim is a Professor of the Practice in Environmental Entrepreneurship at Duke University. Dr. von Windheim is a technology entrepreneur who is focused primarily on early-stage innovations in the physical sciences. He was a co-founder of Cronos Integrated Microsystems, a microelectromechanical systems company (acquired by JDS Uniphase); he was CEO and founder of Nextreme Thermal Solutions, fabricator of the "world's smallest refrigerator" (acquired by Laird Technologies); and he is currently CEO of Zenalux Biomedical (www.zenalux.com) which uses light to monitor health outcomes and diagnose disease.

What is this course about?

Innovation & Entrepreneurship have been given great attention within world's two largest and most dynamic economies. Innovation is about how new ideas are translated into new products and services and how new business models are created. Entrepreneurship is about how individuals together create new business value by mobilizing capital and taking risk.

With cross boundaries economic development and increasing newly e-business models, the college students are facing a critical challenge in exploring their individual values and career opportunities in the dynamic development and potentials of globalization. The course will provide a global overview of key trends regarding cross-border innovation and entrepreneurial activity, and offer students useful guidance about the successful creation and early execution of a new venture. The students in this course will specifically learn the fundamentals of new venture business management and analysis, key operational tools and practical experience regarding creating viable business models for start-ups.

The overall length of the course is three weeks (July 21- August 9, 2019), including one week at DKU and two weeks at Duke University. During the first week at DKU, students will attend lectures on strategic planning & innovation, entrepreneurial leadership, introduction to high-tech and technology transfer, cost benefit analysis and green entrepreneurship, and venture capital investment in China. Along with the academic lectures, students will be provided with access to several entrepreneurial situations by visiting manufacturing firms, high-tech companies and start-ups, and venture capital funds. Students will get an overview of a variety of enterprises via discussions and interviews with enterprise managers and administrative staff.

The 2-week learning at Duke will teach students marketing, finance and business planning within the context of forming a start-up. Core concepts include establishing a value proposition; identifying an opportunity; intellectual property and technology management; marketing & financing a start-up; and exiting a company. The course has a technology focus, but many of the concepts apply to any start-up activity. Students will form teams to go through all the steps required to form a business, stopping short of executing legal agreements to do so. The experience is an ideal springboard for students who want to start a company or be part of an early-stage company in the future.

The course will be discussion-oriented requiring a high degree of participation by students in the classroom and site visits.

What background knowledge do I need before taking this course?

No prerequisites.

What will I learn in this course?

- **The Nature of Innovation and Business Development:** students will focus on learning about the nature and fundamentals of innovation and start-up companies as well as understanding the opportunities and challenges of the increasingly globalized world economy. Students will study how to develop an innovative mind-set tied to creating new businesses, enterprises, and organizations in the context of the global market.
- **The Dynamic Role of Entrepreneurship and Start-ups:** within our experience-based learning environment, students will analyze the failures and successes of companies, and learn to evaluate business opportunities with a set of tools provided by the various instructors. Students will demonstrate their ideas and analyses about the requirements for launching and growing a new entrepreneurial venture.

- **Green Entrepreneurship and International Trade:** students will learn cost benefit analysis in green economies, and obtain an overview of various pathways associated with doing business in China and worldwide. Instructors also will provide opportunities for exploring the interaction between the Chinese economy and global economy. A variety of theoretical models associated with international trade and global entrepreneurial policies also will be emphasized in the course.
- **Strategic Business Planning and Marketing:** students will be introduced to a series of up-to-date business models and business proposals. Instructors also will encourage students to implement the knowledge and practical experience that they have achieved in this course to map out their own business plans and develop relevant marketing strategies.
- **Financial Planning & Legal Communication:** the instructors will help students develop analytical tools (e.g. risk management, portfolio diversification, financial fragility, etc.) for understanding banking issues and financial instruments. Students will also promote their language skills in legal communication.

How will I know if I have met the objectives of this course?

Throughout the course, intensive reading and case study discussion will be required for students individually and in a group. An individual essay requires each student to reflect what he/she learns from the lectures and summarize it in a short essay to explain why you are interested in innovation and entrepreneurship. An individual presentation will be also required for each student to present creative perspectives and entrepreneurial insights on any crucial aspects of start-up business. Students will be divided into small groups to comprise the mock formation of a company based on scenarios provided by the instructors. The final project papers will be assigned to test if students meet the course objectives.

How can I prepare for the class sessions to be successful?

Videos and readings from the training manual and related materials will provide background on the theory and practice. Additionally, readings of different case studies will be assigned for each class and will serve as the basis for group discussions.

Laptops or notebooks are useful for the group work.

What required texts, materials, and equipment will I need?

Required readings materials will be distributed by instructors. Students should bring their laptops for essay composition and postings.

What optional texts or resources might be helpful?

Useful websites: Harvard Business School Publishing website (<https://cb.hbsp.harvard.edu/>).

Course Requirements / Key Assignments

The class will be very interactive, including lectures, discussions, student presentation, and final project. Students are required to attend all lectures during the three weeks, and to read assigned readings before each lecture. Grading for this course is based on four major components: Attendance, Presentation, Reading & Discussions, and Final Project.

Assignment	Date Assigned	Date Due	Percentage
Participation/attendance	July 21	August 9	10%
Individual presentation	July 21	July 26	30%
Reading & Discussions	July 21	August 8	20%
Final Project	July 29	August 8	40%
Total			100%

1. Attendance (10%): students are all required to participate in all lectures and site visits. The discussions in the class engage students with proactive involvement in creative thinking, role-playing and perspective sharing. The site visits will provide students a practical learning environment to obtain technical experience of solving real problems.

2. Individual presentation (30%): Based on the lectures and required readings, each student will choose a topic from innovation and entrepreneurship domain as their individual presentation. Students are expected to make the presentation within 10 minutes in length. Each presentation will be graded by three crucial categories: Language and communication skills, Practical framework and Organization, Overall quality of presentation.

3. Reading & Discussions (20%): during the 3-week program, series readings will be assigned to students before the class. Students will be divided into small groups (normally 5 students in one group). Instructor will throw out discussion questions to each group. Students will have 5-10 minutes preparation on the topics. Each group are required to recommend a group leader presenting the perspectives, opinions, or solutions to the assigned issues.

4. Final Project (40%): each student will be required to submit “Business opportunity analysis template” as their final project by the end of the program. Requirements:

- Read the references and templates given by the instructors;
- Review the example opportunity analysis that has been provided;
- Complete an opportunity analysis including description of the opportunity, Intellectual Property issues, Value Proposition, Business Models, Ability to Execute, Metrics, Analysis and actions.

The grading scale for the course is as follows:

A+ 98-100	C+ 77-79
A 93-97	C 73-76
A- 90-92	C- 70-72
B+ 87-89	D+ 67-69
B 83-86	D 63-66
B- 80-82	D- 60-62
	F 0-59

What are the course policies?

ACADEMIC INTEGRITY: Each student is bound by the academic honesty standard of the Duke Kunshan University. Its Community Standard states: “Duke Kunshan University is a community composed of individuals of diverse cultures and backgrounds. We are dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and accountability. Members of this community commit to reflecting upon and upholding these principles in all academic and non-academic endeavors, and to protecting and promoting a culture of integrity and trust.”

ATTENDANCE: Students are all required to attend all lectures and site visits during the whole program. In case the student has a legitimate excuse for an absence, he/she should get approval from instructor in advance. An excused absence does not count for lost attendance.

Laptops are allowed in class for note taking and to review readings or quickly look up topics. They are not for checking email and other personal business.

What campus resources can help me during this course?

[DKU administrators: Insert link to a pdf or website url for the full list of resources, that includes the writing center, language labs, tutors, and any other relevant campus learning resources.]

DKU Library: <https://dukekunshan.edu.cn/en/academics/library>

Duke Kunshan Colloquium: <https://dukekunshan.edu.cn/en/academics/colloquium>

DKU Campus Life: <https://dukekunshan.edu.cn/en/campus-life>

What is the expected course schedule?

Time		Content
22/7 Mon	AM	<p>Lecture 1: Strategic Planning & Innovation</p> <p><i>Time:</i> 9:00-12:00</p> <p>Instructor: Prof. Denis Simon, Executive Vice President of DKU</p>
	PM	<p>Lecture 2: Entrepreneurial Leadership</p> <p><i>Time:</i> 14:00-17:00</p> <p>Instructor: Mr. Liang Yu, Director of Executive Education Program, DKU</p>
23/7 Tue	AM	<p>Lecture 3: Introduction to 5G Wireless communications</p> <p><i>Time:</i> 9:00-12:00</p> <p>Instructor: Dr. Younghan Han, Professor at Korea Advanced Institute of Science and Technology, and Director of 5G WISE Research Center in Korea</p>
	PM	<p>Lecture 4: Presentation & Writing for Business</p> <p><i>Time:</i> 14:00-17:00</p> <p>Instructor: Prof. Don Snow, Director of Language Training Center, DKU</p>
	Night	<p>Workshop: Personal Development & Self-exploring</p> <p>19:00-20:30 Facilitator: Tim Smith</p> <p>Venue: Student Residence Hall, DKU</p>
24/7 Wed	AM	<p>Lecture 5: Technology commercialization: China-Korea Science & Technology Development and Collaborations</p> <p><i>Time:</i> 9:00-12:00</p> <p>Instructor: Dr. Younghan Han, Professor at Korea Advanced Institute of Science and Technology, and Director of 5G WISE Research Center in Korea</p>
25/7 Thu	AM	<p>Lecture 6: Cost Benefit Analysis and Green Entrepreneurship</p> <p><i>Time:</i> 9:00-12:00</p> <p>Instructor: Dr. Junjie Zhang, Associate Professor at Duke & DKU, Director of Environmental Research Center, DKU</p>
	PM	<p>Individual Presentation Assessment</p> <p><i>Time:</i> 13:00-17:30</p> <p>Venue: Room3107, AB, DKU</p>

26/7 Fri	PM	<p>On-site Lecture 7 Venture Capital Investment in China</p> <p><i>Time:</i> 14:30-16:30</p> <p>Instructor: Dr. Peter Hua Ping, Managing Partner of SBCVC,</p> <p>Venue: Soft Bank China Venture Capital (软银中国)</p>
27/7 Sat	AM	<p>Coach from DKU to Pudong Airport;</p> <p>Depart for Raleigh Durham International Airport, North Carolina, USA</p>
	PM	<p>Airport pick-up (group arrival only);</p> <p>Residence Check-in at Duke University</p>
29/7 Mon	AM	<p>Lecture 8: Product Development</p> <p><i>Time:</i> 9:00-12:00</p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: David Koester, Product Development Manager, Zenalux Biomedical</p> <p>Reading:</p> <p>1. <i>More Push Than Pull</i> Author: J. von Windheim Source: Physics World</p> <p>2. <i>Tyrata White Paper</i> Author: A. Franklin, K. von Gunten Source: Private</p>
30/7 Tue	AM	<p>Lecture 9: Marketing and Communications I</p> <p><i>Time:</i> 9:00-12:00</p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: Karl von Gunten Adjunct Professor, Duke University; Marketing Manager for Laird Technologies</p> <p>Reading:</p> <p>3. <i>Business Communications that Work</i> Author: C. Turner Source: HBP</p>
31/7 Wed	AM	<p>Lecture 10: Innovation and Wealth Creation</p> <p><i>Time:</i> 9:00-12:00</p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: Jesko von Windheim Adjunct Professor, Duke University; Marketing Manager for Laird Technologies</p>
1/8 Thu	AM	<p>Lecture 11: Introduction to Entrepreneurship & New Business Creation</p> <p><i>Time:</i> 9:00-12:00</p> <p>Venue: Nicolas School, Duke University</p>

		<p>Instructor: Jesko von Windheim</p> <p>Professor of the Practice of Environmental Innovation and Entrepreneurship, Duke University</p> <p>Reading: 4. <i>Lab to Market Roadmap (Introduction)</i> Author: J von Windheim, B. Meyers Source: Private</p>
	PM	<p>Lecture 12: Case Study- Tyrata, Inc. – Value Proposition</p> <p><i>Time:</i> 13:30-16:00</p> <p>Instructor: Jesko von Windheim</p> <p>Professor of the Practice of Environmental Innovation and Entrepreneurship, Duke University</p> <p>Reading: 5. <i>Customer Value Proposition in Business Markets</i> Author: J Anderson, J. Narus, W. van Rousum Source: HBP 6. <i>Tyrata Opportunity Analysis (Student)</i> Author: J. Andrews et. Al Source: Private</p>
2/8 Fri	AM	<p>Lecture 13: Corporate Legal Structure in the USA</p> <p><i>Time:</i> 9:00-12:00</p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: John Fuscoe</p> <p>Senior Lecturing Fellow, Duke University Law School; Attorney, Wyrick Robbins Yates & Ponton LLP</p>
	PM	<p>Lecture 14: Product Development, Nextreme, Inc.</p> <p><i>Time:</i> 9:00-12:00</p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: David Koester Product Development Manager, Zenalux Biomedical</p> <p>Reading: 7. <i>Is Your Product Development Process Helping or Hindering Innovation</i> Author: E. Mankin Source: HBP</p>
3-4/8 Sat-Sun	Weekend	
5/8 Mon	AM	<p>Lecture 15: Marketing and Communications II</p> <p><i>Time:</i> 9:00-12:00</p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: Karl von Gunten</p>

		<p>Adjunct Professor, Duke University; Marketing Manager for Laird Technologies</p> <p>Reading: <i>8. Market Segmentation, Target Market Selection, & Positioning</i> Author: M. Sarvary Source: HBP</p>
6/8 Tue	AM	<p>Lecture 16: Marketing and Communications III</p> <p><i>Time: 9:00-12:00</i></p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: Jesko von Windheim Professor of the Practice of Environmental Innovation and Entrepreneurship, Duke University</p>
7/8 Wed	AM	<p>Lecture 17: Scaling Up Your Business</p> <p><i>Time: 9:00-12:00</i></p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: Stephen Brooks Industry Consultant</p> <p>Reading: <i>9. Start-Ups That Last</i> Author: R. Gulati, A. DeSantola Source: HBP</p>
8/8 Thu	AM	<p>Lecture 18: Startup Financing</p> <p><i>Time: 9:00-12:00</i></p> <p>Venue: Nicolas School, Duke University</p> <p>Instructor: Jesko von Windheim Professor of the Practice of Environmental Innovation and Entrepreneurship, Duke University</p> <p>Reading: <i>10. How VCs Evaluate Potential Venture Opportunities</i> Author: M. Roberts Source: HBP</p>
9/8 Fri	AM	<p>Closing Session– Next Steps for Entrepreneurs</p> <p>Instructor: Jesko von Windheim Professor of the Practice of Environmental Innovation and Entrepreneurship, Duke University</p> <p>Reading: <i>11. Ultra-low Gossypol Cottonseed</i> Author: A. Carmody, J. Jang, R. Mrax, S. Thoits Source: Private</p>