

SPRING 2019 VERSION18122018

INDUSTRIAL PHD: THE BUSINESS OF IMPACT, INNOVATION, AND CO-CREATION

Course coordinator

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Course aim

The course aims to prepare the Industrial PhD students to understand and embrace the responsibility to create a business impact through their PhD research, to skillfully navigate between business and academia, and to ensure value creation.

Course rationale

The Industrial PhD Program aims at increasing knowledge sharing between universities and private-sector companies or public sector/NGO, promoting research with commercial/value add perspectives, and taking advantage of competences and research facilities in private/public business to increase the number of PhDs. This course is a first step on this journey.

The course focuses on creating and strengthening a shared understanding of the Industrial PhD scheme as a unique example of collaborative research practice in both Danish and international contexts, which clearly addresses the need for and the benefit of research gaining momentum and impact in practice—in the hosting company, the academic world, and society. The vision for this course is, therefore, to consolidate and strengthen the brand value of the Industrial PhD scheme and applied research both nationally and internationally by combining a classical PhD education with competencies to create and demonstrate the impact of research in practice.

The overall aims of the course are to

- offer knowledge, competencies, and skills necessary to deliver the societal value and ensure business impact created by the Industrial PhD project,
- enhance networking among Industrial PhDs and ensure knowledge sharing, creation of innovative opportunities, and cracking the interdisciplinary challenges, and
- contribute to business-oriented innovation and entrepreneurship in Denmark.

The course is compulsory for all Industrial PhD students, obtaining funds from the Innovation Fund.

Course content

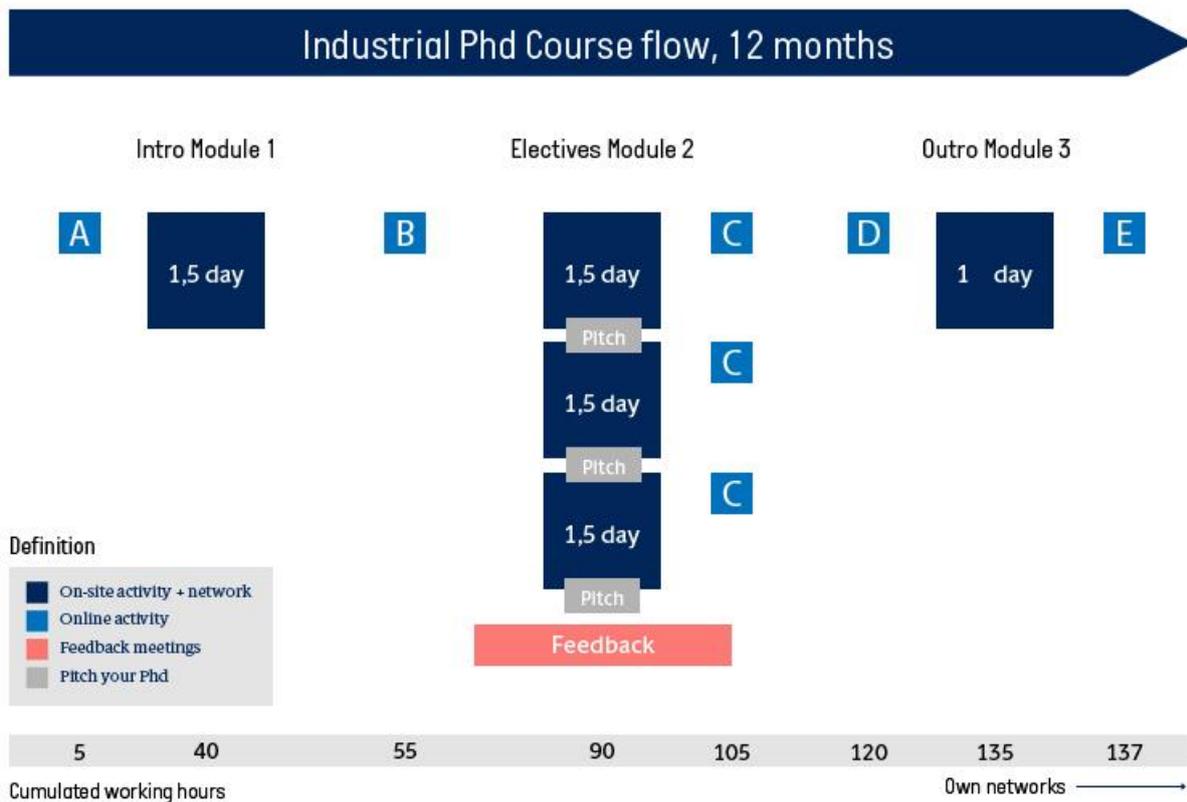
The course runs approx.. 12 months. It is highly recommended to take the course during the first year of PhD studies. The course consists of two compulsory modules and one elective. These are:

- **Module 1.** *The Best of Both Worlds—The Potentials and Pitfalls of Mutual Value Co-creation in-between Academia and Practice.*
Required. 2 ECTS. April 1-2, 2019 (on-site).
- **Module 2a.** *Project Management and Organizational Dynamics.*
Elective. 1.5 ECTS. October, 30-31 2019 (on-site)
- **Module 2b.** *Inspiring Entrepreneurship and Making Innovation Happening.*
Elective. 1.5 ECTS. October, 30-31 2019 (on-site)
- **Module 2c.** *A Toolkit for Communicating the Impact of Your Research – audiences, modes, media and interactions.*
Elective. 1.5 ECTS. October, 30-31 2019 (on-site).
- **Module 3.** *Empowerment on the Personal Level: Incorporate Career Goals, Keep up Energy and Manage the Supervisory Relationship in the Industrial PhD Setting.* Required. 1.5 ECTS. April 2, 2020 (on site).

When signing up for the course, each student should identify one elective module she or he would like to follow.

Teaching methods

The course will be carried out using a blended learning teaching style, where teaching is delivered through traditional classroom teaching, online learning, reflection exercises, feedback, peer-grading, and networking activities. The figure below illustrates the overall course.



The classroom teaching includes 1.5-day introductory module, 1.5-day elective module, and 1-day closing module. The detailed descriptions of teaching for each module are included below. Typically, teaching is conducted as a flipped classroom, where class teaching focuses on activities with a specific learning point in being together, while individual preparation and information sharing takes place online. The classes will be conducted in the workshop style with exercises, cases, and opportunities for students to work on concrete tools they could use later in their projects. Off-site modules offer additional opportunities for interaction, dialogue, and networking.

Online activities are complementary to the classroom teaching and provide content for self-directed learning. That is, PhD students are expected to review the content provided online at any time within a given time frame (usually two to three weeks). There are five online activities scheduled during the course:

- **Activity A:** This is a pre-course activity.
- The assignment will be uploaded on the course portal *CBS Learn* on February 28, 2019
- **Activity B:** This activity is associated with the module 1.
- The detailed description is included in the module description below.
- **Activity C:** This activity is associated with the modules 2a-c.
- The detailed description is included in the module description below.
- **Activity D:** This activity is associated with the module 3.
- The detailed description is included in the module description below.
- **Activity E:** This is a final course activity that is going to be handed out at the end of module 3.

Feedback meetings with supervisors (both university and business) are integrated in the course design. Experience shows that the three parties (i.e., the company, the student, and the university counselor) do not meet regularly during the PhD project, and many consider the cooperation to be unsatisfactory. This is very problematic, as close relationships between these three stakeholders are one of the primary success criteria for the successful implementation of an Industrial PhD. During the course, feedback meetings shall take place twice: (1) after module 1 but prior modules 2a-c, and (2) after modules 2a-c, but prior module 3.

Peer grading: There is evidence that peer assessment enables students to learn from each other's successes and weaknesses. The ability to access one another's work objectively is clearly an important skill. Also, this will support group and collaborative learning so that students are given the opportunity to create professional and social relationships with other peers. The evaluation will be done online using tools available through the online platform CBS Learn. The Industrial PhD students will be organized in relevant thematic as well as interdisciplinary groups.

Network events: The importance of building strong networks will be emphasized throughout the process. However, there will be two events with the following specific topics: "Speed Dating on Ideas" in Module 1 and "Pitch Your PhD" in the evening of elective modules. In addition, the PhD students will be invited to join the networks organized afterward, including a mentoring system with the course alumni.

Examination

Course participation is assessed as passed/not passed. The evaluation is ongoing and assessed by the evaluation of students' participation in all course activities, that is, through 1) active participation in the activities carried out in and between classroom education, 2) submission of all the study products and online activities defined for each module, and (3) completion of the feedback cycle.

Assessment is an integral part of the course progress and pedagogy. It is not only a necessary final formality but also focuses on value-creating learning activities that are directly transferable to the student's practice along the way.

In the next sections, we present a detailed description of each of the modules. We reserve the right to make changes in the time, venue, and faculty, as well as minor modifications to the content.

MODULE 1

THE BEST OF BOTH WORLDS—THE POTENTIALS AND PITFALLS OF MUTUAL VALUE CO-CREATION IN BETWEEN ACADEMIA AND PRACTICE

Type: Required

ECTS: 2 ECTS

Dates: April 1-2, 2019

Place: Sørup Herregård, Sørupvej 26, 4100

Faculty

Rikke Kristine Nielsen, Associate Professor, Department of Communication & Psychology, Aalborg University Copenhagen (module coordinator).

Flemming Poufelt, Professor Emeritus, Department of Management, Politics & Philosophy, Copenhagen Business School.

Module aims

The research literature distinguishes between two types of impact of research: Academic impact and practical impact. Academic impact has to do with producing sound, rigorous research that can be published in high-ranking journals. Practical impact has to do with impacting non-academic stakeholders in practice and policy, for instance organizations/corporations, customers, citizens, consumers or government. This module is designed to help Industrial PhD students realize and deliver on the part of your project application for the Innovation Fund Denmark, where you described the practical impact of *your* research project. Depending on the nature of your host organization, practical impact may be commercial/business value or usefulness in public sector organizations/NGOs. Regardless of the specific nature of your research project and host organization, all Industrial PhD applicants have been required to specify the nature of the practical impact of their project as well as and how they plan to deliver this impact. Now that your research project is well under way, the time has come to refine, realize and execute on your practical impact plans and dreams. This module discusses both research-based as well as experience-based strategies and tips on how to do that.

Module content

The module consists of two sections:

Section 1: Constructive controversy—value creation in between academia and practice

Experience from decades of Industrial PhD research as well as extant research literature inform us that delivery of practical impact in research comes with a number of special opportunities and challenges that transcend academic disciplines and scientific traditions. This part of the course discusses ways of harvesting the benefits and avoiding the pitfalls by proactively positioning yourself in a field characterized by a variety of stakeholders with different conceptions of quality/value. Taking the research literature dealing with such a researcher role and position as our point of departure, this part of the course discusses your position as a researcher in-between academia and practice working with your stakeholder interview and your practical impact potential. In addition to discussing your position as a double-hurdle researcher from research literature point of view, we also engage in an "Industrial PhD collaboratorium".

This takes the form of a panel debate where experienced Industrial PhD stakeholders is gathered to share ideas and advice for doing Industrial PhD research and debate Industrial PhD research with participants.

Section 2: Business/organizational strategy and your personal impact strategy

This second section of module 1 focuses on Industrial PhD research impact in the context of your host organization and strategic priorities with a view to building an “impact case” and stakeholder analysis of the individual Industrial PhD researcher’s project, placing it in the value chain and wider stakeholder ecosystem.

Learning objectives:

By participating in this module, the participant will acquire

- an understanding of and practical tools for optimization of the Industrial PhD researcher’s role as a knowledge entrepreneur in-between research and practice,
- suggestions for strategies for impact optimization and multi-stakeholder cooperation,
- great and best practice: Inspiration for “dos and don’ts” in Industrial PhD research from Industrial PhD practitioners and extant literature, and
- membership in a community of practice through networking and knowledge sharing with peers.

Teaching methods

This off-site module is conducted in an interactive workshop format, where participants work with stakeholder value creation and research impact in plenary, group work, and individual reflection. Highlights of the module literature are presented in videos made available to participants before the module so that we may spend our time together debating the take-aways from the literature and convert theoretical arguments to practical tools to be used in the participants’ projects, seeking inspiration from each other, as well as guest lecturers/panelists.

Examination

To pass this module, the Industrial PhD student must actively participate in the module’s teaching activities by engaging in the following “learning by doing” actions before, during, and after the module.

1. Prior to participating in the module, the Industrial PhD student must
 - a. complete a survey on his/her research project and background and
 - b. conduct a 45-minute interview with a central Industrial PhD research project stakeholder about the practical value and impact of the research project.
2. During the module, the Industrial PhD student is required to
 - a. participate in the teaching activities, including group work, by being present for all sessions offered as part of module 1.
3. After module 1—and before module 2—the Industrial PhD produces
 - a. a business case for his/her Industrial PhD project to be discussed with university and host organization supervisors who give written feedback on the business case to the participant which counts as documentation of this activity and

- b. a 5-7-page stakeholder analysis of central Industrial PhD project stakeholders for which the participant receives written feedback through peer grading from co-students.

Indicative literature

Cohen, W. M. & Levinthal, D. A. (1990): Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152. (24 pages)

Freeman, E. (2010). *Strategic Management—A Stakeholder Approach*. United Kingdom: Cambridge University Press, pp. 52-81 (31 pages)

Wickins, E., & Crossley, M. (2016). Coming alongside in the co-construction of professional knowledge: A fluid approach to researcher positioning on the insider-outsider continuum. In *Revisiting Insider— Research in Comparative and International Education*. (pp. 225-240). Oxford: Symposium Books. (15 pages)

Adler, P. A. & Adler, P. (Eds.) (1987). *Membership Roles in Field Research*. Thousand Oaks: SAGE Publications, pp. 51-68 (17 pages)

Schein, E. H. (2009). *Helping. How to Offer, Give, and Receive Help. Understanding Effective Dynamics in One-to-One, Group, and Organizational Relationships*. San Francisco, CA: Berrett-Koehler Publishers, pp. 30-47 (17 pages)

Ernst, C., & Chrobot-Mason, D. (2011). Flat world, hard boundaries: How to lead across them. *MIT Sloan Management Review*, 52(3), 81-88. (8 pages).

Löwsted, J. & Stjernberg, T. (Eds.) (2006). *Producing Management Knowledge: Research as Practice*. London: Routledge (30 pages)

Alvesson, M. (2003): Methodology for close up studies—Struggling with closeness and closure. *Higher Education*, 46(2), pp. 167-193 (26 pages).

Kieser, A. & Leiner, L. (2009). Why the rigor–relevance gap in management research is unbridgeable. *Journal of Management Studies*, 46(3), 516-533. (17 pages)

Prahalad, C. K. & Ramaswamy, V. (2002). The co-creation connection. *Strategy and Business*, 27, 50-61. (9 pages)

Pettigrew, A. M. (2008). Scholarly impact and the co-production hypothesis. *Global Focus*, 2(2), 8-12.

Hansen, M. T. & Nitin, N. (2004). How to build collaborative advantage. *Sloan Management Review*, 46(1), 22-30. (8 pages)

Crosina, E. & Bartunek, J. (2017). The Paradoxical Mystery of the Missing Differences between Academics and Practitioners. In Smith, W. K., Lewis, M. W., & Jarzabkowski, P. (Eds.), *The Oxford Handbook of Organizational Paradox*, pp. 490-512. Oxford University Press. (21 pages)

Perkmann, M., Tartari, V., McKelvey, M., Autio, E., Broström, A., D'Este, P., & Krabel, S. (2013). Academic engagement and commercialisation: A review of the literature on university–industry relations. *Research Policy*, 42(2), 423-442 (21 pages)

Penfield, T., Baker, M. J., Scoble, R., & Wykes, M. C. (2014). Assessment, evaluations, and definitions of research impact: A review. *Research Evaluation*, 23(1), 21-32 (9 pages).

Follow-up readings will be uploaded on CBS Learn after the module.

MODULE 2, ELECTIVE A PROJECT MANAGEMENT AND ORGANIZATIONAL DYNAMICS

Type: Elective

ECTS: 1,5 ECTS

Dates: October 30-31, 2019

Place: TBA

Faculty

John K. Christiansen, Professor at Copenhagen Business School

Joana Geraldi, Associate Professor at Copenhagen Business School

Module aims

Projects are part of the daily life of firms, as they act as vehicle for e.g. boosting innovation, bringing about change, and creating new products and services. This module aims at enhancing participants' knowledge about project management, while fostering a reflexive approach to the subject and its practice. It will introduce two different theoretical perspectives on project management: one represents the traditional view on project management, represented clearly in international standards and most textbooks. The other perspective represents the so called 'Scandinavian school' of project management, which on the one hand acknowledges the need for classic planning tools and methods, but also reflects on the need for flexibility and co-creation to cope with the high uncertainty, complexity and ambiguity of projects.

We then bring the two theoretical perspectives into three core project practices, that is, three levers/pillars that every project practitioner will *do*:

- (1) Aiming: creating the vision, purpose, scope and planning;
- (2) Adapting: identifying and responding to risks, opportunities and unexpected changes to project processes, project content and project context;
- (3) Collaborating: navigating in the complex stakeholder landscapes that most projects face today.

The two perspectives and three project practices form a 2x3 matrix that will guide the course.

Module content

The intention is that all subjects in the curriculum of this module will be illustrated through practical exercises, relating the theory and the analytical tools to the individual PhD project and other projects.

Aiming the Project: Purpose and plan

Apply tools and concepts to define project vision, purpose, scope, success and benefit, and connect these with a project plan. As we discuss aspects of planning, and timing, we will discuss behavioral aspects of scheduling, e.g. procrastination, overly cautious scheduling, and identify pragmatic coping strategies to mitigate them in own projects.

Adapting the project: Uncertainty and change

Explain impact of uncertainty and change in projects and identify mitigation strategies for own projects.

Collaborating in and around the project: Dynamic contingency stakeholder management

Being able to recognize the importance of different requirements from different stakeholders, e.g. need for progress reporting versus dialogue.

Learning objectives

After this module, the participants will have gained knowledge, tools, and methods to

- understand two distinctly different theoretical views on project management, and their implications for the selection and application of management tools and concepts,
- apply tools and concepts to develop and manage projects, including developing purpose and plans for the project,
- being able to identify sources of uncertainty and changes and to manage their project in a world enriched with uncertainty and ambiguity,
- explain and apply approaches for managing stakeholders and building relationships for their projects, including strategies for communication of progress and research results to and interaction with stakeholders in a dynamic setting,
- recognize the behavioral challenges of scheduling, such as procrastination, and identify pragmatic approaches to mitigate them in projects.

Teaching methods

The module combines two half-day workshops with online activities. The teaching will be a mix of delivery methods encouraging active participation of the participants through discussions and exercises. The class is inspired by the flipped classroom pedagogy where participants are expected to have executed guided reading prior and conducted some preparation activities before we meet and also to conduct one ex-post reflection activity after the workshop to be submitted online.

Before the course

Participants will engage with a number of guiding presentations and course literature on the on-line platform (*CBS Learn*). The readings cover various parts of the 2 x 3 course matrix and participants are asked to reflect on how the readings relate to their PhD experiences (and if they would like to, other project experiences) and write a short essay of 1-2 pages on this.

Examination

During the module, the Industrial PhD student is required to participate in the teaching activities, including group work, by being present for all sessions offered as part of the module. After the module, the participants will need to deliver a short reflection submission that will be graded as pass/failed. The reflection submission of around 500 words should build on the students' preparations and classroom debates and treat a topic of importance for the participant, and deal with implications for project management of her/his own PhD project or another business project.

Indicative literature

- Andersen, E. S., (2014) Two Perspectives on Project Management. In Lundin, R.A. & Hällgren, M. (Ed.) (2014) *Advancing Research on Projects and Temporary Organizations*, Copenhagen Business School Press & Liber
- Jensen, A. F., Thuesen, C. & Geraldi, J. (2016) The projectification of everything: Projects as a human condition. *Project Management Journal*, 47(3), pp. 21-34.
- Maylor, H. (2010). (Chapter 2 and 4.) *Project Management*. Harlow, England; New York: Financial Times Prentice Hall.
- Kreiner, K. (2014) The Project Success; Restoring Project Success as Phenomenon.
- Snowden, D. J., & Boone, M. E. (2007). A leader's framework for decision making. *Harvard Business Review*, 85(11), 68.
- Kreiner, K. (1995). In search of relevance: project management in drifting environments. *Scandinavian Journal of Management*, 11(4), 335-346.
- Vogwell, D. (2003). *Stakeholder management*. Paper presented at PMI® Global Congress 2003—EMEA, The Hague, South Holland, The Netherlands. Newtown Square, PA: Project Management Institute.
- Tryggestad, K., Justesen, L., & Mouritsen, J. (2013). Project temporalities: how frogs can become stakeholders. *International Journal of Managing Projects in Business*, 6(1), 69–87.
- Christiansen, J. K., & Varnes, C. J. (2007). Making Decisions on Innovation: Meetings or Networks? *Creativity and Innovation Management*, 16(3), 282–298.

MODULE 2, ELECTIVE B

INSPIRING ENTREPRENEURSHIP AND MAKING INNOVATION HAPPEN

Type: Elective

ECTS: 1,5 ECTS

Dates: October 30-31, 2019

Place: TBA

Faculty

Jacob Lyngsie, Associate Professor, University of Southern Denmark

Module aims

The course explores entrepreneurial behaviour by individuals that lead to the discovery of new business opportunities and how such opportunities may be exploited by established firms/organisations.

Entrepreneurship has become a key focus area in today's dynamic competition. The classical type of entrepreneurship, self-employment, has become a means to fuel growth. However, the view that the study of entrepreneurship means the study of people whom start-up companies is unnecessarily constraining. However, entrepreneurship also involves complex processes of assembling bundles of complementary resources and coordinating actions and investments over time in the pursuit of profit under uncertainty – all activities associated with the established firm. Thus, recruitment and support of employees engaging in entrepreneurial behaviour is a key factor in firms' competitive strategy. However, until recently most research has focused on the individual entrepreneur establishing a new venture and given little emphasis on the entrepreneurial behaviour carried out by salaried employees. In addition, most managerial advice about entrepreneurship within established firms has been based on anecdotal evidence or single case studies.

This course breaks with the focus on individuals and instead emphasises that established firms may be uniquely positioned to use organizational mechanisms that exacerbate entrepreneurial behaviour. In relation to the Industrial PhD program this may involve exploring questions such as: who should be entrusted with engaging in entrepreneurial activities, what is the role of senior management in the entrepreneurial process, and how do firms organise to emphasise the entrepreneurial motivation of their employees. In addition to a research driven curriculum, students are prompted to apply course material to practical business circumstances.

Module content

The course centres on entrepreneurial behaviour by individuals. This entails exploring human capital antecedents of employees in terms of their proclivity to engage in entrepreneurial activities. However, as most of the course is based on entrepreneurial activities within established firms, an integral part of the course deals with how firms may organize such behaviour. However, unlike a new venture undertaken by an individual, entrepreneurial activities within established firms may broadly be separated into three different activities:

- The discovery

- Evaluation
- Exploitation activities

Thus, organizing entrepreneurial activities not only requires that entrepreneurial behaviour is encouraged by the firm's organizational setup but also that different phases are coordinated. Specifically, the course focuses on:

- Conceptualisation and analysis of entrepreneurial behaviour within established firms.
- Understanding key drivers of entrepreneurial behaviour and how these may differ between different entrepreneurial activities.
- Delineation and consideration of the role played by managers in establishing "pro-entrepreneurial firms"
- Practically orientated application of research findings and appreciation of the complexity of balancing different entrepreneurial activities.

Learning objectives

After this module, the participant will be able to:

- Reflect on an informed basis on the nature and antecedents of entrepreneurial behaviour.
- Be familiar with the analytical tools needed to manage constituent factors relating to entrepreneurial behaviour within established firms.
- Understand the differences between various aspects of entrepreneurial behaviour and how these may be separated within the firm.
- Identify organizational misalignment with entrepreneurial activities and apply practical tools to enhance entrepreneurial activities.

Teaching methods

The module combines a one-day workshop with several on-line activities. At the workshop, the pedagogical approach varies between lectures; dialogue based discussion; and student presentations based on group work. Throughout the course on-line methods will be utilized to enrich the learning experience. This may encompass videos, information search, on-line group meetings and student feedback on group work.

Examination

In order to pass this module, the Industrial PhD student must actively participate in the module's teaching activities by engaging in the following "learning by doing"-action before and during the module:

1. Prior to participating in the module, the Industrial PhD student must:
 - a. Prepare a 2-minute video presentation on her/his research topic and how this relates to innovative/entrepreneurial behavior.
2. During the module the Industrial PhD student is required to:
 - a. Participate in the teaching activities including group work by being present for all sessions offered as part of the module.

Indicative literature

Lyngsie, J. and Foss, N. J. (2017). The more, The merrier? Women in top-management teams and entrepreneurship in established firms. *Strategic Management Journal*, 38(3), 487-505

Foss, N. J., Lyngsie, J. and Zahra, S. A. (2015). Organizational design correlates of entrepreneurship: The roles of decentralization and formalization for opportunity discovery and realization. *Strategic Organization*, 13(1), 32-60

Foss, N. J., Lyngsie, J. & Zahra, S. A. (2013) "The role of external knowledge sources and organizational design in the process of opportunity exploitation." *Strategic Management Journal* 34.12: 1453-1471.

MODULE 2, ELECTIVE C

A TOOLKIT FOR COMMUNICATING THE IMPACT OF YOUR RESEARCH— AUDIENCES, MODES, MEDIA, AND INTERACTIONS

Type: Elective

ECTS: 1.5 ECTS

Dates: October 30-31, 2019

Place: TBA

Faculty

Rikke Kristine Nielsen, Associate Professor, Department of Communication & Psychology, Aalborg University Copenhagen (module coordinator)

Frederikke Winther, PhD, M.Sc. in rethorics, communication consultant, Copenhagen Coaching Center

David Budtz Pedersen, Professor, Department of Communication & Psychology, Aalborg University Copenhagen.

Module aims

This module aims at establishing a solid foundation for the development of the Industrial PhDs' communication competence with a view to enhancing the ability and motivation for effectively communicating the value of their research in a multi-stakeholder research setup.

The module takes as its point of departure that:

- Research communication is an active, productive and personally driven element of the collaborative research process which can stimulate dialogue, mutuality, and value creation, and
- Industrial PhDs stand to gain from being able to address many different interests and values in their communication. Not only after project completion, but also during the research process as pathways for fostering productive interactions with stakeholders, trust, and room for maneuvering.

This module emphasizes the development of communicational strategies and practices from within the everyday life as a researcher. It is important to note that this is not a course on presentation techniques or research dissemination in general, but rather a course on communication as an integral part of research practice throughout the project period.

The focus is put on the ongoing "micro-impacts" through communication – particularly, but not exclusively, internally in the host organization and in the "in-between" of host organization and host university. Micro-impacts are the smaller, incremental - positive as well as negative – insights, results and news that is relevant for central stakeholders to be informed about. Such an effort will support and stimulate the vital connection between the project and its variety of stakeholders (internal and external) *during* the research process, rather than *after* completion of research and results. Information and communication is key to interaction and collaboration between stakeholders.

In effect, this module aims at making participants capable of delivering on their knowledge dissemination obligation (cf. the regulations of the Innovation Fund Denmark) in an active, strategic, and meaningful way.

Module content

This module introduces theoretical perspectives of and practical tools for communicating Industrial PhD research in speech and writing both internally in the host organization as well as externally to the broader public through different communication modes and media. In effect, this module will invite participants to reflect upon the role of communication with respect to securing research impact through productive interactions with stakeholders and as a platform for social capital buildup.

The module will enable participants to handle communication in their project as well as positioning and planning of research communication. *Before* (pre-module assignments), *during* and *after* (after-module assignments) the module, participants will work with their own project communication through production exercises (online or in-class) such as:

- Research narratives and rhetorical positioning: Communicating from your different Industrial PhD positions
- Process communication: Intentions, modes and audiences
- Pitch your PhD (on-site in front of invited judges)
- Communication plan: Incorporating communication in your research and impact plan (cf. Module 1)
- Remediation – communicating the same message to different audiences in a digital format

Learning objectives

By participating in this module, the participant will obtain

- training in planning and execution of research communication activities,
- the ability to formulate central story lines tailored to different groups of stakeholders,
- training in handling communication activities in established news media as well as social media,
- practical research communication tools,
- the ability to formulate and disseminate the value and impact of the individual research project, and
- an understanding of the way in which research communication is an integral part of research impact in both practice and academia.

Teaching methods

The module combines a 12-12-hour workshop (two half days and one evening) with online activities. It is conducted in an interactive workshop format in which participants work with

stakeholder research communication in plenary, group work, and individual reflection. Highlights of the module literature are presented in videos made available to participants before the module so that we may spend our time together building theoretically informed research communication tools to be used when communicating the individual participant's research project.

Examination

To pass this module, the Industrial PhD student must actively participate in the module's teaching activities by engaging in the following "learning by doing" actions during and after the module. During the module, the Industrial PhD students are required to

- participate in the teaching activities including group work by being present for all sessions offered as part of module 2,
- produce communications tools tailored to their own project, and
- give a presentation, "an elevator pitch," of their research project.

Indicative literature

Horst, M., & Michael, M. (2011). On the shoulders of idiots: Re-thinking science communication as 'event.' *Science as Culture*, 20(3), 283-306.

Cheney, G., Christensen, L. T., Conrad, C., & Lair, D. J (2004). Corporate rhetoric as organizational discourse. In Grant, D., Hardy, C., Oswick, C., & Putnam, L. (Eds.) *The SAGE Handbook of Organizational Discourse*, 79-103.

Barker, R. T. & Gower, K. (2010). Strategic application of storytelling in organizations. Towards effective communication in a diverse world. *Journal of Business Communication*, 47(3), 295-312.

Trench, B. (2008). Towards an analytical framework of science communication models. In Cheng, D., Claessens, M., Gascoigne, T., Metcalfe, J., Schiele, B., & Shi, S. (Eds.) *Communicating Science in Social Contexts—New models, New Practices*, Springer, 119-135.

Gabrielsen, J. (2010). *The Power of Speech*. Hans Reitzels Forlag.

LERU (2017) *Productive interactions: Societal impact of academic research in the knowledge society*. League of European Research Universities. Main authors: Wiljan van den Akker & Jack Spaapen. Open access:

Ravenscroft, J. Liakata, M. Clare, A., & Duma, D. (2017). *Measuring scientific impact beyond academia: An assessment of existing impact metrics and proposed improvements*. Open Access: <https://doi.org/10.1371/journal.pone.0173152>

Follow-up readings will be uploaded on CBS Learn after the module.

MODULE 3

EMPOWERMENT ON THE PERSONAL LEVEL: INCORPORATE CAREER GOALS, KEEP UP ENERGY, AND MANAGE THE SUPERVISORY RELATIONSHIP IN THE INDUSTRIAL PHD SETTING

Type: Required

ECTS: 1,5 ECTS

Dates: April 2, 2020

Place: Copenhagen Business School

Faculty

Mirjam Godskesen, Independent Consultant in UNWIND, Part-time lecturer, AAU

Module aims

This module aims to empower the participants by giving them personal tools that target the specific challenge to navigate in the Industrial PhD setting.

When the participants take module 3, they are at the middle stage of the PhD study, which is often characterized by challenges such as increasing time-pressure and the feeling that there is still far to go. The module addresses three topics that are specifically challenging for Industrial PhD students:

- Worries about possible career paths
- Different expectations from the academic and Industrial setting
- Coping with stress and exhaustion due to their many obligations

It also rounds up the course; while module 1 *explores* the in-between position of an Industrial PhD student as a particular platform of inquiry and knowledge creation that comes with a range of possibilities and challenges, module 3 further explores this position, zooming in on the ability to *handle* these special challenges and opportunities on the more personal level.

Module content

Each of the three challenges refers to a separate teaching element in the module.

Career paths explored from an activity and strengths perspective

Input to this teaching element comes to a large extent from module 1 where former Industrial PhD students have participated and shared their stories. This is supplemented by a flipped-classroom element, where participants watch a video made specifically for the module where former Industrial PhDs are interviewed about their career choices and significant moments on their journey to their current position.

Inspired by these examples, participants explore their dreams from an activity and strength perspective. They prepare by 1) finding three examples of positions they would like to hold after the PhD and 2) by mapping activities in their work as an Industrial PhD according to a method focused on strengths and activities. At the workshop, participants will share their work, challenge and inspire each other on alignment between career goals and strengths, and 3) write a one-page reflection on their career plans and possibilities.

Managing supervisory relationships and organizational expectations

This teaching element takes its starting point in a presentation in which the PhD student is characterized as a “boundary subject,” and it will be exemplified how and why the special supervisory relationships in the Industrial PhD study are both challenging and potentially very rewarding. Participants will reflect on how their own PhD is “orchestrated” and share their experiences in groups. A one-page reflection is written and will be shared and commented on in peer groups. This reflection is included in the final portfolio.

Balancing between inspiration and exhaustion

The third teaching element explores inspiration and exhaustion as two sides of the same thing. Cross-pressure, realistic planning, and taking on the optimal amount of challenges will be addressed. Participants will make a game plan before the module and discuss realistic planning and priorities at the workshop in small groups.

Learning objectives

After this module, the participant will be able to

- reflect on an informed basis concerning possible career paths after the PhD study,
- connect one’s career goals to specific competence development during the PhD study,
- navigate more safely in the field between academia and industry and in handling relations in the supervisory group,
- manage and prioritize ones’ work in the cross field between diverging expectations in different organizational settings, and
- keep a healthy work-life balance and a proactive approach to stress.

Teaching methods

The module combines a one-day workshop with several online activities. At the workshop, pedagogical methods alternate between short presentations, dialogue, and group work in groups of different sizes. The online methods encompass videos, activity mapping based on tools, investigations of possibilities, online group meetings, and a reflection paper.

Examination

To pass this module, the Industrial PhD student must actively participate in the module’s teaching activities by engaging in the following activities before, during, and after the module:

1. Before the course, participants are required to
 - a) watch a video (flipped classroom method),
 - b) find three examples of possible positions after the PhD,
 - c) map their activities for two weeks according to the strengths perspective, and
 - d) prepare a “game-plan” for a 14-day period.
2. During the course, participants are required to
 - a) participate in the teaching activities including group work by being present for all sessions offered as part of module 3,
 - b) challenge each other on career goals in small groups,
 - c) discuss the realistic planning based on the “game-plan” in small groups, and
 - d) share in groups their experience of how their PhD is “orchestrated.”
3. After the course, participants are required to

- a) write a 1-page reflection on “orchestration” of their PhD study, comment on it in peer-groups.

Indicative literature

Enders, J. (2005). Border crossings: Research training, knowledge dissemination and the transformation of academic work. *Higher Education*, 49(1-2), 119-133.

Salminen-Karlsson, M. & Wallgren, L. (2008) The Interaction of Academic and Industrial Supervisors in Graduate Education: An Investigation of Industrial Research Schools. *Higher Education*, 56(1), 77-93. <https://doi.org/10.1007/s10734-007-9090-4>

Stubb, J., Pyhältö, K. & Lonka, K. (2011) Balancing between inspiration and exhaustion: PhD students' experienced socio-psychological well-being. *Studies in Continuing Education*, 33(1): 33-50, DOI: 10.1080/0158037X.2010.515572

Follow-up readings will be uploaded on CBS Learn after the module.