



SGH

Year	2016/2017	
Course title	Managing Research and Development (R&D) in Transnational Corporations	
Course number	234791 - 1028	3 ECTS points
Lecturer	Kraj Kamil Marek, PhD	

A. Course objective

The course aims to provide students with in-depth knowledge on research and development (R&D) activities run by transnational corporations (TNCs) as well as to develop skills that are useful in managing this area of corporate activities. Discussion of how to organise and manage corporate R&D. Discussion of a dominant role of TNCs in technological progress worldwide, and the position of Poland as a host country for locating corporate R&D activities.

B. Course syllabus

Knowledge, R&D, technological competences, innovation - definitions and linkages between the terms. The main modes of carrying out R&D projects adopted by TNCs. Organising corporate R&D structure (key issues). Global and local implications of a growing involvement of TNCs in R&D activities. Poland's position in the process of corporate R&D internationalisation.

C. Educational outcome

Knowledge	Knowledge: 1. Students understand the differences between the key terms in the field of innovativeness of enterprises. 2. Students know the main modes of carrying out R&D projects adopted by TNCs, including their strengths and weaknesses. 3. Students know the impact of a TNC's top management's profile on decision-making about the mode of running R&D activities in the TNC. 4. Students know the process of organising the corporate R&D structure. 5. Students understand the cross-functional linkage of R&D, production and marketing. 6. Students know the position of Poland as a host country involved in R&D activities run by TNCs.
Skills	1. Students can assess the overall level of technological competences of a company. 2. Students can make a decision on the mode of running a particular R&D project as well as they can explain why it is the right mode. 3. Students know how to manage the process of establishing a new corporate R&D unit (e.g. laboratory, centre). 4. Students can determine to what degree the corporate functions of R&D, production and marketing should be linked with one another. 5. Students can identify and indicate the positive and negative effects on a particular country, which result from corporate R&D activities.
Social competencies	Improvement in students' analytical and decision-making skills. Improvement in students' teamwork skills.

D. Semester time table

- 1 Introduction into the course: knowledge, research and development (R&D), innovation process, technology, technological innovation, technological competences - definitions, features and linkages between the terms.
- 2 The general differentiation of TNCs involved in R&D activities: science- and technology-based companies - the major features, examples, and its comparison to the OECD's classification of manufacturing industries based on technology.
- 3 Transnational corporations as the driving forces behind the global technological progress - the discussion of R&D expenditures of globally leading TNCs against a background of R&D financial data for countries.
- 4 The R&D strategy as one of the key elements of the overall strategy and the innovation strategy in the TNCs.
- 5 The idea of 'a double network' - strengths and weaknesses of the main modes of carrying out R&D projects adopted by TNCs (full and partial outsourcing of R&D vs. establishing and developing an R&D network of units within a TNC).
- 6 The position of a senior R&D manager in the hierarchy of a TNC. The impact of a TNC's top management's profile on decision-making about the mode of running R&D activities in the TNC.
- 7 Organising corporate R&D structure: procedure for establishing new corporate R&D units, integration vs. autonomy between corporate R&D units within a corporate R&D network, closing down corporate R&D units.
- 8 Co-ordination of cross-functional activities involving R&D, production and marketing. Differentiation between 'customer-oriented R&D' and 'market-oriented R&D'.
- 9 R&D collaboration between TNCs and the science sector (universities, research laboratories etc.)
- 10 R&D collaboration between TNCs and other companies. The importance of technology alliances.
- 11 A scoring method as one of the R&D project evaluation techniques - discussion and an exercise.
- 12 Transnational corporations as one of the pillars of countries' National Innovation Systems (NIS) - the role of TNCs in linking NISes of different countries.
- 13 Implications of the growing trend of internationalisation of corporate R&D activities for home and host countries of TNCs involved in running R&D.
- 14 Poland's position in the process of corporate R&D internationalisation.
- 15 Conclusions: assessing the future impact of a growing involvement of TNCs in R&D activities on NISes of Poland and the selected countries or regions of the world.

E. Basic literature

R.Boutellier, O.Gassman, M.von Zedtwitz , Managing Global Innovation. Uncovering the Secrets of Future Competitiveness, Springer-Verlag, Second Revised Edition, Berlin Heidelberg 2000, lub wydanie następane (tj. trzecie z 2008); P.Reddy, Globalization of corporate R&D: implications for innovation systems in host countries, Routledge, London/New York 2000; World Investment Report 2005. TNCs and the Internationalization of R&D, UNCTAD, New York/Geneva 2005 (a free-of-charge pdf version available at the UNCTAD's webpage on the WIR Series: <http://www.unctad.org/wir>); K.M.Kraj, Corporate R&D Centres in Poland, [in:] "Przedsiębiorstwo wobec wyzwań globalnych", pr. zbior. pod red.nauk. A.Hermana i K.Poznańskiej (eds.), tom 2 (part 2), Oficyna Wydawnicza SGH, Warszawa 2008.

F. Supplementary literature

M.Dodgson, D.Gann, A.Salter, The Management of Technological Innovation. Strategy and Practice, Oxford University Press, Oxford/New York 2008; O.Gassman, M. von Zedwitz, New concepts and trends in international R&D organization, Research Policy Vol.28, Issues 2-3 (Special Issue), 1999; A.Gerybadze, G.Reger, Globalization of R&D: recent changes in the management of innovation in transnational corporations, Research Policy Vol.28, Issues 2-3 (Special Issue), 1999; W.Kuemmerle, Building Effective R&D Capabilities Abroad, Harvard Business Review, March-April 1997.

G. Author's most important publications concerning the offered course

The related publication(s) of the author: K.M.Kraj, Współpraca branży teleinformatycznej w Polsce ze szkołami wyższymi w zakresie transferu wiedzy i technologii, [in:] "Procesy tworzenia wiedzy oraz transferu osiągnięć naukowych i technologicznych do biznesu", red.nauk. M.A.Weresa, K.Poznańska (eds.), Oficyna Wydawnicza SGH, Warszawa 2012; K.M.Kraj, Corporate R&D Centres in Poland, [in:] "Przedsiębiorstwo wobec wyzwań globalnych", pr.zbior. pod red.nauk. A.Hermana i K.Poznańskiej (eds.), tom 2 (part 2), Oficyna Wydawnicza SGH, Warszawa 2008; K.M.Kraj, Znaczenie sieci powiązań dla proinnowacyjnych korporacji transnarodowych, [in:] "Kapitał Ludzki - Innowacje - Przedsiębiorczość", red.nauk. P.Niedzielski, K.Poznańska, K.B.Matusiak (eds.), Zeszyty Naukowe Uniwersytetu Szczecińskiego/SOOIPP Annual 2008, Szczecin 2009; K.Kraj (współautor - K.Poznańska), Umiędzynarodowienie działalności badawczo-rozwojowej w korporacjach transnarodowych, [in:] "Mechanizmy i obszary przeobrażeń w organizacjach", pr.zbior. pod red. A.Potockiego (ed.), Difin, Warszawa 2007; K.M.Kraj (coauthor: K.Poznańska), Niektóre aspekty outsourcingu prac badawczo-rozwojowych, [in:] "Zarządzanie strategiczne w teorii i praktyce", pr.zbior. pod red. A.Kaleta i K.Moszkowicz (eds.), Zeszyty Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław 2008.

H. Numbers of required prerequisites

not required

I. Course size and mode

	Full-time	Saturday-Sunday	Afternoon
Total:	30	14	30
Lecture	30	14	30

J. Final mark composition

multiple choice examination	60%
others	40%

K. Foreign language requirements

English

L. Selection criteria

M. Methods applied

case studies
discussions