APPENDIX 1

1. **List of PhD courses in Economics**
   (doctoraat in de economische wetenschappen)

1.1 Principles

Below you find the list of courses that are acknowledged by the Doctoral School for a PhD in Economics (doctoraat in de economische wetenschappen). The course package has the following general structure:

a) Three compulsory core courses: <mark>Advanced Microeconomics</mark>, <mark>Advanced Macroeconomics</mark> and <mark>Advanced Econometrics</mark>. You can take these courses at our own faculty or equivalent – as indicated by the corresponding colors - at other faculties/universities.

b) An additional package of a minimum of 15 ECTS up to a maximum of 30 ECTS of specialist courses. With regard to the size of the package, the doctoral guidance committee submits a proposal to the Faculty Council for approval upon first registration for the doctorate and the Doctoral School. Regarding the content of the package, PhD students can choose from the below list of courses recognized by the Doctoral School, subject to approval by the supervisor. The doctoral student has not yet taken these (or equivalent) courses.

For the recognition of courses that are not on the below list, an application must be submitted to the (https://webapps.ugent.be/doctoralSchools/secure/phdStudent.jsf).

1.2 List of courses organized or endorsed by the Doctoral School

1.2.1 Advanced Microeconomic Courses

UGent
- <mark>Advanced Microeconomics: Game Theory and Asymmetric Information</mark> (D. Van de gaer, 6 ECTS)

KULeuven
- <mark>Advanced Microeconomics II</mark> (L. Lauwers, 6 ECTS)

UCLouvain
- <mark>Advanced Microeconomics II: Game Theory and Information Economics</mark> (F. Maniquet, 5 ECTS)
- Research seminar I: Microeconomics (E. Toulemonde, 5 ECTS)

ULBruxelles
- <mark>Graduate Microeconomics I</mark> (G. Kirchsteiger, 10 ECTS)
- <mark>Graduate Microeconomics II</mark> (L.P. Merlino, 5 ECTS)
- Graduate Microeconomics III (G. Kirchsteiger and P. Legros, 5 ECTS)

2.2. Advanced Macroeconomic Courses

UGent
- <mark style="background-color:lime">Advanced Macroeconomics: Equilibrium and Dynamics</mark> (F. Heylen and P. Van Rymenant, 6 ECTS)

- Quantitative Methods for Dynamic Economics (K. Önder, 6 ECTS)
- Advanced Topics in International Economics (K. Önder, 6 ECTS)
- Empirical macroeconomics: causal inference (G. Peersman and F. Smets, 6 ECTS, TO BE CONFIRMED)

KULeuven
- Advanced Macroeconomics I (F. De Graeve, 6 ECTS)
- Advanced Macroeconomics II (M. Kobielarz, 6 ECTS)
- Advanced Topics in Macroeconomics & Policy (C. Pröbsting, 6 ECTS)
- Dynamic Methods (E. Ciscato, 6 ECTS)

UCLouvain
- Advanced Macroeconomics I: Intertemporal Behavior and Business Cycles (L. Pensieroso, 5 ECTS)
- Advanced Macroeconomics II: Growth, Dynamics and Policy (R. Oikonomou, 5 ECTS)
- Advanced Macroeconomics III: research seminar (T. Baudin & D. De la Croix, 5 ECTS)
- Dynamic Methods in Economics (R. Oikonomou, 5 ECTS)
- Advanced Course in Economics V: Macroeconomics expectations, theory and evidence (F. Monti, UCLouvain, 5 ECTS)

ULBruxelles
- Graduate Macroeconomics I (F. Blasutto, 10 ECTS)
- Graduate Macroeconomics II (R. Kollmann, 5 ECTS)
- Graduate Macroeconomics III (??, 5 ECTS)
- Advanced Topics in Macroeconomics (H. Hesse, 5 ECTS)

UNamur
- Advanced Monetary Economics (R. Houssa and Y. Rychalovska, 5 ECTS)

2.3. Advanced Econometrics Courses

UGent
- Advanced Econometrics: Non-linear Methods (G. Everaert and B. Cockx, 6 ECTS)
- Causal Inference in Microeconometrics with Application to Program Evaluation (B. Cockx, 8 ECTS)
- Survival Analysis (E. Goetghebeur, 5 ECTS, MaStat)
- Causal Machine Learning (S. Vansteelandt, 5 ECTS, MaStat)
- Deep Learning (S. vanden Broucke, 6 ECTS, MaStat)
- Geostatistics (E. Van De Vijver, 5 ECTS, MaStat)
- Experimental Design (J. Meys and S. Luca, 3 ECTS, MaStat)
- Analysis of High Dimensional Data (L. Clement, 5 ECTS, MaStat)
- Big Data Science (D. Peralta Camara and E. Goetghebeur, 5 ECTS, MaStat)
- Natural Language Processing (C. Develder and T. Demeester, 6 ECTS, MaStat)

KULeuven
- Advanced Econometrics (G. Dhaene, 6 ECTS)

UCLouvain
- Advanced Econometrics I (S. Van Bellegem, 5 ECTS)
- Advanced Econometrics II – Microeconometrics (W. Pariente, 5 ECTS)
- Advanced Econometrics II – Time Series Econometrics (S. Van Bellegem, 5 ECTS)

- Advanced Courses in Economics III (Big Data in Macroeconomics and Finance, F. Monti, 5 ECTS)
- Econometrics Workshop (E. San Martin Gutiérrez, 5 ECTS)

ULBruxelles
- Graduate Econometrics I (G. Van Bever, 5 ECTS)
- Graduate Econometrics II (P. Gobbi and A. Ramos, 5 ECTS)
- Graduate Econometrics III (D. Preinerstorfer, 5 ECTS)
- Graduate Statistics (T. Verdebout, 5 ECTS)
- Stochastic Models (M. Jansen and J.A. Garcia; 5 ECTS)
- Statistical Foundations of Machine Learning (G. Bontempi, 5 ECTS)
- Computational Statistics (M. Jansen, 5 ECTS)

2.4. Advanced courses in Banking and Finance

UGent
- Advanced Investment Analysis (M. Frömmel, 6 ECTS)
- Management of Financial Institutions (R. Vander Vennet, 6 ECTS)
- Financial Risk Management (F. De Jonghe, 6 ECTS)
- Advanced Asset Allocation (K. Inghelbrecht, 4 ECTS
- Data Science for Finance and Insurance (K. Boudt, 4 ECTS)

2.5. Advanced courses in International Economics

KULeuven
- Advanced Topics in International and Development Economics (H. Vandenbussche and S. Vanormelingen, 6 ECTS)

UCLouvain
- Advanced International Trade (J. Gomes and G. Vannoorenberghe, 5 ECTS)
- Advanced Courses in Economics I: Shift-shares and gravity (G. Vannoorenberghe, UCL, 5 ECTS)

ULBruxelles
- Advanced International Trade (P. Conconi, 5 ECTS)

2.6. Advanced courses in Labour Economics and Welfare

KULeuven
- Advanced Topics in Labor & Public Economics (F. Vermeulen and E. Ciscato, 6 ECTS)
- Welfare Economics (Erik Schokkaert, 6 ECTS)

UCLouvain
- Advanced Labour Economics (V. Vandenberghe/M. Hungerbuhler, 5 ECTS)
- Advanced Public Economics (J. Hindriks, 5 ECTS)
- Ethics and Social Choice (F. Maniquet, 5 ECTS)
- Population and Family Economics (F. Mariani, 5 ECTS)
- Advanced Courses in Economics II: Social preferences in economics (A. Panin, 5 ECTS)
- Advanced Courses in Economics IV: Experimental economics (A. Panin, 5 ECTS)

ULBruxelles
- Behavioral Economics (G. Kirchsteiger, 5 ECTS)

2.7. Advanced Courses in Environmental Economics

KULeuven
- Environmental and Resource Economics (S. Rousseau, 6 ECTS)

2.8. Other Advanced Courses

UGent
- Multidisciplinary Research Tools to Study Work and the Labour Market (IDC UGent @ Work, 3ECTS, biannual – in every uneven year)
- Networks in Socio-Economic Systems (LEC. Rocha, 6 ECTS)
- Complexity Economics and Agent-based Models (LEC. Rocha, 6 ECTS)

KULeuven
- Advanced Topics in Industrial Organization (J. De Loecker, 6 ECTS)

UCLouvain
- Industrial Organization (J. Johnen, 5 ECTS)

ULBruxelles
- Advanced Industrial Organization (M. Nardotto, 5 ECTS)
- Development Economics (P. Verwimp, 5 ECTS)
- Dynamic Optimization (T. Demuynck, B. De Rock and L.P. Merlino, 5 ECTS)