



ES/EC/IB 343 – CIRCULAR ECONOMY: A VISIONARY SYSTEM IN A GLOBAL, EUROPEAN, AND UK CONTEXT

IES Abroad London

DESCRIPTION:

In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society. This unique course is centered on the concept of a circular economy that seeks to rebuild capital – whether this is financial, manufactured, human, social, or natural – and fully respects the resources and ecological limits of our planet. To ensure sustainable growth, resources must be used in a smarter, more sustainable way. Many natural resources are finite, an environmentally and economically sustainable way of using them must be found. No longer can we build our future on the linear “take-make-dispose” model. Underpinned by a transition to renewable energy sources, the circular economy model builds economic, natural, and social capital on three principles: design out waste and pollution, keep products and materials in the circle, and regenerate natural systems. Further, it represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits. This course will have a special focus on developments within the European Union and the UK.

CREDITS: 3 credits

CONTACT HOURS: 45 hours

LANGUAGE OF INSTRUCTION: English

PREREQUISITES: None

ADDITIONAL COST: None

METHOD OF PRESENTATION:

A combination of methods will be applied, including:

- Lectures
- In-class discussion
- Student presentations
- Field trip(s) and guest lecture(s)

REQUIRED WORK AND FORM OF ASSESSMENT:

- Midterm paper (2000 words): The mid-term paper is a take home exam. The students will discuss case studies and analytical reports on topical circular economy issues - 30%
- Individual case studies (an oral presentation on different topics in circular economy) - 20%
- Final Exam includes MCQ and short-answer questions - 40%
- Participation in discussion is a key part of the course. The discussion will be informal and participative - 10%

LEARNING OUTCOMES:

By the end of the course, students will be able to:

- Explain the difference between a linear and circular economy as well as infinite resources and planetary boundaries;
- Understand the concept of a circular economy in general and in the European Union and the UK in particular;
- Gain detailed knowledge of a circular economy and its building blocks and context;
- Describe the European Union's and the UK's Circular Economy Package and the concept of a shared/collaborative economy;

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- Demonstrate a deep knowledge of the circular economy in areas of plastics and modern agriculture, renewable energies and cities;
- Acquire background and context knowledge about sustainable development and systems thinking;
- Discuss packaging design, UK specifics and policymaking;
- And improve academic research, writing and oral presentation skills.

ATTENDANCE POLICY:

Regular class attendance is mandatory. Irregular attendance may result in a lower grade in the course, and/or disciplinary action. The IES Abroad London class attendance policy does not allow for unexcused absences, and grades will be docked one-half letter grade for each such absence. Rare exceptions will be made for the following reasons:

- The student is too sick to attend class. In this instance, the student must call the IES Abroad Centre before class to notify any of the IES Abroad staff. It is not sufficient either to email, send a message with a friend or call the Centre after the class has started.
- A serious illness or death in the immediate family requiring a student to travel home. This requires written approval from the Centre Director before departure.

Arriving more than 10 minutes late to class may count as an unexcused absence. Immigration laws in the UK are extremely strict, and we jeopardize our legal status in hosting students who do not regularly attend class. Students who do not attend class regularly will be reported to the appropriate officials and risk dismissal from the programme and deportation from the UK. If a student incurs absences representing 25% of the total class hours, they will be contacted by the Academic Manager. If these absences are made up exclusively of unexcused non-attendance, this will trigger a disciplinary review. If these absences are made up of excused non-attendance a meeting will be held to discuss the underlying reasons for lack of attendance, and to discuss ways it can be maintained for the duration of the term. If the 25% threshold is reached due to a mixture of excused and unexcused absences, students will also be asked to attend a meeting to discuss.

CONTENT:

Choose an item	Content	Assignments
Week 1	Intorduction • The circular economy • The sharing economy	• Julian Kirchherr, Nan-Hua Nadja Yang, Frederik Schulze-Spuntrup, Maarten J. Heerink, Kris Hartley (2023). "Conceptualizing the Circular Economy (Revisited): An Analysis of 221 Definitions", Resources, Conservation and Recycling, 194. • Stahel, W.R. (2016). The circular economy. Nature 531, p. 435–438. • Ellen MacArthur Foundation. "Circular Economy Schools of Thought" (text and videos). • Schor, J. (2014). "Debating the sharing economy". • De Wit, M., J. Hoogzaad & C. von Daniels (2020). The Circularity Gap Report 2020. Platform for Accelerating the Circular Economy (PACE).
Week 2	Challenging common conceptions • Links between environmental and economic issues • An alternative way of approaching environmental, social and economic issues	• Ellen MacArthur Foundation. "Seeing the bigger picture" (videos). • Each video ends with a question; discussion in class.

Choose an item	Content	Assignments
Week 3	Exploring the circular economy • Comparing living and manmade systems • Linear/materials economy • The circular economy Understanding the challenge of “finite” resources • The urgent challenge of finite resources • Economic history since industrial revolution • Our current consumption and production systems	• Raworth K., (2017). “Doughnut Economics – Seven Ways to Think Like a 21st-Century Economist”. p. 111-138. • The Ellen MacArthur Foundation (2013). “Towards the Circular Economy Vol. 1: an economic and business rationale for an accelerated transition”. p. 13-62. • Hervé Corvellec, Alison F. Stowell, and Nils Johansson (2022). “Critiques of the circular economy”, Journal of Industrial Ecology, 26(2), p. 421-432. • Angelina De Pascale, Roberta Arbolino, Katarzyna Szopik-Depczyńska, Michele Limosani, Giuseppe Ioppolo (2021). “A systematic review for measuring circular economy: The 61 indicators”, Journal of Cleaner Production, 281.
Week 4	Designing for a circular economy • Introduction of companies that have adopted the circular economy The circular economy & modern agriculture • The challenges around conventional monocultures and soil quality • Challenges in modern agriculture and securing the food supply for the future	• Ellen MacArthur Foundation. “Philips & Turntoo: Selling light as a service”. • Ellen MacArthur Foundation. “FLOOW2: Business-to-business asset sharing”. • Ellen MacArthur Foundation. “MUD Jeans: Pioneering a lease model for organic cotton jeans”. • Ellen MacArthur Foundation. “Re-Tek: Establishing a reverse supply chain for electronics”. • World Business Council for Sustainable Development. “Strategies and examples”. • Ellen MacArthur Foundation. “Lesson 5: The Circular Economy and Modern Agriculture”.
Week 5	Redesigning plastics • What happens to our waste plastic? • Is recycling plastics really that effective? Guest Lecture • A representative from a food bank charity	• Ellen MacArthur Foundation (2016). “The New Plastics Economy: Rethinking the Future of Plastics”. p. 22-42, 44-72 & 86-96. • Ellen MacArthur Foundation (2019). “New Plastics Economy: Reuse – Rethinking Packaging”.
Week 6	Circular economy and cities • Major innovations and trends associated with modern cities Business model canvas • Applying the business model canvas to develop your own business model	• Ellen MacArthur Foundation. “The Future of Cities”. • Strategyzer. “Business Model Canvas Explained” (video). • Strategyzer. “Business Model Canvas”.

Choose an item	Content	Assignments
Week 7	Renewable energies & energy efficiency • Circular economy as a substantial shift to renewables and energy efficiency	• Olabi, Abdul Ghani (2019). "Circular economy and renewable energy". Energy. 181: p. 450-454. • Anne P.M. Velenturf and Phil Purnell (2021). "Principles for a sustainable circular economy", Sustainable Production and Consumption, p. 1437-1457.
Week 8	Agenda 2030 and its Sustainable Development Goals (SDGs) • The link between UN's SDGs and the circular economy	• United Nations. "The 17 Goals". • United Nations. "12: Ensure sustainable consumption and production patterns". • Schroeder, Patrick, Kartika Anggraeni & Uwe Weber (2018). "The Relevance of Circular Economy - Practices to the Sustainable Development Goals- Circular Economy and SDGs". • Geissdoerfer, Martin, Paulo Savaget, Nancy M. P. Bocken & Erik Jan Hultink (2017). "The Circular Economy – A new sustainability paradigm?" Journal of Cleaner Production. 143: p. 757–768.
Week 9	Field Trip	• London walking tour
Week 10	European Union • European agenda for collaborative economy • Circular Economy Package (CEP) • European Strategy for Plastics • Sustainable consumption and production	• Ellen MacArthur Foundation (2020). "The EU's Circular Economy Action Plan: Setting the world's largest single market on a transition towards a circular economy". • European Commission (2016). "A European agenda for collaborative economy". • European Commission (2015). "Circular Economy Package: Questions & Answers". • European Commission (2018). "A European Strategy for Plastics in a Circular Economy". • European Parliament (2019). "Sustainable consumption and production". • European Commission. "Circular economy: Closing the loop – The production phase of the circular economy".
Week 11	UK circular economy plans • long-term waste management • resource efficiency • sustainable industry practices	• GOV.UK "Circular Economy Package Statement". • GOV.UK "UK and the Sustainable Development Goals". • CE-HUB "National Interdisciplinary Circular Economy Research (NICER) Programme". • GOV.UK "Resources and waste strategy for England". • GOV.UK "Waste Management Plan for England".
Week 12	Presentations	• Individual case studies (an oral presentation on different topics in circular economy)

COURSE-RELATED TRIPS:

A one-day field trip to 2 different sites in/around London will be organized as part of the course:

- London walking tour

RECOMMENDED READINGS:

- Pauline Deutz, etc., “Circular Economy Realities – Critical Perspectives on Sustainability”, Routledge Tylor & Francis Group, 2024
- Stijn van Ewijk, Julia Stegemann, “An Introduction to Waste Management and Circular Economy”, UCL Press, 2023.
- Claire Potter, “The Circular Economy (for Regular People): The Next Step in Sustainable Living”, Laurence King Publishing, 2021.
- Miguel Brandão, etc., “Handbook of the Circular Economy”, Edward Elgar Publishing, 2020.
- Ellen MacArthur Foundation, World Economic Forum and McKinsey & Company. The New Plastics Economy: Rethinking the Future of Plastics (Ellen MacArthur Foundation, 2016).
- Le Tote – Personalized Clothing Subscription & Rented Fashion, Available: <https://www.letote.com>.
- Raworth K., (2017), “Doughnut Economics - Seven Ways to Think Like a 21st-Century Economist”, p. 27-52, 53-80, 207-242
- Stahel, W. R. in The Circular Economy — A Wealth of Flows (ed. Webster, K.) 86–103 (Ellen MacArthur Foundation, 2015).

REQUIRED READINGS:

- Julian Kirchherr, Nan-Hua Nadja Yang, Frederik Schulze-Spuntrup, Maarten J. Heerink, Kris Hartley (2023). “Conceptualizing the Circular Economy (Revisited): An Analysis of 221 Definitions”, Resources, Conservation and Recycling, 194. Available: <https://www.sciencedirect.com/science/article/pii/S0921344923001374>
- Hervé Corvellec, Alison F. Stowell, and Nils Johansson (2022). “Critiques of the circular economy”, Journal of Industrial Ecology, 26(2), p. 421-432. Available: <https://onlinelibrary.wiley.com/doi/full/10.1111/jiec.13187>
- Anne P.M. Velenturf and Phil Purnell (2021). “Principles for a sustainable circular economy”, Sustainable Production and Consumption, p. 1437-1457. Available: <https://www.sciencedirect.com/science/article/pii/S2352550921000567>
- Angelina De Pascale, Roberta Arbolino, Katarzyna Szopik-Depczyńska, Michele Limosani, Giuseppe Ioppolo (2021). “A systematic review for measuring circular economy: The 61 indicators”, Journal of Cleaner Production, 281. Available: <https://www.sciencedirect.com/science/article/pii/S0959652620349866>
- Frank Figge, Andrea Stevenson Thorpe, Philippe Givry, Louise Canning, Elizabeth Franklin-Johnson (2018). “Longevity and Circularity as Indicators of Eco-Efficient Resource Use in the Circular Economy”. Ecological Economics, p. 297-306. Available: <https://www.sciencedirect.com/science/article/pii/S0921800917315653>
- GOV.UK “Circular Economy Package Statement”. Available: <https://www.gov.uk/government/publications/circular-economy-package-policy-statement/circular-economy-package-policy-statement>
- GOV.UK “UK and the Sustainable Development Goals”. Available: <https://www.gov.uk/government/topical-events/uk-voluntary-national-review-of-progress-towards-the-sustainable-development-goals>
- CE-HUB “National Interdisciplinary Circular Economy Research (NICER) Programme”. Available: <https://ce-hub.org/nicer-programme/>
- GOV.UK “Resources and waste strategy for England”. Available: <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>
- GOV.UK “Waste Management Plan for England”. Available: <https://assets.publishing.service.gov.uk/media/60103f71d3bf7f05bc42d294/waste-management-plan-for-england-2021.pdf>
- De Wit, M., J. Hoogzaad & C. von Daniels (2020). The Circularity Gap Report 2020. Platform for Accelerating the Circular Economy (PACE). Available: https://assets.website-files.com/5e185aa4d27bcf348400ed82/5e26ead616b6d1d157ff4293_20200120%20-%20CGR%20Global%20-%20Report%20web%20single%20page%20-%202021x297mm%20-%20compressed.pdf
- Ellen MacArthur Foundation. “Circular Economy Schools of Thought” (text and videos). Available: <https://www.ellenmacarthurfoundation.org/circular-economy/concept/schools-of-thought>
- Ellen MacArthur Foundation. “FLOOW2: Business-to-business asset sharing”. Available: <https://www.ellenmacarthurfoundation.org/case-studies/business-to-business-asset-sharing>
- Ellen MacArthur Foundation. “Lesson 5: The Circular Economy and Modern Agriculture”. Available: <https://www.ellenmacarthurfoundation.org/assets/downloads/schools-colleges/Schools-Colleges-WLL-Lesson-Plan-5-F.pdf>
- Ellen MacArthur Foundation. “MUD Jeans: Pioneering a lease model for organic cotton jeans”. Available: <https://www.ellenmacarthurfoundation.org/case-studies/pioneering-a-lease-model-for-organic-cotton-jeans>
- Ellen MacArthur Foundation. “Philips & Turntoo: Selling light as a service”. Available:

<https://www.ellenmacarthurfoundation.org/case-studies/selling-light-as-a-service>

- Ellen MacArthur Foundation. "Re-Tek: Establishing a reverse supply chain for electronics". Available: <https://www.ellenmacarthurfoundation.org/case-studies/establishing-a-reverse-supply-chain-for-electronics>
- Ellen MacArthur Foundation. "Seeing the bigger picture" (videos). Available: <https://www.youtube.com/playlist?list=PLD2C43638C526D33F>
- Ellen MacArthur Foundation. "The Future of Cities". Available: <https://www.ellenmacarthurfoundation.org/assets/downloads/future-of-cities.pdf>
- The Ellen MacArthur Foundation (2013). "Towards the Circular Economy Vol. 1: an economic and business rationale for an accelerated transition". p. 13-62. Available: <https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf>
- Ellen MacArthur Foundation (2016). "The New Plastics Economy: Rethinking the Future of Plastics". p. 22-42, 44-72 & 86-96. Available: https://www.newplasticseconomy.org/assets/doc/EllenMacArthurFoundation_TheNewPlasticsEconomy_Pages.pdf
- Ellen MacArthur Foundation (2019). "New Plastics Economy: Reuse – Rethinking Packaging". Available: <https://www.newplasticseconomy.org/assets/doc/Reuse.pdf>
- Ellen MacArthur Foundation (2020). "The EU's Circular Economy Action Plan: Setting the world's largest single market on a transition towards a circular economy". Available: <https://www.ellenmacarthurfoundation.org/assets/downloads/EU-Case-Study-june2020-EN.pdf>
- European Commission. "Circular economy: Closing the loop – The production phase of the circular economy". Available: https://ec.europa.eu/commission/sites/beta-political/files/circular-economy-factsheet-production_en.pdf
- European Commission (2015). "Circular Economy Package: Questions & Answers". Available: http://europa.eu/rapid/press-release_MEMO-15-6204_en.htm
- European Commission (2016). "A European agenda for collaborative economy". Available: <http://ec.europa.eu/DocsRoom/documents/16881/attachments/2/translations>
- European Commission (2018). "A European Strategy for Plastics in a Circular Economy". Available: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1516265440535&uri=COM:2018:28:FIN>
- European Parliament (2019). "Sustainable consumption and production". Available: <https://www.europarl.europa.eu/factsheets/en/sheet/77/sustainable-consumption-and-production>
- Geissdoerfer, Martin, Paulo Savaget, Nancy M. P. Bocken & Erik Jan Hultink (2017). "The Circular Economy – A new sustainability paradigm?" Journal of Cleaner Production. 143: p. 757–768.
- Olabi, Abdul Ghani (2019). "Circular economy and renewable energy". Energy. 181: p. 450-454. Available: <https://doi.org/10.1016/j.energy.2019.05.196>
- Raworth K., (2017). "Doughnut Economics – Seven Ways to Think Like a 21st-Century Economist". p. 111-138.
- Schor, J. (2014). "Debating the sharing economy". Available: <https://greattransition.org/publication/debating-the-sharing-economy>
- Schroeder, Patrick, Kartika Anggraeni & Uwe Weber (2018). "The Relevance of Circular Economy - Practices to the Sustainable Development Goals- Circular Economy and SDGs". Available: https://www.researchgate.net/publication/323156948_The_Relevance_of_Circular_Economy_Practices_to_the_Sustainable_Development_Goals_Circular_Economy_and_SDGs
- Stahel, W.R. (2016). The circular economy. Nature 531, p. 435–438. Available: <https://www.nature.com/news/the-circular-economy1.19594>
- Strategyzer. "Business Model Canvas". Available: <https://www.strategyzer.com/canvas/business-model-canvas>
- Strategyzer. "Business Model Canvas Explained" (video). Available: <https://vimeo.com/78350794>
- United Nations. "12: Ensure sustainable consumption and production patterns". Available: <https://sdgs.un.org/goals/goal12>
- United Nations. "The 17 Goals". Available: <https://sdgs.un.org/goals>
- World Business Council for Sustainable Development. "Strategies and examples". Available: <https://www.ceguide.org/Strategies-and-examples>

Filmography/Videos:

- "Circular Economy: definition & Examples". Available: <https://www.youtube.com/watch?v=X6HDcubgxRk>
- "The Circular Economy: what is it?" Available: <https://www.youtube.com/watch?v=IhMooyLWkKc>

- Ellen Mac Arthur Foundation, "School of thoughts". Available: <https://www.ellenmacarthurfoundation.org/circular-economy/concept/schools-of-thought>.
- -----, "Seeing the bigger picture". Available: <https://www.youtube.com/playlist?list=PLD2C43638C526D33F>.
- -----, "The CE and modern agriculture". Available: <https://www.ellenmacarthurfoundation.org/assets/downloads/schools-colleges/Schools-Colleges-WLL-Lesson-Plan-5-F.pdf>