

Systems transformation: Innovation for a better world

Pilot collaboration with Upper Canada College

First assessment 2027

The Diploma Programme (DP) is a rigorous pre-university course of study designed for students in the 16 to 19 age range. It is a broad-based two-year course that aims to encourage students to be knowledgeable and inquiring, but also caring and compassionate. There is a strong emphasis on encouraging students to develop intercultural understanding, open-mindedness, and the attitudes necessary for them to respect and evaluate a range of points of view.

Normally, three subjects are taken at higher level (HL) and three subjects are taken at standard level (SL). The IB recommends 240 teaching hours for HL subjects and 150 hours for SL. Subjects at HL are studied in greater depth and breadth than at SL. In addition, three core elements—the extended essay, theory of knowledge and creativity, activity, service—are compulsory and central to the philosophy of the programme.

For this pilot, students take three higher level (HL) subjects, one standard level (SL) subject, and the three core elements. In place of the other two standard level subjects, they complete a 300-hour project-based systems transformation course.



I. Course description

Systems transformation: Innovation for a better world is an innovative 300-hour pilot course co-developed by the IB and Upper Canada College. It delivers transformational learning experiences that equip students with the knowledge, skills and attitudes necessary to address the most complex systemic problems of our time.

Through this transdisciplinary and action-oriented course, students explore pressing local and global issues relating to pluralism, wellbeing, and sustainability. They learn and apply systems thinking, design thinking, and digital innovation tools and approaches in order to understand and develop ethical solutions to these issues. This requires students to be creative and empathetic, and to consider the ethics of their actions. It also requires them to integrate perspectives, methods and approaches from multiple disciplines to produce solutions that may not have been foreseen through the lens of a single discipline.

The curriculum areas are explored through an experiential project-based approach where students actively investigate complex real-world challenges and questions. In addition to undertaking two formal extended projects, students engage in a variety of smaller student-led and teacher-led projects and experiences. Community engagement is a key feature of this course, with students engaging in a wide variety of community-based activities such as internships, external collaborations and partnerships, and service experiences.

Particular emphasis is also placed on fostering students' innovation, creativity, entrepreneurship, ethics and empathy in service of individual, societal, and planetary flourishing. About more than just about inventing, innovation happens when that invention is applied and used in contexts to improve the status quo. Throughout the course, specific attention is paid to developing routines with students that promote innovative and creative thinking and challenge them to push the boundaries of their own imaginations. The course also provides explicit opportunities for students to leverage, and explore the impact of, digital technologies.

II. Course aims

The aims of the Systems transformation: Innovation for a better world course are for students to:

- appreciate the complex, systemic and interconnected nature of many pressing problems facing the world today
- develop and apply systems thinking, design thinking, and digital innovation skills to address local and global issues at the complex and contested intersection of pluralism, wellbeing, and sustainability
- cultivate the knowledge, skills and attitudes necessary to address systemic challenges, including deeply considering the perspectives of others and anticipating the impact of potential solutions on human and environmental systems
- recognise where and how systems and structures create and sustain inequality and injustice, and challenge harmful narratives and unjust status quos
- cultivate approaches to problem-solving that are collaborative, iterative, respectful, empathetic and flexible, and generate ethical, systems-focused innovative solutions
- develop and communicate ethical and effective solutions to problems that contribute to genuine pursuit of a more peaceful, just and sustainable world
- foster a sense of positivity and resilience in students as they envision and co-create positive change in the world around them

III. Subject requirements

For this pilot, students are required to select three HL subjects and one SL subject to study alongside the systems transformation course and the three core elements. To ensure that a reasonable breadth of study is maintained, the IB mandates that this selection must include:

- At least one subject from the studies in language and literature or language acquisition subject groups
- No more than two subjects across the language and literature and language acquisition subject groups
- At least one subject from the sciences or mathematics subject groups
- A maximum of two subjects from any subject group

IV. Curriculum overview

Systems transformation: Core curriculum This element of the curriculum provides an introduction to complex systems. It also helps develop a toolkit of systems thinking, design thinking and digital innovation tools and approaches that students use throughout the course as a whole. <ul style="list-style-type: none">- Understanding systems: exploring what complex systems are and how they work, how they connect and intersect, and how they can be transformed- Design: exploring how to investigate, understand, develop and test innovative solutions based on an informed understanding of problems, biases, and perspectives, ensuring processes and solutions are sustainable and have a positive impact on society- Digital innovation: exploring the role and impact of current and future technologies, including AI, on how we access and interpret information, communicate with others, approach problems and implement solutions	90 hours
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<p>Systems transformation: Curriculum contexts</p> <p>Three interconnected curriculum contexts are explored through a project-based approach where students actively investigate complex real-world challenges and questions. Students explore the intersections and interrelationships between these three complex contexts, applying systems thinking, design thinking, and digital innovation tools and techniques to create innovative and ethical solutions to real-world challenges.</p> <ul style="list-style-type: none"> - Sustainability: exploring how environmental and climate systems function and the impacts that human activity have on them, and offering tools to help solve environmental challenges and anticipate potential environmental impacts of solutions - Pluralism: exploring where and how social systems and structures of power and privilege create and sustain inequality and injustice, and offering open-minded and empathetic frameworks for action that value diversity and seek equity and inclusion for a future that benefits everyone - Wellbeing: exploring the science and practice of wellbeing and the complex behavioural and social systems that can lead to individual and societal wellbeing, and offering techniques to both support one’s own wellbeing while also considering the wellbeing of others in developing innovative solutions to complex challenges 	<p>200 hours</p>
<p>Systems transformation: Reflection</p> <p>This element of the curriculum provides a dedicated opportunity for students to engage in collective sensemaking and to reflect on how their understanding of systems transformation has deepened and changed throughout the course. It encourages students to consider how they can continue to bring about meaningful change in the world as they transition to the next stage of their lives beyond school.</p>	<p>10 hours</p>

V. Assessment overview

This pilot utilizes a range of authentic assessment formats that reflect the action-oriented nature and real-world focus of the course. This includes case study, project, and portfolio based assessment tasks. Two of the four tasks (a case study and a project proposal) are internally assessed and externally moderated by the IB. The other two tasks (an impact analysis and a curated extract from a competencies portfolio) are externally assessed by the IB.

This 300-hour pilot course is a dual award course that takes the place of two 150-hour SL subjects. The course is graded on the same 1-7 scale as other IB subjects, and the student is awarded two identical grades based on their performance across the systems transformation course as a whole.

VI. Assessment model

Type of assessment	Format of assessment	Weighting of final grade (%)
External		50
Impact analysis	Students plan and undertake an extended project focused on creating an innovative solution to an issue of their choice at the intersection of at least two of the three areas of pluralism, wellbeing, and sustainability. They write a project report summarising their process, solution and analysis, with a particular focus on the project's impact and the progress made towards the intended goals.	30
Competencies portfolio	Students curate and annotate a selection of artefacts from their course portfolio. These artefacts provide evidence that demonstrate development of key competencies and reflection on the learning process.	20
Internal		50
Case study	Students explore a case study produced by the IB. Part A of this task consists of a collaborative group activity where students engage with the unseen case study. Part B of this task consists of an individual analysis including a proposal for an intervention.	20
Project proposal	Students create an individual project proposal which is pitched to a panel audience for feedback. This feedback is then incorporated into their project designs and reflections as students go on to complete their project.	30

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For further information on the IB Diploma Programme, visit: www.ibo.org/en/dp

For further information about Upper Canada College, visit: <https://www.ucc.on.ca/>

For more on how the DP prepares students for success at university, visit: www.ibo.org/en/university-admission