Title: Inclusive Learning Technology for Sustainable Development (2 cp)
Lecturer(s): Dr. Jonghwi Park and Dr. Philip Vaughter (Guest lecturer: Prof Shinobu Yamaguchi)
Schedule: April 2021 – June 2021
Version: February 26, 2021

Course Description:
Education and lifelong learning is a key drive to the successful implementation and achievement for sustainable development. From climate changes, to responsible consumption, to resource management, to gender equality, and to the recent pandemic, the pressing global issues will unlikely be solvable without people from all walks of life actively participating in making urgent changes in view of building a sustainable society. This can be done through empowering communities and individuals to have a sound understanding of the underlying and interconnected issues and be part of the solutions.

As such, the movement of education for sustainable development (ESD) emphasizes a vital role of education and lifelong learning in achieving the 17 SDGs and moving towards a sustainable future. It stresses that learning should not stop at the formal schooling and that learning opportunities should be accessible to anyone, anytime and anywhere throughout one’s life.

With the rapidly advancing information and communication technology (ICT), educational opportunities can indeed go beyond the formal education and learners can pursue flexible learning paths at their own paces throughout their lives. But the very same technology has proven during the Covid-19 pandemic and its ensuing school closure and distance learning that it can worsen the learning inequality between learners with access to technology and those without, often further associated with the family environment and economic and social status. From a lifelong learning perspective, learning technology for sustainable development should take a careful consideration on inclusive and respectful designs in order not to leave anyone behind. This include, not limited to, those who have low literacy skills, disabilities, geographical disadvantages and language minorities as well as those who are forcefully displaced from their homes.

This 2-credit project-based course is to provide students with a comprehensive overview of the roles of and current issues in ESD from a lifelong learning perspective. It also explores a landscape of innovative and inclusive design of technology in expanding equal access to quality learning for sustainable development in a variety of settings, from emerging and low-income countries to advanced and highly connected nations. The course pays the equal attention to potential risks that digital technologies may impose in human and social development, well-being and energy consumption. Finally, students will have an opportunity as a group to design an innovative,
inclusive and evidence-based educational programme for a local sustainability issue of their choice which aims to develop skills, knowledge and attitudes to help address the identified issues and build a sustainable future.

**Learning Objectives:**
At the end of the course, students will be able to:

- Explain the roles of education and lifelong learning in progressing towards SDGs by 2030
- Select a local sustainability issue that can be addressed by education and lifelong learning
- Analyse a local sustainability issue and identify target learners to provide educational interventions
- Design an education programme that is appropriate for the target learners and effective for the intended learning outcomes
- Integrate innovation learning technology into an education programme purposefully to enhance quality, equity and inclusiveness.
- Evaluate feasibility, sustainability and scalability of an education programme
- Create a monitoring plan to measure the outcome of an education programme

**Assessment:**
- Attendance and class participation (10%)
- Assignments: (40%)
  - A short paper on a global or local sustainability issue of your interest, potential benefits and challenges in addressing the issues with ESD, and potential learners and rationales (max 1,500 words) (Individual - 25%)
  - A group presentation on a global or local sustainability issue of your team’s choice, including the selection and negotiation process of the choice, collectively refined analysis of potential benefits and challenges in addressing the issues with ESD, and collectively improved rationales for target learners. (Group - This will become the basis for your project rationale. – 15%)  
- Project:
  - ESD programme proposal (Group - 40%)  
  - Presentation (Group- 10%)

**Assessment Criteria:**

Threshold Standards: in order to demonstrate the achievement of learning outcomes for the course, students must:

- Display a working knowledge of the integrated sustainable development agenda and how it relates to education
- Provide insights in how to engage with given audiences of learners in education for sustainable development thru literature review and analysis
- Showcase how to design and implement an inclusive education programme on sustainable development with appropriate use of technology

Grading Criteria: the grading scale in this course will be set as (TBA):

- A:
- B:
General Criteria: Each written assignment should be in MS format and single-spaced, 12-point Times New Roman font. All written assignments must have a title, a proper introduction and conclusion section and all material that is used to support the student’s argument must be clearly cited. For the in-text citations and the bibliography, we suggest that students use APA style citations. For a reference for APA style citations see: https://www.umuc.edu/library/libhow/apa_examples.cfm. A works cited page should come after the end of each written assignment. Reference programs such as Endnote, Citavi or RefWorks are very useful for collecting, organizing and formatting citations and students are strongly encouraged to make use of these. Assignments should be carefully edited for grammar and spelling before submission – British English will be used for spelling rules in this course.

Reading Material:


- **May 19th**

- **May 26th**


<table>
<thead>
<tr>
<th>No.</th>
<th>Outline</th>
<th>Date</th>
<th>Lecturer</th>
</tr>
</thead>
</table>
| 1   | **Introduction**  
  - Global challenges: How much do we know?  
  - Learning goals  
  - Team formation | April 7\(^{th}\) | Jonghwi Park, Philip Vaughter & Shinobu Yamaguchi |
| 2   | **Lecture:**  
  - Introduction to ESD: Why education?  
  - SDG4: Education 2030 Agenda  
  - ESD and lifelong learning | April 14\(^{th}\) | Jonghwi Park |
| 3   | **Lecture:**  
  - ESD: Why education?  
  - Introduction to ESD: Trends, main issues and remaining challenges  
  - ESD 2030 Roadmap: Five priority areas | April 21\(^{st}\) | Philip Vaughter |
| 4   | **Lecture**  
  - ESD: Global agenda to local actions  
  - What is main sustainability issues in your local community? | April 28\(^{th}\) | Philip Vaughter |
| 5   | **Lecture:**  
  - What is innovation? (Guest Lecture)  
  - Cases: Innovative ESD programmes (policies, learning environment, teachers, youth, and community involvement) | May 12\(^{th}\) | Due date for the short paper (individual assignment) |
|     | Guest Lecturer:  
  - Shinobu Yamaguchi  
  - Philip Vaughter | |
| 6   | **Lecture:**  
  - Technologies in education: Pros and cons  
  - Inclusive and respectful design of technology | May 19\(^{th}\) | Jonghwi Park |
| 7   | **Lecture:**  
  - Intro to learning activity design (evidence-based, result-oriented)  
  - Learning theories (1): Constructivism | May 26\(^{th}\) | Jonghwi Park |
| 8   | **Lecture:**  
  - Learning theories (2): social learning  
  - Discussion on the group project | June 2\(^{nd}\) | Jonghwi Park |
| 9   | **Presentation:**  
  Each student group will present the progress of the project, including  
  - Sustainability issue  
  - Target learners | June 9\(^{th}\) | Jonghwi Park, Philip Vaughter |
<table>
<thead>
<tr>
<th>Lecture</th>
<th>Date</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Lecture:</td>
<td>June 16&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Diverse needs of marginalized learners</td>
<td>Jonghwi Park</td>
</tr>
<tr>
<td></td>
<td>Learning strategies for ESD</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Lecture:</td>
<td>June 23&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Designing inclusive learning materials for ESD</td>
<td>Jonghwi Park</td>
</tr>
<tr>
<td></td>
<td>Key considerations to leave no one behind</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Lecture:</td>
<td>June 30&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>ESD and assessment</td>
<td>Philip Vaughter</td>
</tr>
<tr>
<td></td>
<td>Challenges in measuring the impact of ESD</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Lecture:</td>
<td>July 7&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Implementations: Risks and mitigating measures</td>
<td>Jonghwi Park &amp; Philip Vaughter</td>
</tr>
<tr>
<td></td>
<td>Group discussion - peer review</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Lecture:</td>
<td>July 14&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Monitoring a development project: core values and challenges</td>
<td>Philip Vaughter</td>
</tr>
<tr>
<td>15</td>
<td>Final presentation</td>
<td>July 21&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Shinobu Yamaguchi, Jonghwi Park and Philip Vaughter</td>
<td></td>
</tr>
</tbody>
</table>