**Syllabus**
**FUTURISTIC INNOVATION: TECHNOLOGICAL INVENTIONS IN SCIENCE FICTION AND REALITY**

### A. General Information

| 1. Academic Unit | UNDERGRADUATE VICERECTOR OFFICE | | | | | |
|---|---|---|---|---|---|---|
| 2. Program | SCIENCE, TECHNOLOGY AND INNOVATION TRACK (CTI) | | | | | |
| 3. Spanish name | INNOVACIÓN FUTURISTA: INVENTOS TECNOLÓGICOS EN LA CIENCIA FICCIÓN Y REALIDAD | | | | | |
| 4. Code | CTR20244 | | | | | |
| 5. Location in the curriculum | BACHELOR/DEGREE | | | | | |
| 6. Credits | 8 | | | | | |
| 7. Type of course | Mandatory | | Elective | X | Optional | |
| 8. Duration | Bimonthly | | Semi-annual | X | Annual | |
| 9. Modules per week | Theoretical | 2 | Practical | | T.A. | |
| 10. Class hours | Classes | 68 | Teaching Assistance | | | |
| 11. Prerequisites | None | | | | | |

### B. Contribution to the Graduate's Profile

Bearing in mind the changes in the labour market, mainly those related to the global environment, diversity, and an interdisciplinary view, Universidad del Desarrollo intends to educate students through an educational project that allows them to develop new skills, competencies, and knowledge. Students receive a solid education in their branch of knowledge, consistent with the needs of the working world so that they successfully enter their professional field at the end of undergraduate education. Thus, Track courses are designed with the aim of helping students gain enriching learning experiences through extra-disciplinary education that prepares them for changing and challenging employment standards.

The course "Futurist Innovation: Technological Inventions in Science Fiction and Reality" forms part of the **Science, Technology, and Innovation TRACK** and is intended to aims to explore the intersection between science fiction and technology, from its literary foundations to its impact on contemporary society, thus teaching the following generic and specific competencies: innovation and critical thinking.

C. **General Competencies and Learning Outcomes from the Course**

| Generic Competencies | General Learning Outcomes |
|---|---|
| *Innovation* | Identify the key elements that define science fiction as a literary and cinematic genre, contextualizing its relationship with technology through the analysis of texts, films, and representative examples. |
| *Critical Thinking* | |
| | Distinguish the main subgenres of science fiction and explore the scientific speculation present in works of science fiction, evaluating their potential to inspire technological innovation through concrete examples. |
| | Analyze the history of technological inventions and great inventors, as well as examine the scientific theories present in science fiction and their feasibility in relation to current scientific reality, using comparative analysis and group discussions. |
| | Investigate specific examples of technological innovation influenced by science fiction, highlighting relevant cases such as artificial intelligence, virtual reality, biotechnology, and space exploration, and analyze future trends in science fiction and their possible impact on current and future technological development. |
| | Analyze how scientific innovation is represented in science fiction and its impact on the public perception of science and technology, through content analysis, infographic construction, and argumentative debates. |
| | Reflect on the positive and negative impacts of technology in the current world, considering different points of view and ethical values through guided discussions and critical analysis. |
| | Analyze how science fiction anticipates ethical dilemmas related to technology and its relevance in the contemporary world, through group discussions and the identification of speculative scenarios. |

| | | Reflect on the ethical and moral responsibilities in the creation and use of technology, considering its impact on society and the environment through action proposals and research projects. |

## D. Units, Content and Learning Outcomes

| Units and Content | Competency | Learning Outcomes |
|---|---|---|
| Unit 1: Fundamentals of Science Fiction and Technology<br><br>• Science fiction as a literary and cinematic genre<br>• Main subgenres of science fiction related to technology<br>• History of technological inventions<br>• Great inventors in history | *Innovation*<br><br>*Critical Thinking* | Identify the key elements that define science fiction as a literary and cinematic genre, contextualizing its relationship with technology through the analysis of relevant texts and films.<br><br>Distinguish the main subgenres of science fiction by representing them in representative works.<br><br>Analyze the history of technological inventions and great inventors, considering the historical and cultural context through group presentations. |
| Unit 2: Technological Inventions Inspired by Science Fiction<br><br>• Scientific speculation in science fiction<br>• Technological innovation influenced by works of science fiction<br>• Artificial intelligence, virtual reality, biotechnology, and space exploration<br>• Future trends in science fiction | *Innovation*<br><br>*Critical Thinking* | Analyze the scientific speculation present in works of science fiction and its potential to inspire technological innovation through concrete examples from different representative works.<br><br>Investigate specific examples of technological innovation influenced by science fiction, highlighting cases of artificial intelligence, virtual reality, biotechnology, and space exploration through the creation of digital content.<br><br>Analyze future trends in science fiction and their possible impact on current and future technological development through guided discussions. |

| Unit 3: Real Science in Science Fiction | Innovation | Examine the scientific theories present in science fiction and their feasibility in relation to current scientific reality through comparative analysis. |
|---|---|---|
| • Scientific theories in science fiction<br>• Scientific feasibility in science fiction<br>• Scientific innovation in science fiction | *Critical Thinking* | Analyze how scientific innovation is represented in science fiction and its impact on the public perception of science and technology through content analysis and infographic construction. |
| Unit 4: Ethics in Science and Technology | *Innovation* | Analyze the positive and negative impacts of technology in the current world, considering different points of view and ethical values through guided discussions. |
| • Positive and negative impacts of technology in the current world.<br>• Science fiction as anticipation of ethical dilemmas<br>• Ethical and moral responsibilities in the creation and use of technology<br>• Impact of technology on the environment | *Critical Thinking* | Analyze how science fiction anticipates ethical dilemmas related to technology and its relevance in the contemporary world through group discussions.<br><br>Reflect on the ethical and moral responsibilities in the creation and use of technology, considering its impact on society and the environment through action proposals. |

**E.  Teaching Methods**

- Project-Based Learning: Students will undertake various projects aimed at helping them understand technological innovation through its application and history.

- Case Method: Students will tackle different current ethical problems to formulate action proposals regarding those issues.

**F.  Evaluation Strategies**

- Presentation on inventions and inventors: Students will prepare a presentation on various inventors and technological inventions that have been significant in human history.

- Creation of digital content: Students will create a video, reel, or podcast about different inventions inspired by science fiction.

- Creation of an infographic: Students will create an infographic about scientific innovation in various works of science fiction.

- Presentation on action proposal: Students will deliver a presentation on different proposals to address various ethical issues of technology in the current or future world.

**Assistance Requirement:**

The course includes a mandatory attendance requirement, which implies that the student who does not comply with this requirement will not have the right to take the Final Exam of the subject, as stipulated in the Academic Regulations for Regular Students. The number of absences allowed will be detailed in the respective calendars of each course and/or academic activity, and will be informed at the beginning of the teaching period for each of them.

**Note**: In case the course is delivered in virtual mode, attendance record will also be part of the approval criteria. This record will be done as follows:

1. **Synchronous virtual class**: attendance will be registered during the session, considering the connection to the class at the time it is delivered, according to the schedule defined in the course.
2. **Asynchronous virtual class**: attendance will be considered by the timely completion of assignments, tasks, or any deliverable at the time and date previously requested.
3. **Blended course**: attendance to face-to-face and virtual classes will be registered according to the class schedule defined for the subject. In the case of virtual classes, it will be during the session, considering the connection to it at the time it is delivered or by the timely completion of assignments, tasks, or any deliverable at the time and date previously requested.

**G. Learning Resources**

<u>Mandatory Reading</u>

- Johnson, B. D. (2011). *Science fiction Prototyping: Designing the Future with Science Fiction*. Morgan & Claypool Publishers.