JINDAL GLOBAL BUSINESS SCHOOL
INDIA'S FIRST MULTI-DISCIPLINARY GLOBAL BUSINESS SCHOOL

O.P. Jindal Global University
*A Private University Promoting Public Service*
NAAC Accreditation - 'A' Grade

Jindal Global Business School
*Course Outline*

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|---|---|
| Course Title | Artificial Intelligence for Development |
| Core or Elective | Elective |
| Program and Batch | IBM 4th and 5th year, MBA 2025 |
| Semester & Academic Year | Fall 2026 |
| Credits | 1.5 |
| Discipline/Area | IS & Analytics |
| Name of the Faculty Member/Course Instructor | Prof. Ravinder Kumar Verma, |
| Contact Details of the Faculty Member | ravinderk.verma@jgu.edu.in<br>Mo-7419614828 |
| Contact Details of Support Staff | jgbs-eo@jgu.edu.in |
| Faculty Member's Open Office Day/s & Time | TBD |

**Introduction to the Course**

Artificial Intelligence (AI) is transforming how development challenges are addressed across sectors such as agriculture, healthcare, education, and financial inclusion. Governments and organisations, such as the United Nations, are using AI to advance the Sustainable Development Goals (SDGs).

This course examines AI as a tool for socio-economic development and value creation. It focuses on real-world applications of AI in the development sector, highlighting improvements in service delivery, inclusion, and providing solutions to existing challenges. Students explore real-world applications of AI in the development space and analyse how AI technologies can support the broader societal initiatives. The course also discusses challenges associated with AI adoption in development contexts, including digital inequality, data limitations, governance capacity, infrastructure constraints, and ethical risks. Through case studies, policy discussions, and applied projects, students learn how AI solutions can be designed and implemented responsibly in development sectors.

**Course Learning Objectives**

**At the end of the course, students should be able to**

1. CLO1- Understand the concept of AI for Development.
2. CLO2- Analyze the role of artificial intelligence and key principles for development.
3. CLO3- Evaluate AI applications in development sectors

4. CLO4- Assess ethical, social, and economic implications of AI for development.

**Programme Competency Goals**

| **MBA Programme Competency Goals (PCGs)** | | **MBA Programme Learning Objectives (PLOs)** |
|---|---|---|
| | | **Students will be able to** |
| **1** | **Technological Agility:** Ability to adopt relevant technologies for better business decision making. | 1. Understand relevant business technologies |
| | | 2. Understand future technologies in business domain |
| **2** | **Responsible Global Citizenship:** Ability to understand the interplay between local and global issues and to act with sensitivity towards ethical and social issues | 3. Understand the interplay between local and global business issues |
| | | 4. Demonstrate sensitivity towards ethical issues |
| | | 5. Demonstrate sensitivity towards social issues |
| | | 6. Address societal issues |
| **3** | **Effective communication:** Ability to effectively exchange ideas and information | 7. Present their ideas with clarity |
| | | 8. Prepare an organized and logical business document |
| | | 9. Use technology for effective communication |
| **4** | **Critical Thinking:** Ability to identify, analyze business problems and propose effective solutions | 10. Identify main issues of business problems |
| | | 11. Examine information from different sources |
| | | 12. Draw inferences from analysis |
| | | 13. Evaluate alternatives |
| | | 14. Summarize and conclude |
| **5** | **Leadership:** Ability to take initiative, inspire and collaborate with others | 15. Take initiative |
| | | 16. Contribute effectively in groups |

**PLO-PCG Assessments Mapping Matrix**

| Program Learning Objectives (PLOs) | Program Competency Goals (PCGs) | Course Assessment Item |
|---|---|---|
| PLO-01, PLO-02, PLO-03, PLO-04, PLO-08, PLO-09 & PLO-10 | PCG-01, PCG-03 | A1, A2, A3, A4 |
| PLO-05, PLO-06 | PCG-02 | A2, A4, |
| PLO-07, PLO-11, PLO-12 | PCG-03, PCG 04 | A2 |

## Evaluation Schema

The course grade will be determined based on:

| Assessment Task | Weightage (%) | Nature (Individual/Group) | Week of Assessment | PLOs to be Assessed |
|---|---|---|---|---|
| A1: Class Participation | 10% | Individual | Continuous | PLO-01, PLO-02, PLO-08, PLO-10 |
| A2: Assignments (Presentations and activities) | 30% | Activities-Individual; Presentation-Group | Weekly (every week, group presentation, in-class activities) | PLO-01, PLO-02, PLO-3, PLO-4, PLO-5, PLO-6, PLO-07, PLO-08, PLO-09, PLO-10, PLO-11, PLO-12, PLO-16 |
| A3: Quiz | 30% | Individual | 3rd-4th Week | PLO1, PLO2, PLO10 |
| A4: Term Project | 30% | Group | 6th Week | PLO-01, PLO-02, PLO-3, PLO-4, PLO-5, PLO-6, PLO-07, PLO-08, PLO-09, PLO-10, PLO-11, PLO-12, PLO-16 |

**Description of Assessments:**

**A1- Class Participation (10%)** - The participation of the students in class discussions, case presentations, and guest lectures shall be evaluated out of 10 marks.

**A2 – Assignments (30%)- Class Presentation and Activities:** Students will be assessed on in-class activities and a group presentation.

A group of students will prepare and present assigned cases in class. Students will also be assessed based on the in-class activities.

*Guidelines for Case Presentations*

For case presentations, students form groups (2-5 members in a group), prepare a presentation on the allotted topic by following the guidelines.

Presentation & PPT preparation instructions-

- Case Presentations- 30 minutes.
- Elaborate PPTs
- The focus should be on how technologies are used, their impact, and an analysis of the case.

- All members should participate equally in class presentations,
- Questions and answers from the case,
- Groups must upload PPTs before the presentation date on the UMS link and update PPTs based on feedback.
- Prepare for 20 minutes of presentation and 5-10 minutes for Questions and answers.

**A3 - Quiz (30%) –** An in-class quiz will be of 30 marks and will be conducted during the 3rd-4th week. This will be a multiple-choice question.

**A4- Term Project (30%)-** Project Guidelines – AI for Development
Project Title: "Leveraging AI for Development" (Title may be adapted to chosen company/industry.)
*Assignment Description*

Groups (2–5 members) will study a real-world case in which AI is used to improve development-sector implications. business models, engagement, and concerns**.**

- Explore how AI supports development processes and decision-making.
- Analyse the impact of AI on society, actors, and business. Discuss the challenges and opportunities.

*Timeline*: Stage One Report Proposal Submission - Deadline: 6th week of the course.
*Mode of Submission: Reports and PPTs, Viva - The faculty will communicate the UMS submission link.*

**Rubrics for Assessment 4:**

The students will be assessed based on the following points:

| Criteria/Level | Poor (1-2) | Fair (3-5) | Good (6-7) | Excellent (8-10) |
|---|---|---|---|---|
| Understanding of concepts | Lack of understanding of core concepts | Limited understanding of core concepts | Adequate understanding of core concepts | Clear understanding of core concepts |
| Logical Flow/Organization of ideas | No sense of organization | There is a sense of organization, although some of the organizational tools are used weakly or missing | Good overall organization includes the main organizational tools. | Well organized. Includes title, introduction of main idea, transitions, and conclusion. |
| Depth and breadth of analysis and discussion | Information presented is very limited. No analysis or implications drawn | Information presented is inadequate and misses many points. Some analysis and discussion. | Information centres on some of the points and covers them adequately. Adequate analysis and discussion. | Information presented covers all the points in depth and is accurate. Good analysis and well-rounded discussion |

**Teaching Method**
The course will have a judicious mix of lectures, storytelling, experiential exercises, and cases. Here the onus of learning will be with the student, and the instructor will be a facilitator. Instead of learning 'what to do', the cases will also be used as examples of real-world phenomena where issues arise, and good and bad practices are

seen. The key to learning this way is to see many examples and situations and learn inductive as well as deductive ways from students' and managers' different experiences.

**Textbook / Other Readings**

**Textbook**:

1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence
2. Brian Christian. The Alignment Problem: Machine Learning and Human Values
3. Prediction Machines
4. Atlas of AI
5. AI 2041: Ten Visions for Our Future
6. United Nations Reports on SDGs
7. Richard Heeks. Technology and Developing Countries: Practical Applications, Theoretical Issues Kindle Edition

**Session Plan**

| Session Details | Topics | PLOs Covered |
|---|---|---|
| | | |
| **Session No-1** | **Introduction to Course and Introduction to AI for Development** | PLO1, PLO2, PLO10 |
| Objective of the session | Introduction to AI for Development | |
| Subtopics to be covered | 1 Understanding AI for Development<br>2 Origins of AI for Development<br>3 Why Organisations Use AI for Development? | |
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs<br>. | |
| Case Title & Number | Not Applicable (N/A). | |
| Pedagogy | Lectures, cases, and class discussions | |
| | | |
| **Session No-2** | **Foundations of Development and AI** | PLO1, PLO2, PLO10 |
| Objective of the session | Theoretical background of development: Capability approach | |
| Subtopics to be covered | 1. Meaning of Development<br>2. Development applications<br>3. Linking AI with Development**:** Critical Elements | |

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|---|---|---|
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs | |
| Case Title & Number | Not Applicable | |
| Pedagogy | Lectures, cases, and class discussions | |
| | | |
| **Session No-3** | **AI Solutions for Development Sectors Part 1: An Overview** | PLO1, PLO2, PLO10 |
| Objective of the session | AI for Development: Principles and Applications | |
| Subtopics to be covered | 1. Approaching Development Space with AI.<br>2. Deconstructing the elements of development<br>3. Applications | |
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs | |
| Case Title & Number | Not Applicable | |
| Pedagogy | Lectures, cases, and class discussions | |
| | | |
| **Session 4** | **AI Solutions for Development Sectors Part 2: An Overview** | PLO1, PLO2, PLO10 |
| Objective of the session | AI for Development: Principles and Applications | |
| Subtopics to be covered | 1. Applying AI Systems: Problem identification, stakeholder analysis, solution design<br>2. Digital technologies in development, AI applications in agriculture, healthcare, education, and public services | |
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs | |
| Case Title & Number | Not Applicable | |
| Pedagogy | Lectures, cases, and class discussions | |
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|---|---|---|
| **Session No-5** | **AI Ecosystems for Development** | PLO1, PLO2, PLO10 |
| Objective of the session | Elements and layers of AI ecosystems for development | |
| Subtopics to be covered | 1. Digital Platforms<br>2. Data infrastructure, open data initiatives, data governance | |
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs | |
| Case Title & Number | Not Applicable | |
| Pedagogy | Lectures, cases, and class discussions | |
| | | |
| **Session No-6** | **AI for Sustainable Development Goals** | PLO1, PLO2, PLO10 |
| Objective of the session | AI for Development: From the SDGs perspective | |
| Subtopics to be covered | 1. Role of AI in achieving SDGs,<br>2. Implications: Opportunities<br>3. Challenges of AI adoption | |
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs | |
| Case Title & Number | Not Applicable | |
| Pedagogy | Lectures, cases, and class discussions | |
| | | |
| **Session No-7** | **Hands-on session 1: AI for Development: Applications** | PLO1, PLO2, PLO10, PLO12, PLO13 |
| Objective of the session | Hands-on Activity on AI in Healthcare Systems and AI in Agriculture and Food Security | |
| Subtopics to be covered | N/A. | |
| Readings Details | N/A. | |
| Case Title & Number | N/A. | |
| Pedagogy | In-class exercises and discussion | |
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| **Session No-8** | **Guest Lecture** | PLO1, PLO2, PLO10 |
| Objective of the session | Real-world examples of AI for Development | |
| Subtopics to be covered | AI for Development: Processes and impact. | |

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|---|---|---|
| Readings | N/A. | |
| Case Title & Number | N/A. | |
| Pedagogy | Guest Lecture and class discussions-<br>**Speaker**- Mr. Ashutosh Mishra, Senior Consultant, E & Y | |
| | | |
| **Session No-9** | **Applications of AI in Governance and Disaster sectors** | PLO1, PLO2, PLO10 |
| Objective of the session | AI in Urban Governance, AI in Disaster Risk Management | |
| Subtopics to be covered | 1. AI-enabled urban planning, traffic systems, and infrastructure management.<br>2. Disaster prediction, early warning systems, emergency response analytics | |
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs | |
| Case Title & Number | Not Applicable | |
| Pedagogy | Lectures, cases, and class discussions | |
| | | |
| **Session No-10** | **Ethical AI in Development Contexts** | PLO1, PLO2, PLO10 |
| Objective of the session | Understand ethical concerns of AI for development in real-world applications. | |
| Subtopics to be covered | Bias, fairness, accountability, inclusive AI design. Integrating theoretical perspectives into digital processes: Analysis. | |
| Readings | 1. Kate Crawford. Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence<br>2. Brian Christian. The Alignment Problem: Machine Learning and Human Values<br>3. Prediction Machines<br>4. Atlas of AI<br>5. AI 2041: Ten Visions for Our Future<br>6. United Nations Reports on SDGs | |
| Case Title & Number | Not Applicable | |
| Pedagogy | Lectures, cases, and class discussions | |
| | | |
| **Session No-11** | **Hands-on session- 2** | PLO1, PLO2, PLO10, PLO12, PLO13 |
| Objective of the session | AI for Development: Finance and Education | |
| Subtopics to be covered | N/A | |
| | N/A | |

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|---|---|---|
| Readings | | |
| Case Title & Number | Readings, cases, and reports will be shared with the class. | |
| Pedagogy | N/A | |
| | | |
| **Session No-12** | **Final Project** | PLO1, PLO 2, PLO3, PLO4, PLO5, PLO6, PLO7, PLO12, PLO14, PLO15, PLO16 |
| Objective of the session | Evaluation | |
| Subtopics to be covered | N/A | |
| Readings | N/A | |
| Case Title and Number | N/A | |
| Pedagogy | N/A | |
| | | |
| **Session No-13** | **Final Project** | PLO1, PLO 2, PLO3, PLO4, PLO5, PLO6, PLO7, PLO12, PLO14, PLO15, PLO16 |
| Objective of the session | Evaluation | |
| Subtopics to be covered | N/A | |
| | N/A | |
| Readings | N/A | |
| Case Title and Number | N/A | |
| Pedagogy | Student's Presentation | |
| | | |
| **Session No- 14** | **Revision Session** | PLO1, PLO2, PLO10, PLO12, PLO13, PLO16 |
| Objective of the session | Revise and reflect on the course | |
| Subtopics to be covered | Presentation/Discussion | |
| Readings | N/A | |
| Case Title & Number | - | |
| Pedagogy | Revision and discussions | |
| | | |
| **Session No-15** | **Revision Session** | PLO1, PLO2, PLO10, PLO12, PLO13, PLO16 |
| Objective of the session | Revise and reflect on the course | |
| Subtopics to be covered | Presentation/Discussion | |
| Readings | N/A | |
| Case Title and Number | - | |
| Pedagogy | Revision and discussions | |

**Disability Support**

JGU endeavours to make all its courses accessible to students. The Disability Support Committee (DSC) has identified conditions that could hinder a student's overall well-being. These include physical and mobility-related difficulties, visual impairment, hearing impairment, mental health conditions, and intellectual/learning difficulties, e.g., dyslexia and dyscalculia. Students with any known disability needing academic and other support are required to register with

the Disability Support Committee (DSC) by following the procedure specified at **https://jgu.edu.in/disability-support-committee/**

Students who need support may register any time during the semester up until a month before the end-of-semester exam begins. Those students who wish to continue receiving support from the previous semester must re-register within the first month of the semester. Last-minute registrations and support might not be possible, as sufficient time is required to make the arrangements for support.

The DSC maintains strict confidentiality about the identity of the student and the nature of their disability, and the same is requested from faculty members and staff as well. The DSC takes a strong stance against in-class and out-of-class references made about a student's disability without their consent and disrespectful comments referring to a student's disability.

All general queries are to be addressed to **disabilitysupportcommittee@jgu.edu.in**

*Disclaimer: This course outline, including assessments, sessions and/or readings, may be revised during the semester if such need arises.