Course title: Challenges of a Digital Economy			
Course code: PPS 136	**No. of credits:** 2	**L-T-P:** 21-7-0	**Learning hours:** 28
Pre-requisite course code and title (if any): Brief understanding of digital technology			
Department: Policy Studies			
Course Coordinator(s): Mr Sanjaya Das		**Course Instructor(s)**: Mr Sanjaya Das	
Contact details: das.sanj@gmail.com			
Course type: Core		**Course offered in**: Semester 1	

Course Description

Digitization and internet connectivity has become the backbone of the Fourth Industrial Revolution. There has been an exponential growth in digitization and internet connectivity. It has the potential to propel societies forward, enable innovative business models and help governments address legitimate policy concerns. Digitization is transforming business models, the policy landscape and social norms. In the Digital Economy and Society a shared, trusted digital environment is created which is driver of inclusion, economic development and social progress. The digital environment aims to create networks that enable and encourage action to promote the long-term health and stability of digitally enabled economies and societies. The course aims to provide inputs on appropriate elements required for national strategy, provide a brief understanding of various aspects of how digitization has impacted various aspects of life in general for common man.

Course objectives

- Understand the various aspects of digitization of data
- Understand the impact on economy, society on digitization of data
- Understand the impact of digitization of data on financial crime, analytics
- Become mindful of a wide range of applications of digitization & decision making

Course content

Module	Topic	L	T	P
1	**Big Data in Action for Development** What is Big Data? How can we better understand and utilize big data? What is the business impact of big data? What can big data look like for development sector? How can we work with big data? How to reach big data maturity? What are some of the challenges and considerations when working with big data?	3	1	
2	**Internet of Things – Unleashing the Potential of Connected Products and Services** The state of the market. The four phases of the evolution. Key near-term opportunities and benefits. Major challenges and risks. Convergence on the outcome economy. The emergence of the outcome economy. Delivering outcomes through connected ecosystems and platforms. Shift towards an integrated digital and human workforce. Enhancing productivity and work experience through augmentation. Reskilling for digital industries.	3	1	
3	**Smart Cities – Future of Urban Development & Services** Emerging urban landscape. Challenges in urbanization. Urban development initiatives. Challenges Due to Urbanization. The Future of Cities. Challenges in Urban Transformation. The Business of Running Cities: Urban Services. Enablers for Adopting New Models for Urban Services. Accelerating Public-Private Partnerships for Urban Services. Recommendations for Accelerating Urban Rejuvenation Programs – Business environment reforms, Sector-specific recommendations, Private-sector action items, State Specific Action Items. Roadmap for Urban Transformation – Approaches & Action Plan	3	1	
4	**Big risks big data thinking – Anti Money Laundering/Trade Based Money Laundering**	3	1	

	Big risks require big data thinking. Why use FDA: key benefits and adoption. Technology: the right tools for the right job. Turning data into information. Leverage analytics, mitigate risks. Secure the buy-in, execute the build. Essentials of an effective program. Extent and prevalence of Trade Based Money Laundering (TBML) Problem. Role of agencies responsible for TBML. Domestic and international cooperation and training. Significance of TBML. The trade finance environment.			
5	**Digital Transformation of Healthcare Industry** Value in Healthcare – Defining the problem, What value means in healthcare. Foundational Principles of Value-Based Care Delivery – Measuring outcomes and costs, Focusing on distinct population segments, Customizing segment-specific interventions, A preliminary roadmap for system transformation. Industry Context. Key Enablers of Value in Healthcare. Role of Public Policy. Future Horizons. Recommendations – Government and all stake holders. Next Steps for the Value in Healthcare Project.	3	1	
6	**Impact of Big Data on the Future of Insurance** What is big data? What is insurance? How is data currently used in insurance? Implications for society due to data usage in insurance industry – Better risk signaling, Greater premium dispersion, Other consequences. Benefit for Society – Recent developments in risk monitoring and reduction. Challenges faced – Privacy concerns. Considerations for Policy Makers.	3	1	
7	**Digital Dividends** Overview: Strengthening the analog foundation of digital revolution. Facts and Analysis – Accelerating growth and Expanding opportunities (Focus on sectors – Agriculture, Digital Finance, Education, Social Media, and Digital Identity). Policies – Sectoral Policies, National priorities, Global Cooperation (Focus on – Energy, Environment Management).	3	1	
	Total	**21**	**7**	**0**

- **Evaluation criteria**
- Quiz + Presentation: 10%
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- Quiz + Presentation: 10%
- Quiz + Presentation: 10%
- Quiz + Presentation: 10%
- Essay: 30%

Learning outcomes:

- Develop an understand on the impact of digitization on economy, society at large
- Understand the upcoming trends and directions in the digital world

Pedagogical approach:

The course will be delivered through class room lectures, discussion of case studies from relevant research articles.

Materials:

Required text

Suggested readings

1. Big Data @ Work by Davenport
2. Big Data: A Revolution That Will Transform How We Live, Work and Think by Viktor Mayer-

Schonberger, Kenneth Cukier
3. The Internet of Things by Samuel Greengard
4. Getting Started with the Internet of Things by Cuno Pfister
5. Smart Cities – Big Data, Civic Hackers, and the Quest for a New Utopia by Anthony M. Townsend
6. Building Smart Cities: Analytics, ICT, and Design Thinking by Carol L. Stimmel
7. Data-Driven Healthcare: How Analytics and BI are Transforming the Industry by Laura B. Madsen
8. Healthcare Disrupted: Next Generation Business Models and Strategies by Jeff Elton and Anne O′Riordan
9. Analytics for Insurance: The Real Business of Big Data by Tony Boobier

Case Studies

Websites

Journals

Other readings

Additional information (if any)
Students to carry laptops.

Student responsibilities
The students are expected to come prepared with readings when provided and undertake tests at the end of each session.

Course reviewers

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