	UNIVERSIDAD DISTRITAL FRANCISCO JOSÉ DE CALDAS FACULTAD DE INGENIERÍA **SYLLABUS** PROYECTO CURRICULAR DE INGENIERÍA INDUSTRIAL	
UNIVERSIDAD DISTRITAL **FRANCISCO JOSE DE CALDAS**		

Academic Space: Digital Transformation

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Obligatorio	☐	Básico	☐	Complementario	☐
Electivo	☒	Intrínseco	☒	Extrínseco	☐

Number of Credits	2	**Semester: VIII**	

Type of Course:	Teórico	☒	Práctico	☐	Teórico - Práctico	☐

Alternativas Metodológicas:

Clase Magistral	☐	Seminario	☒	Seminario-Taller	☐	Taller	☐	Prácticas	☐
Proyectos Tutoriados			☐	Otros	Haga clic aquí para escribir texto.				

I.	JUSTIFICATION OF THE ACADEMIC SPACE.

Digital transformation is defined as the integration of digital technology in all areas of a business. This leads to fundamental changes in the way how a business operates and the value they deliver to customers.

Digital transformation is changing the way business gets done, and in some cases creating entirely new kinds of businesses. With digital transformation, companies are taking a step back and revisiting their current business model, from internal systems to customer interactions. As we move from paper to smart spreadsheets and applications, we have the opportunity to re-imagine how we do business and how we engage our customers with digital technology on our side.

Francisco José de Caldas District University recognizes that one of the most important aspects to develop for the training of comprehensive professionals is the ability to adapt to new technological trends that give greater importance to digital environments. The training and education of students in the use of these digital tools provides future professionals with added value to the theoretical training obtained from academic exercise and will allow them to take greater advantage of these concepts in working life, better adapting to the new market needs based on the knowledge and use of new trends and practices for the management of the current industry.

This is how GICOECOL research group aims to open a space to sensitize students of all curricular projects interested in knowing how companies should develop both digital skills to work differently, as well as leadership skills to establish vision and strategy, in a world where the only constant is change.

Previous knowledge:

Desirable: intermediate english level and a level corresponding to a percentage equal to or greater than 60% of the approved academic spaces in their study plan.

II.	CONTENT PROGRAMMING

GENERAL OBJETIVE

Appropriate the knowledge and practices in order to understand how digital transformation allows businesses to create competitive advantages in a digital and global economy.

SPECIFIC OBJETIVE

1. Know the impact of digital and social technologies, as well as platforms on business models and processes.

2. Identify the organizational capabilities that must be developed in order to have a sustainable and competitive business in a new digital environment.

3. Explore emerging trends and technologies as key drivers of digital transformation

4. Know the techniques for the adoption of technologies and the path towards digital transformation of companies

TRAINING COMPETENCES

Context Competences:
- Decision making: Think conceptually, analytically and critically, to analyze information, propose and evaluate alternatives in order to solve problem situations.
- Research, innovation and technological development. Identify research opportunities based on contextual situations, theories and / or techniques that generate technological development.

Basic competences:
- ICT Management - Digital Competence: Manipulation and application of new technical resources to apply them in communicational and analytical contexts, applied to scientific methodologies, technological models, information bases, access to networks and the design of new algorithmic and communication strategies.
- Awareness of change: Monitoring and perception of variations and dynamic impulses in natural, social, cultural and political processes.

Labor competencies:
• Strategies for the improvement of business systems: Application of methods, models, simulation, decision-making and macro meso and micro diagnostic analysis, taking into account the dynamics and productive specialization, network operation, the institutional framework of learning processes and industrial policies and technological as well as the set of factors that impact the systemic operation in competitive conditions.

SYNTHETIC PROGRAM:

1. How technology change business
   - Evolution of technology
   - Deconstruction of the value chain
   - success stories

2. Disruption
   - The Competitive life cicle
   - The economics of innovation

3. Digital trends

   - Big data
   - Internet of things
   - Additive Manufacturing
   - Cyber Security
   - Artificial Intelligence
   - Blockchain

4. Path to digital transformation

   - New Digital Growth
   - People & Organization
   - Data & Analytics
   - Ecosystems

III.   STRATEGIES

Type of Course	Hours			Hours teacher/week	Hours student/week	Hours student/semester	Credits
	DW	TW	AW	(DW + TW)	(DW + TW+AW)	X 16 semanas	2
Theoretical	2	2	2	4	6	96	

Direct Work (DW): Classroom work with plenary of all students.
Team work (TW): Tutoring work from the teacher to small groups or individually to students.
Autonomous work (AW): Student work without the teacher's presence, which can be done in different instances: in work groups or individually, at home or in the library.

IV.   RESOURCES

Media and Aids
For the development of the subject, it is required: video beam, computer, as well as audiovisual media (videos) that allow addressing different topics. In the same way, visualize success stories in digital transformation. The topics will be addressed by co-researchers of the group or guests who are part of the research network.

Bibliography

Guiding Texts
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Maheshwari, A. (2019). *Digital Transformation: Building Intelligent Enterprises*. John Wiley & Sons, Incorporated.

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Fernandez, M. (2020). Industry 4. 0: Technologies and Management in the Digital Transformation of the Industry

Complementary Texts
- Rogers, D. L. (2016). *The digital transformation playbook: Rethink your business for the digital age*. Columbia University Press.
- Daim, T. U. (Ed.). (2020). *Digital Transformation: Evaluating Emerging Technologies*. World Scientific Publishing Company Pte. Limited.
- Perkin, N., & Abraham, P. (2017). *Building the agile business through digital transformation*. Kogan Page Publishers.

- *Journals*
- MaryAnne M. Gobble (2018) Digital Strategy and Digital Transformation, Research-Technology Management, 61:5, 66-71, DOI: 10.1080/08956308.2018.1495969
- Kristin Vogelsang, Kirsten Liere-Netheler, Sven Packmohr & Uwe Hoppe (2019): Success factors for fostering a digital transformation in manufacturing companies, Journal of Enterprise Transformation, DOI: 10.1080/19488289.2019.1578839
- Katarzyna Boratyńska (2019) Impact of Digital Transformation on Value Creation in Fintech Services: An Innovative Approach, Journal of Promotion Management, 25:5, 631-639, DOI: 10.1080/10496491.2019.1585543
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V.   ORGANIZATION / TIMES

#.	topic	ACADEMIC WEEKS															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	How technology change business	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	Disruption	☐	☐	☐	☐	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	Digital trends	☐	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐
4	Path to digital transformation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☒	☒	☒	☒

VI. EVALUATION

	TYPE OF EVALUATION		DATE		PERCENTAGE

FIRST SECTION	workshops	week 8	35%
SECOND SECTION	Expert Panel	week 16	35%
FINAL EXAM	Business diagnostic technical report	weeks 17 -18	30%

COURSE ASPECTS TO EVALUATE

Topic	Achievement indicator	Evaluation criteria	Evaluation method
1	The student knows the impact of technologies on business models and business processes.	Identify the impact of technology on companies from case studies.	workshop
2	Identify the organizational capabilities to have a sustainable and competitive business.	The student appropriates the concept of competitiveness and innovation to identify organizational capacities	seminary
3	Explore emerging trends and technologies and their relationship to digital transformation.	the student recognizes different technological possibilities related to digital transformation.	Research / expert panel
4	Learn about mechanisms to adopt technology and the path to digital transformation.	Applies the concepts to a business environment and determines the diagnosis related to digital transformation.	Practical case

DATOS DEL PROFESOR

Nombre:
Pregrado:
Postgrado:
Correo electrónico: