**Information and Communication Systems** **(con laboratorio di Analytics e strumenti di rilevazione dell’audience dei media digitali)**

## Prof. Matteo Tarantino

# Information and Communication Systems and elements of teaching strategies (con esercitazioni di Metodologia e tecnologie didattiche per la comunicazione e i media)

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***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course aims to educate students on the basics of understanding, designing and operating complex information and communication systems, through the coordination of digital and analogue platforms and technologies. The course developes around a theoretical axis as well as an applied one through a  project work. The course is accompanied by a workshop on the techniques of measuring the performance of online platforms (analytics). **The course is delivered in English.**

*INTENDED LEARNING OUTCOMES*

**Knowledge and understanding**

At the end of the course, students will be able to: understand the sociological and economic mechanisms of innovation; Understanding the structure and operation of complex information and communication systems; Recognize the investment mechanisms operated by stakeholders; Understand the role and function of systems related to environmental communication; Understand the paradigm of the datification, and its applications; Understand the role and impact of algorithmic guidance tools in these systems, with particular reference to recommendation engines.

**Ability to apply knowledge and understanding**

At the end of the teaching, students will be able to: articulate plans related to complex information and communication systems; Identify and recognise the vulnerabilities of these systems; Choose and apply appropriate automation strategies for specific communicative objectives; Assessing the value of data for different stakeholders in different scenarios.

***COURSE CONTENT***

* Background Theories: Convergence, platform, system, content, and resources. Theories of innovation (1 lesson).
* Conceptualizing a complex multi-platform information & communication system. The relationship between resources and technology. The social modelling of Technology: Recognizing the active role of users  (1 lesson).
* The logic of the prototype and the iterative construction of platforms and systems. Approaches to prototyping and development. (1 lesson).
* The role of data. Data value, data collection, data management. Data streams, databases, APIS. Approaches to the datafied society. Data/institution/user ratio (2 lessons).
* The sustainability of a system. Multi-stakeholder models. Read the relationship between resources invested and resources acquired (1 lesson).
* Content: Relationship between designed and user generated content. Conflict management. User communities (1 lesson).
* The role of the cultural variable. Digital culture and technology. Digital and China. (1 lesson).
* Complex systems for communication: the communication of environmental risk. (1 lesson)

***READING LIST***

S.F. Wamba & L. Carter*. Social media tools adoption and use by SMEs: An empirical study*. In Social media and Networking: Concepts, methodologies, tools, and applications (p. 791-806). 2016.

McCann, M., & Barlow, A. *Use and measurement of social media for SMEs.* Journal of Small Business and Enterprise Development, 22(2), 273-287. 2015.

G. Adomavicius & A. Tuzhilin. *Toward the next generation of recommender systems: A survey of the state-of-the-art and possible extensions*. IEEE Transactions on Knowledge & Data Engineering 6 (2005): 734-749.

H. Wickham, *Tidy Data,**Journal of Statistical Software, 59*(10), 1 - 23. 2015.

N. Marres, E. Weltevrede, *Scraping the Social? Issues in live social research*. Journal of Cultural Economy, 6(3), p. 313-335. Goldsmiths Research Online. ISSN 1753-0350.

M. Tarantino. *Uncertainty in the Air: Communicating Urban Air Pollution*, in Z. Krajina & Stevenson  (a cura di) The Routledge Companion to Urban Media and Communication, Routledge, New York (2019).

E. Harwitt, "*WeChat: Social and political development of China’s dominant messaging app*." Chinese Journal of Communication 10.3 (2017): 312-327.

Further bibliography will be indicated during class.

***TEACHING METHOD***

Frontal lecture, supervision of project works. Students are encouraged to take their personal computer to class.

***ASSESSMENT METHOD AND CRITERIA***

* 1. During each class, students will present in small groups the assigned readings and will be evaluated on the basis of their presentation. Students without regular attendance (<75%) will have to hand in written summaries of the readings. This part will weight 20% on the final grade.
  2. At the end of the course, students will have to hand in their project work. This will comprise a working demo as well as a report with objectives, scopes, budget and expected outcomes. This project will be evaluated on the basis of effectiveness, creativity and sustainability. Evaluation will weight 40% on the final course grade
  3. Students will be evaluated through a final written test on the whole course bibliography. This test will weight 40% on the final grade.
  4. The evaluation of the outcomes of the workshop contributes to the final grade with a bonus ranging from minus two to positive two grades.

In order to pass the exam, all parts (project work, test, exercise) will have to be evaluated with sufficient grades.

***NOTES AND PREREQUISITES***

* 1. During each class, students will present in small groups the assigned readings and will be evaluated on the basis of their presentation. Students without regular attendance (<75%) will have to hand in written summaries of the readings. This part will weight 20% on the final grade.
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Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG or on the Faculty notice board.

# Laboratorio di Analytics e strumenti di rilevazione dell’audience dei media digitali

## Dott. Davide Carbonini

***OBIETTIVO DEL CORSO E RISULTATI DI APPRENDIMENTO ATTESI***

Il laboratorio si pone l’obiettivo di mostrare e spiegare il funzionamento del principale software di rilevamento statistico per il monitoraggio del traffico su siti web o applicazioni mobile: Google Analytics.

L’obiettivo della prova scritta a conclusione del laboratorio è la produzione, da parte di ogni studente, singolarmente, di un approfondito report scritto che contenga le informazioni necessarie e sufficienti per illustrare ed argomentare i dati rilevati.

Gli studenti saranno quindi chiamati a redigere un documento da presentare ad un cliente fittizio, esattamente come se fossero loro stessi fornitori di servizi di web analysis.

***PROGRAMMA DEL CORSO***

Il laboratorio è diviso in 2 parti:

a) Introduzione e allineamento competenze tecniche finalizzate alla comprensione dei dati che il software

rileva

b) Formazione all’uso del software “Google Analytics”

***DIDATTICA DEL CORSO***

La prima parte del laboratorio si svolge in modalità tradizionale mediante lezione frontale. Successivamente si procede presso il laboratorio informatico della Facoltà.

***METODO E CRITERI DI VALUTAZIONE***

La valutazione viene attribuita secondo diversi criteri:

● comprensione delle informazioni trasmesse durante le lezioni circa il funzionamento del software e le modalità di interpretazione dei dati da esso forniti

● impegno, ed attinenza a quanto trasmesso, nella rielaborazione autonoma di tali informazioni ai fini della produzione di un report scritto

● qualità grafica, ortografica e contenutistica del report prodotto da ogni studente

Il punteggio assegnato è in trentesimi, dove 18 indica la sufficienza.

***AVVERTENZE E PREREQUISITI***

Per legittimare la frequenza sono richieste almeno la metà + 1 ora di presenza (almeno 11 ore).

Per gli alunni che non frequenteranno le lezioni in presenza saranno disponibili le lezioni preregistrate.

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# Information and Communication Systems and elements of teaching strategies (con esercitazioni di Metodologia e tecnologie didattiche per la comunicazione e i media)

## Prof. Matteo Tarantino

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course aims to educate students on the basics of understanding, designing and operating complex information and communication systems, through the coordination of digital and analogue platforms and technologies. The course developes around a theoretical axis as well as an applied one through a  project work. The course is accompanied by a workshop the theory and technique of communication teaching. **The course is delivered in English.**

*INTENDED LEARNING OUTCOMES*

Knowledge and understanding

At the end of the course, students will be able to: understand the sociological and economic mechanisms of innovation; Understanding the structure and operation of complex information and communication systems; Recognize the investment mechanisms operated by stakeholders; Understand the role and function of systems related to environmental communication; Understand the paradigm of the datification, and its applications; Understand the role and impact of algorithmic guidance tools in these systems, with particular reference to recommendation engines.

Ability to apply knowledge and understanding

At the end of the teaching, students will be able to: articulate plans related to complex information and communication systems; Identify and recognise the vulnerabilities of these systems; Choose and apply appropriate automation strategies for specific communicative objectives; Assessing the value of data for different stakeholders in different scenarios.

***COURSE CONTENT***

* Background Theories: Convergence, platform, system, content, and resources. Theories of innovation (1 lesson).
* Conceptualizing a complex multi-platform information & communication system. The relationship between resources and technology. The social modelling of Technology: Recognizing the active role of users  (1 lesson).
* The logic of the prototype and the iterative construction of platforms and systems. Approaches to prototyping and development. (1 lesson).
* The role of data. Data value, data collection, data management. Data streams, databases, APIS. Approaches to the datafied society. Data/institution/user ratio (2 lessons).
* The sustainability of a system. Multi-stakeholder models. Read the relationship between resources invested and resources acquired (1 lesson).
* Content: Relationship between designed and user generated content. Conflict management. User communities (1 lesson).
* The role of the cultural variable. Digital culture and technology. Digital and China. (1 lesson).
* Complex systems for communication: the communication of environmental risk. (1 lesson)
* **The course will also address topics relative to the teaching of media and communications. Students will have to obligatorily complete the laboratory of Methodology and Technologies for Media and Communication Teaching.**

***READING LIST***

S.F. Wamba & L. Carter*. Social media tools adoption and use by SMEs: An empirical study*. In Social media and Networking: Concepts, methodologies, tools, and applications (pp. 791-806). 2016.

McCann, M., & Barlow, A. *Use and measurement of social media for SMEs. .*Journal of Small Business and Enterprise Development, 22(2), 273-287.2015.

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H.Wickham, *Tidy Data,Journal of Statistical Software, 59*(10), 1 - 23. 2015.

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E. Harwitt, "WeChat: Social and political development of China’s dominant messaging app." Chinese Journal of Communication 10.3 (2017): 312-327.

Further bibliography will be indicated during class.

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***TEACHING METHOD***

Weekly lectures, supervision of coursework.

***ASSESSMENT METHOD AND CRITERIA***

Students will be guided to the individual realization of an information/communication system whose quality (measured in terms of efficacy, robustness and sustainability) is 2/3 of the exam evaluation. The remaining 1/3 of the evaluation will depend on a closed-response test on a selection of the bibliography. Moreover, the evaluation of the exercise contributes to the final vote in the measure of-2/+ 2 points. The laboratory of methodology and didactic technologies will be assessed with an endorsement.

In order to pass the exam, all the elements (System, test, exercise, laboratory) will have to reach at least the sufficiency

***NOTES AND PREREQUISITES***

Students must have a basic understanding of the basic theories of communication systems; A basic understanding of concepts such as the nature and function of algorithms, the distinction between data/information/knowledge and between source/executable code. Students are encouraged to take their personal computer to class.

***Contact hours***

By email appointment.

# Esercitazioni di metodologia e tecnologie didattiche per la comunicazione e i media

## Dott.ssa Roberta Bova

***OBIETTIVO DEL CORSO E RISULTATI DI APPRENDIMENTO ATTESI***

L’esercitazione si propone di individuare e problematizzare specifici contesti e strumenti applicativi per la didattica. La comunicazione e i media saranno pertanto sia il luogo, sia l’oggetto del lavoro. L’obiettivo è quello di rendere evidenti alcuni elementi costitutivi dell’agire didattico, che nell’uso quotidiano rimangono inavvertiti e non discussi. Tale esercizio consente di scoprire nel contesto didattico nuovi angoli di visuale e nuovi modi di manipolare e combinare gli oggetti e le tecniche.

***PROGRAMMA DEL CORSO***

Introduzione: la terminologia come oggetto di lavoro: tecnologia, metodologia, didattica, comunicazione, media.

Tecnologia: *techné* + *logos*; il discorso della tecnica; tecnica, arte, artificio; strumento e *tool.*

Gli strumenti della didattica: la scuola e gli arredi scolastici, la scrittura.

Gli strumenti umani: gli alunni, gli insegnanti, il *setting*.

***BIBLIOGRAFIA***

Ivan Illich, Celebrare la consapevolezza, Neri Pozza 2020.

Testo aggiuntivo per i non frequentanti (cfr. sotto): Walter J. ong , *Oralità e scrittura*, il Mulino 2014.

***DIDATTICA DEL CORSO***

Lezioni frontali

***METODO E CRITERI DI VALUTAZIONE***

L’esercitazione prevede una valutazione finale sulla base di una esercitazione scritta (10 slide circa) prodotta dagli studenti e assegnata dal docente esercitatore; nell’elaborato gli studenti personalizzeranno le attività di esercitazione di gruppo realizzarte nel corso del laboratorio. Gli studenti che non avranno preso parte ad almeno il75 % delle lezioni verranno considerati *non frequentanti*; per costoro, l’elaborato sarà da intendere come recensione dei due volumi assegnati (10mila battute circa). La valutazione si concluderà con l’assegnazione di un voto in trentesimi.

***AVVERTENZE E PREREQUISITI***

Trattandosi di un’esercitazione breve, si raccomanda se possibile una frequenza piena. Non sussistono prerequisiti.

*Orario e luogo di ricevimento degli studenti*

Il docente esercitatore riceve gli studenti direttamente durante le esercitazioni.