



Interactive Narrative Design for
Complexity Representation
Short Term Scientific Mission
on
Foundations for Programs in Interactive
Digital Narrative Studies

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SUMMARY

This document is the result of a Short Term Scientific Mission on the Foundations of Interactive Narrative Studies, held in Malta, between 10 and 14 July 2023.

The goal of the Scientific Mission has been to define programs of study on Interactive Digital Narrative, its history, foundations, design models, analysis methods, and production practices, and how such study programs can be realized in the European and US higher educational systems.

The aim is to develop comprehensive proficiency in Interactive Digital Narrative and provide successful pathways to professional jobs.

This document discusses the motivations for implementing study programs on Interactive Digital Narratives, outlines the specific goals and outcomes of the programs, and presents topics, course names and sample sequences. The document is divided into undergraduate and graduate programs, designed to foster a transdisciplinary approach for a transdisciplinary endeavor.

3 YEAR UNDERGRADUATE program

MOTIVATION

There is a need for full programs in creating and analyzing Interactive Digital Narrative (IDN). IDNs are used in many different areas (narrative video games, museum installations, Journalism, XR experiences for Cultural Heritage, Health, Public Policy, Education).

However, so far there is no dedicated program that creates the narrative designers, critics and teachers to support the growing need of applying and teaching about IDN works.

Existing courses on IDN in video game programs, communication, literature, film studies/filmmaking are mostly a single class, often delivered in a just-in-time fashion relative to a larger media program, and are therefore insufficient as preparation for the workplace or a further academic career.

The graduates of the program will work in many different areas, including education (K12 and Higher Education), Cultural Heritage, Journalism, Entertainment (Video Games, Theme Parks, Interactive Film, etc.), Edutainment (Applied Games, XR), PR/Marketing and PSA (e.g. Narrative Interfaces for Big Data), and Public Policy (IDN for decision making), and more.

PROGRAM GOALS

In an undergraduate program on IDN, students will

- design, write, and produce individual works of IDN in **project-based** learning;
- engage with relevant **critical and technical concepts** in the field of IDN;
- be able to analyze and **critique** IDN both structurally and in specific contexts;
- engage with IDN from both systems-oriented and content-oriented **perspectives**;
- learn how to approach projects with a sensibility for complex **ethical** issues;
- **experience IDN practices** in the context of several academic disciplines (including Arts and Humanities, Computer Science & Engineering, Communications, Cognitive Sciences and more);
- draw upon **transmedia** approaches for IDN development;
- **explore** IDN in a multitude of professional **fields and practices**, inclusive of industry (journalism, entertainment (e.g. games, film, television), communications) and broader public domains (cultural heritage, health, education, PR/PSA).

UNDERGRADUATE PROGRAM STRUCTURE

This is a proposed structure for the undergraduate program, and its articulation into years and semesters. Courses are organized into **Production Practices & Product Design, Media Design & Technology, Society & Culture, Narrative Architectures, and IDN Systems**. Here below, we report the core courses, followed by the complete list of electives, which students select to concretely address their particular professional interest in the IDN world.

Core courses and articulation

Year 1

Semester 1

- IDN Theory: Narrative Foundations, History & Case Studies (15 ECTS)
- Intro to IDN-specific Programming 1 (7.5 ECTS)
- Elements of Media and Aesthetics (7.5 ECTS)

Semester 2

- Interactivity: Writing, Structures, Mechanics (15 ECTS)
- Intro to IDN-specific Programming 2 (7.5 ECTS)
- Worldbuilding & Character Design (7.5 ECTS)

Year 2

Semester 1

- Production studio 1 (Project course) (15 ECTS)
- Designing Playable IDNs - Usability, UX and Playtesting (15 ECTS)

Semester 2

- IDN for Representations of Complex Issues (7.5 ECTS)
- Socio-Cultural contexts of IDN applications: Theory and Ethics (7.5 ECTS)
- Elective 1 (7.5 ECTS)
- Elective 2 (7.5 ECTS)

Year 3

Semester 1

- Elective 1 (7.5 ECTS)
- Elective 2 (7.5 ECTS)
- Elective 3 (7.5 ECTS)
- Academic Writing and Methods (7.5 ECTS)

Semester 2

- Production studio 2 (Thesis) or Theoretical (Thesis) Course (30 ECTS)

Proposed list of Elective courses for the Undergraduate program

Production Practices & Product Design

- IDN Entrepreneurship

Media Design & Technology

- 2D Animation
- 3D Animation
- 3D Modeling
- Data Structures and Algorithms
- Full-stack development
- Sound Design for Interactive Audio
- Performance, Embodiment and Play
- Lighting for Film
- Web Design and Technology
- Location-Based Media Design
- Video Production (Pre, Production, Post)
- Enhanced Reality
- AI for IDN Design
- Game Engine Programming
- Computing for Big Data
- Intro to Game-Engines Programming

Society & Culture

- Legal Issues for Developing Digital Media
- Media Studies
- Game Studies

Narrative Architectures

- Analogue interactive storytelling

IDN Systems

- Advanced IDN analysis

2 YEAR GRADUATE program

MOTIVATION

There is a need for full graduate programs in creating and analyzing Interactive Digital Narrative (IDN). However, there is no dedicated program that creates, at a graduate level, the interactive narrative designers, critics and teachers to support the growing need for **advanced knowledge in applying and teaching about IDN works**.

Existing courses in graduate programs about video game, communication, literature, film studies/filmmaking are often a single class, often delivered in a just-in-time fashion relative to a larger media program, and are therefore insufficient as a broader preparatory experience.

The graduates of the program will work in senior roles in many different areas, including education (K12 and Higher Education), Cultural Heritage, Journalism, Entertainment (Video Games, Theme Parks, Interactive Film, etc.), Edutainment (Applied Games, XR), PR/Marketing and PSA (e.g. Narrative Interfaces for Big Data), and Public Policy (IDN for decision making), and more.

Incoming students are expected to have the core competencies from the undergrad program, either through completion of an undergraduate IDN program, or through appropriate bridge work following undergraduate preparation in a related discipline. At an institution which offers both undergrad and graduate programs, relevant undergrad courses will be offered as electives to catch up.

The graduate program specifically requires that students extend current knowledge of IDN techniques and practices, challenge design assumptions and theory through research, co-creation, and analysis of IDN artifacts.

Alumni from this program will **lead teams in industry, public service and academic contexts**. They will **drive innovation** and **provide leadership** to the field.

program GOALS

In a graduate program on IDN, students will

- be able to **innovate** and **extend** existing practice;
- be able to **present, explain and defend** their projects to experts and stakeholders;
- help to define the **future** of the field;
- be able to understand and apply **interdisciplinary research insights and methods for designing and producing IDN**;
- work independently and in project teams to produce and **user test IDN content** and artifacts;
- **collaborate** with **external** partners to **produce** IDN prototypes based on specific client needs;
- be able to rigorously **evaluate** IDN artifacts.

GRADUATE program STRUCTURE

This is a proposed structure for the graduate program, and its articulation into years and semesters. Courses are organized into Production Practices & Product Design, Media Design & Technology, Society & Culture, Narrative Architectures, and IDN Systems. Here below, we list the core courses, followed by the complete list of Elective ones, which students select to address concrete professional needs in the in the IDN world.

Core courses and articulation

Year 1

Semester 1

- Advanced IDN Design Principles (15 ECTS)
- Prosocial Complexity Representations: Topics, Ethics, Sustainability, Responsibility (15 ECTS)

Semester 2

- Production Studio 1: Product management and innovation (15 ECTS)
- Elective 1 (7.5 ECTS)
- Elective 2 (7.5 ECTS)

Year 2

Semester 1

- Research Methods and Analysis in IDN (15 ECTS)
- Elective 1 (7.5 ECTS)
- Elective 2 (7.5 ECTS)

Semester 2

- Production studio 2 (Thesis) or Theoretical (Thesis) Course (30 ECTS)

Proposed list of Elective courses for the Graduate program

Society & Culture

- Reducing the Carbon Footprint of your IDN Application

IDN Technology

- Programming with a Game Engine
- Custom IDN Engine Development
- XR, VR, AR for IDNs
- Data Science for IDNs
- Programming for IDNs

Narrative Architectures

- IDN for data journalism
- IDN for scientific communication
- IDN for crisis management
- IDN for cultural heritage communication
- Theories and techniques in character development
- Storytelling with data
- IDN authoring tools and frameworks
- IDN System Design and Maintenance
- Cross-platform and Immersive IDN Experiences
- Integration of artificial intelligence (AI) techniques
- Advanced IDN Design Principles

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