Introduction to Digital Media

Peter von Maydell & Frieder Nake
Winter 2018/19

Outline & Conditions for Credit, Schedule 2018/19 (22 October 2018)

Welcome to the Masters programme that Hochschule für Künste (HfK), Bremen, and University of Bremen are offering jointly! The programme leads to the degrees of a Master of Science (M.Sc., at the university) and a Master of Art (M.A., at HfK). During this first semester you are supposed to take "Introduction to Digital Media" as the only mandatory course. This is a challenge for the two of us who are offering the course: We will try hard to make it interesting to you so that you take part voluntarily. For some challenge, for some effort, for some fun, i.e. for learning by doing and reflecting.

Digital Media! If that term is taken to mean smartphones, we find them all over the world. They are in the hands and pockets of females and males, kids and grandparents, rich and poor, workers and managers, students and professors. Some consider digital media to be media of liberation or convenience and independence. Others point at their potentials for ontrol and surveillance, at the subtle suppression that comes with digital media. Until only a few years ago, nobody had a smartphone. Meanwhile, they have created their own demand. If you now want to communicate with a group of friends, it will be via Whatsapp, and for it you need a smartphone. Is that a smart phone, or is it a highlevel supercomputer?

The very term, »Digital Media«, says that our field of study is about digitality and mediatization. We may consider our field of study as design work of a highly general kind. Somehow immaterial and interdisciplinary. It is situated between algorithmics and aesthetics, or between event and research, or extending from strict logical derivation to wide open interpretation. Do you see it similarly? Do you connect anything with the terms *algorithmics* and *aesthetics*?

That much we can say for sure: Without computers, there are no digital media. Digital media is one of the results of the algorithmic revolution which politicians call the "digital revolution". Computers constitute its basic precondition.

Digital media appear as the technical carriers of current hypes like Big Data, Digital Humanities, Gamification, ubiquitous communication, surveillance, espionage, smart industries, Industry 4.0, the new machine learning, the new Artificial Intelligence. And smilies, in all their variations.

Winter 2018/19 | 4 SWS | 6 ECTS | M.A., M.Sc. in Digital Media | Monday 14-18 HfK Auditorium | Begin 22 october 2018

Peter von Maydell p.maydell@hfk-bremen.de | (0421) 9595 1237 | HfK room xxxx
Frieder Nake nake@informatik.uni-bremen.de | (0421) 218 64485 | Uni MZH room 1330 | https://compart.uni-bremen.de | Office h

We may think of our dominating modes of expression and communication – the verbal (symbolic) and the visual (iconic) modes – to be at odds with each other. The subtle and greatly differentiating power of symbolic expression seems to lose against the touching, immediate, and flat iconic mode. A cultural revolution is happening as people voluntarily use various devices of information technology.

Our Goals are: Students gain a good understanding of Digital Media – conceptually, historically, technically, aesthetically, in theory and practice. When their friends ask them, what it is that they are doing, they should be able to explain just that in simple and clear terms. We try to establish the foundation for this.

Students will experience a healthy dialectics in studying digital media: the tension between algorithmics and aesthetics. We are concerned with both these aspects at the same time. Things in the digital dimension are designed for perception (surface aspect of things) and they are constructed for manipulation (subface aspect). This is new! It is exciting and challenging. Sensual perception is subject matter of aesthetics and subjective; mental construction is subject matter of algorithmics and objective.

General structure of the seminar for the term 2018/19

As indicated, students should develop a deep understanding of "digital media" since this is their subject matter. The very term of "digital media" already says, we are dealing with media. But with media of a special kind: "digital". This term is not very precise. Important is what distinguishes digital from other media. The difference is the computer. Without computers (we call them *semiotic machines*), there are no digital media! Therefore, we need a good understanding of the media specifics of computers.

Computers are machines to evaluate computable functions. A first dimension we must, therefore, study is that of *computability*. It is fundamental for everything we do. But since the mid-1980s, computers have been used in a particular mode: in the interactive mode. A second dimension of our studies thus is the dimension of *interactivity*. On their path from the view as an automaton via tool to media, computers started to be connected with each other by an enormous international technological network, the Internet. The third dimension of computers' media characteristics thus is, *connectivity*. These three dimensions determine what we study!

We plan for 3 + 2 units:

- the Introduction (1 week)
- three topical blocks of four weeks each:
  - o computability
  - o interactivity
  - o connectivity
- the Conclusion (1 week).

Each of the three topical blocks defines four meetings of the seminar. They are planned as

1. A guest gives a one-hour lecture on the topic of the block. The lecture is open to the general public. We hope for broad discussion to emerge from it. To prepare for this, groups of students are requested to work out questions and remarks. Members of the four thematic groups for the topic (cf. "Conditions for credit") are challenged in particular. All of us should prepare for meeting the guest, and afterwards reflect on what he or she said. After the lecture and discussion, short excerpts will be handed out, selected from the guests's publications. We will use them for a broader discussion with our visitor.

2. The second meeting of each block is scheduled for presentations by thematic groups of students (there may be four groups of five members each). We build those groups at the first meeting of the seminar (cf. "Conditions for credit"). Each group gets a specific theme in the context of one of the four topics. The theme will be associated to a publication for students to study as a basis for their presentation. Each group presentation takes 45 minutes, including discussion.

3. At the third meeting, students are asked to work alone or in small groups on an issue of the topic. You

take up the guest's lecture and the students' presentations from the week before; you formulate questions, discuss, record results, be ready to present and discuss them.

4. The last meeting of a topic is scheduled for an in-depth treatment of the theme, and its critical reflection by us, the teachers. We first lecture including some extra as, e.g., a video; this develops into theses we suggest for discussion. The discussion should be result-oriented: we formulate results, even if only vaguely. A short summary presentation by us concludes the topical block with its four themes. We intend to prepare written summaries afterwards.

We also plan for a visit to a museum in Bremen or not far away (we are thinking of Edith-Russ Haus für Medien-kunst in Oldenburg.)

Conditions for credit

The European Credit Transfer System (ECTS) considers one credit point (CP) as equivalent to 30 hours of work. This is considered to be the average workload of an average full-time student. Our seminar carries 6 CPs. They amount to a workload of 180 hours of work for each student during the term.[1]

The six credit points are granted if you satisfy these general conditions: you are always participating as an active member of the seminar. You are supposed to read papers, think about them in contexts, reach out to other questions, issues, and aspects, sketch ideas for the group's presentation, participate in discussions.

Explicit requirements for credit are these two:

1. *The cooperative effort*. We build twelve study groups of five students each (3 topics, 4 groups for each topic, 60 students). For each of the three topical blocks, we formulate four special themes for group work. Each study group chooses their theme to work on (we do this at the first meeting). Each theme will be represented by one publication. Each group carefully studies their assigned publication and discusses it from the perspective of their theme. The groups present their results to the second meeting of their topical block. They get 45 minutes for the presentation, including discussion. The group also formulates a set of questions for the invited speaker of their block.

2. *The individual effort*. After classes have come to their end, each individual participant is asked to write a term paper (*essay*) reflecting on what he or she has learned during the seminar. We announce the topic and question of the essay at our last meeting. You are asked to submit three weeks later.

Invited speakers

We have invited three guest speakers to introduce the topical blocks. They will stay with us for the rest of the meeting for discussion. – We also invite two former graduates from our program for a session on "Studying and Working in the field of Digital Media". – The following persons will be our visitors:

22 Oct 18	**computability**	Prof. Dr. Oliver Deussen, Konstanz
19 Nov 18	**interactivity**	Prof. David Oswald, Schwäbisch Gmünd
17 Dec 18	**connectivity**	Prof. Dr. Martin Warnke, Lüneburg
10 Dec 18	**study & work**	Two former graduates talk about their professional experiences after graduating (names will be announced)

[1] The European credit transfer system (ECTS) is based on the following assumptions. Students are treated like average working people. One semester is six months, or 26 weeks. During this time, students should gain 30 credit points, i.e. work for 900 hours. If we take one week as 40 hours of work, students are supposed to work during one semester for 22.5 weeks, and have 3.5 weeks of vacation. This is the ECTS logic.

Schedule of activities

no.	date	topic, work
1	15 Oct 18	Introduction. Organizing the seminar. General questions. Overview of the term, the semester, and the program. We present the 3 topics with 4 themes each (a text for each of the 3x4 themes). Build groups of about 5 students per theme, assign a theme (text) to each of them.
2	22 Oct 18	Topic 1 (1): **Computability**. Guest speaker: Oliver Deussen (Konstanz)
3	29 Oct 18	Topic 1 (2): Four groups of students present their themes
4	5 Nov 18	Topic 1 (3): Students work on small projects whose results they submit
5	12 Nov 18	Topic 1 (4): Reflection on, and summary of topic (PvM, FN)
6	19 Nov 18	Topic 2 (1): **Interactivity**. Guest speaker: David Oswald (Schwäbisch Gmünd)
	23 Nov 18?	Visiting Edith-Russ Haus füe Medienkunst in Oldenburg (date prelinimary, to be decided)
7	26 Nov 18	Topic 2 (2): Four groups of students present their themes
8	3 Dec 18	Topic 2 (3): Students work on small projects whose results they submit
9	10 Dec 18	Topic 2 (4): Reflection on, and summary of topic (PvM, FN) (plus visit by former students)
10	17 Dec 18	Topic 3 (1): **Connectivity**. Guest speaker: Martin Warnke (Lüneburg)
11	7 Jan 19	Topic 3 (2): Four groups of students present their themes
12	14 Jan 18	Topic 3 (3): Students work on small projects whose results they submit
13	21 Jan 18	Topic 3 (4): Reflection on, and summary of topic (PvM, FN)
14	28 Jan 18	Conclusion. Retrospective, summary, feedback, critique (prepared by anonymous questionnaire). Profs present: "History, theory, and practice of digital media"; students will be given their topic for a "fundamental essay".
	28 Feb 18	Deadline for submission of individual "fundamental essay"