

## **Science Goes Fiction Science Fiction, Film and Technological Futures in a Historical Perspective**

AK1205, VT2023, 7,5 cp  
Division of History of Science, Technology and Environment, KTH  
V12, Tuesdays 17.15-19.00

### **Course Memo**

#### **Introduction**

During the last 100 years, Science Fiction films and literature have been a forum through which science and technology have, directly and indirectly, been brought out to the public, discussed, and interpreted. Within the genre, images of the role of science and technology in future society have not only mirrored existing discourses and discussions about science's and technology's power or danger, but have also created visions of the future, as well as inspired and/or discouraged research and technological development. Taking works of science fiction as a starting point, the course will analyze statements regarding scientific and technological change and relate these to twentieth century discussions and discourses regarding science, technology, and society. The objective is both for you to critically reflect on these discussions and to be introduced to the history of science and technology. We will touch upon themes such as images of technoscientific development; science, technology and gender; futuristic visions of industrialization and environmental problems; research ethics; the relations between human and machine; and the relationship between humans and their environments.

#### **Course Organization**

Altogether you will attend eight lectures and four seminars. The course schedule contains the dates and topics, literature and films. It is attached to this course memo.

#### **Lectures**

Lectures will be held weekly. To prepare for a lecture you will receive up to 60 pages of text material to read. You will write short comments connected to five out of the seven thematic course lectures. Your comments serve to inform the teachers and lecturers about the points you found interesting, surprising or puzzling in the texts and will be used in class discussion.

#### **Seminars**

The seminars provide the opportunity to develop your own course work. For the seminars you will set up a blog and write a blog introduction (as part of a group assignment), write two individual blog entries, and draft your final course paper. In the seminars you will also give each other feedback on your work in written form.

### Literature

The course literature consists of selected research articles and book chapters connected to the seven thematic lectures. The course literature will be uploaded on KTH's learning platform Canvas. The readings are mandatory.

### Films

Each of the seven thematic lectures is connected to a film to be watched before the lecture.

### Course Assessment

The requirements for passing the course are regular attendance, active participation in class, and the submission and approval of all written assignments:

1. **Attendance of 75 % of the course** is mandatory. Absence from more than three lectures will have to be made up by an additional writing assignment. Absence from a seminar will have to be made up by a writing assignment.
2. You will write short comments on the course readings in preparation of five of the seven thematic lectures (you may freely select five out of the seven lectures). **Your literature comments will have a length of 300 to 400 words and include three questions for discussion in class.** Upload your comments to Canvas at the latest at 10 am one day before the lecture. The comments/questions will be graded pass/fail.
3. As part of a small group project, you will **set up a public blog**. The purpose of this task is to connect your ideas from the course readings, lectures and films as well as from additional material and to develop your own thoughts into a publishable format. You will present your group's ideas for your blog in a **joint handout paper of 2 pages** for seminar 1. The handout can serve as an introductory blog post for your blog. Upload your handout to Canvas at the latest at 10 am four days before seminar 1. As part of a peer-review exercise you will also be asked to **comment on your fellow students' handouts** for seminar 1. The handout and your comments will be graded pass/fail.
4. You will **write two blog entries of 800 to 1000 words each**, as contributions to your group's blog. The purpose of this task is to publish your thoughts and your own work in a coherent textual and visual form, which can include text, images, videos and podcasts. Post your two blog entries on your blog at the latest at 10 am four days before seminar 2. As part of a peer-review exercise you will also **comment on your fellow students' blog entries** for seminar 2. Your blog commentaries will be graded pass/fail. Your blog entries will be graded A to F.
5. For seminar 3, you will be asked to **find and select film clips on a preassigned theme** of science fiction for class discussion. Upload the links to your selected film clips to Canvas at the latest at 10 am one day before seminar 3. Your film clips will be graded pass/fail.
6. The final course assignment consists of a **written paper of 2000 to 2500 words**. You will analyze a book/film/television series/comic etc. of your own choice, relating to

one or several of the themes and perspectives discussed in the course. The book/film/series/comic must not be one of those that were closely discussed in class. In seminar 4 you will **present a first draft of your final paper** and discuss it with your fellow students. Post your paper draft at the latest at 10 am four days before the seminar. For the seminar, you will also **give feedback to another student's paper draft**. The deadline for submitting your final assignment to Canvas is **May 24, 2023**. Your final paper will be graded A to F.

### **Grading**

Grading for the course will be based on the ECTS scale (A to F). For your grade, the following dimensions will be assessed:

- your course activity, assessed through attendance and participation in class, written commentaries on the course literature (5), the blog handout (1), a film clip activity (1), a paper draft (1), and the written and oral feedback to the work of your fellow students (3) (11 items, graded pass/fail)
- the quality of your seminar contributions, assessed through two blog entries (A to F, 30 % of the final grade)
- the quality of your final paper (A to F, 40 % of the final grade)

Fulfilling each of the three dimensions is mandatory to pass the course. The first dimension is mandatory to pass the course. Results on the second and third dimension make up your course grade.

### **Grading Criteria**

To pass the course, your written assignments shall demonstrate your ability to

- describe how one or several works of science fiction relate to one or more questions discussed in class related to the history of science and technology, such as the relations between humans and machines; the relationship between humans and their environments; gender relations; or ethical questions of science and technology
- discuss and compare works of science fiction as examples of how attitudes towards science and technology have changed over time
- communicate your argument clearly
- demonstrate an understanding of the used literature and sources.

To achieve a higher grade, you shall also demonstrate the ability to

- critically analyze claims and representations regarding scientific and technological change in one or several works of science fiction, by applying the theoretical perspectives, concepts and tools presented in the course
- critically reflect on how your own as well as other people's attitudes towards science and technology are formed through popular culture and media like science fiction novels and films
- critically reflect on how a work of science fiction is itself an expression of culture formed in specific social, political, and geographical settings.

Reaching these goals will depend on your ability to present and communicate your ideas in a clear way. It is important that your written assignments respect formal academic standards:

by fully disclosing the literature and other source material used; by referencing the material in a distinct way; and by distinguishing your own ideas clearly from those of others. Instructions on the standards of academic work in different formats will be provided to you in class.

### **Avoiding Plagiarism**

At KTH we work actively to prevent plagiarism. The definition of plagiarism is using someone else's ideas or work without acknowledging it. This is a serious offence that can lead to suspension from the university. Read more at KTH's website on "Cheating and Plagiarism" at <https://www.kth.se/en/student/stod/studier/fusk-1.997287>. Also check your abilities by taking the anti-plagiarism tutorial *Refero*, which you find for example here: <http://refero.lnu.se/english/>. During the seminars we will give information about the correct way to make references. Your texts submitted for the seminars and your final paper will be screened using the text-matching tool *Ouriginal* in Canvas.

### **Canvas**

We will use KTH's learning platform Canvas as a means and forum for communication. You will upload your written assignments to the assignment folders on Canvas.

### **Special Needs**

If you need compensatory support because of documented, permanent disabilities you should contact the support group called *Funka* here at KTH as soon as possible: <https://www.kth.se/student/stod/studier/funktionsnedsattning/funka-1.953214>. E-mail: [funka@kth.se](mailto:funka@kth.se) Phone: 08-790 75 00. Funka will inform about and help you with available support.

### **Teachers**

Sabine Höhler, Associate Professor of Science and Technology Studies at the Division of History of Science, Technology and Environment at KTH (course responsible teacher).  
Contact: [sabine.hoehler@abe.kth.se](mailto:sabine.hoehler@abe.kth.se)  
Alicia Gutting, Doctoral Student at the Division of History of Science, Technology and Environment at KTH (course teacher).  
Contact: [alicia.gutting@abe.kth.se](mailto:alicia.gutting@abe.kth.se)

### **Guest Lecturers**

Anna Åberg, Lecturer in History of Technology at the Department of Technology Management and Economics, Chalmers University of Technology  
Hannah Klaubert, Postdoctoral researcher, Department of Thematic Studies (TEMA), Technology and Social Change (TEMAT), Linköping University  
Jerry Määttä, Associate Professor at the Department of Culture and Aesthetics, Stockholm University  
Jonas Ramsten, Lecturer at the Unit for Culture, Society and Media Production at Linköping University

### **Examiner**

Nina Wormbs, Professor of History of Technology at the Division of History of Science, Technology and Environment at KTH. Contact: [nina.wormbs@abe.kth.se](mailto:nina.wormbs@abe.kth.se)

**Add-on Studies**

For advanced studies within this field you may apply for a master's thesis in history of science and technology after completing this course (AK221X Degree Project in History of Technology, Second Cycle, 30.0 credits:

<https://www.kth.se/student/kurser/kurs/AK221X?l=en>).

## Course Schedule, Overview

Week 4	Tuesday 24 January, 17-19	<b>Lecture 1 Introduction</b>
Week 5	Tuesday 31 January, 17-19	<b>Lecture 2</b> “Spaceship Earth: Envisioning the Human Habitat in the Environmental Age”, Sabine Höhler Film: <i>Silent Running</i> (USA 1972)
Week 6	Tuesday 7 February, 17-19	<b>Seminar 1 Blog Handout</b>
Week 7	Tuesday 14 February, 17-19	<b>Lecture 3</b> “Science Fiction Film as Technological Spectacle”, Jonas Ramsten Film: <i>Tron</i> (USA 1982)
Week 8	Tuesday 21 February, 17-19	<b>Lecture 4</b> “Disaster Stories in Film and Literature since 1950”, Jerry Määttä Film: <i>28 Days Later</i> (GB 2002)
Week 12	Tuesday 21 March, 17-19	<b>Seminar 2 Blog Posts</b>
Week 13	Tuesday 28 March, 17-19	<b>Lecture 5</b> “The Genoist Society: Genetic Engineering in Science and Fiction”, Sabine Höhler Film: <i>GATTACA</i> (USA 1997)
Week 14	Tuesday 4 April, 17-19	<b>Lecture 6</b> “Aliens R Us: Othering the Future”, Anna Åberg Film: <i>Blade Runner</i> (USA 1982)
Week 16	Tuesday 18 April, 17-19	<b>Seminar 3 “Cyborgs R Us”</b>
Week 17	Tuesday 25 April, 17-19	<b>Lecture 7</b> “Science/Fictions of the Future: From Cold War Scenarios to Nuclear Waste Disposal Planning”, Hannah Klaubert Film: <i>The Heavens Call</i> (USSR 1959)
Week 18	Tuesday 2 May, 17-19	<b>Lecture 8</b> “Nuclear Winter in Science and Fiction”, Alicia Gutting Film: <i>Threads</i> (GB 1984)
Week 19	Tuesday 9 May, 17-19	<b>Seminar 4 Final Paper Draft</b>

Final Papers due week 21: Wednesday May 24, 2023

## Course Schedule, Extended

### January 24      **Lecture 1: Introduction**

Lecturer: Sabine Höhler

Place and time: V12, 17.15-19.00

Literature: Vivian Sobchack, *Screening Space: The American Science Fiction Film*, New Brunswick/London, Rutgers University Press 1997 (1987), Ch. 1: "The Limits of the Genre: Definitions and Themes", pp. 17-63.

Assignment: No written assignment. Have a look at the recommended reading.

### January 31      **Lecture 2: "Spaceship Earth: Envisioning the Human Habitat in the Environmental Age"**

Lecturer: Sabine Höhler

Place and time: V12, 17.15-19.00

Literature: Thomas Haigh, "Technology's Other Storytellers: Science Fiction as History of Technology", in: *Science Fiction and Computing: Essays on Interlinked Domains*, ed. David L. Ferro and Eric G. Swedin, Jefferson, NC, McFarland & Co. 2011 (20 pp.)

John Allen and Mark Nelson, *Space Biospheres*, Oracle, Arizona, Synergetic Press 1989 (orig. 1986), pp. 52-64.

Peder Anker, "The Ecological Colonization of Space", *Environmental History* 10 (2005) 2: 239-268.

Film: *Silent Running* (USA 1972)

Assignment: Watch the film and read the texts for this class. Write a short literature comment of 300 to 400 words, including 3 questions for discussion, to be uploaded to Canvas at the latest at 10 am one day before the lecture. (Literature comments need to be provided for five out of seven lectures.)

### February 7      **Seminar 1: Blog Handout**

Students will present their blog ideas in a handout and give each other feedback.

Place and time: V12, 17.15-19.00

Assignments: 1. As part of a group work, prepare a handout of 2 pages for a blog on a preassigned science fiction theme. In your handout, present a definition and introduction of your topic, provide examples from science fiction films/books/comics/TV series/games etc., and present your ideas for possible blog posts. Upload your group's handout to Canvas at the latest at 10 am four days before the seminar.

2. The blog handouts will be circulated among the students. Read the handouts and comment on the handouts in written form. Upload your comments to Canvas at the latest at 10 on the day of the seminar.

**February 14      Lecture 3: “Science Fiction Film as Technological Spectacle”**

Lecturer: Jonas Ramsten

Place and time: V12, 17.15-19.00

Literature: Stacey Abbott, “Final Frontiers: Computer-Generated Imagery and the Science Fiction Film”, *Science Fiction Studies* 33 (2006) 1, pp. 89-108.  
Temenuga Trifonova, “Special Effects: Simulation in Cinema”, *Kinema: A Journal for Film and Audiovisual Media*, Spring 2004 (11 pp.).  
Lukasz Boron, “Méliès and Early Cinema: Conjuring the Science-Fiction Film Genre”, *CineAction* 82/83, 2010 (7 pp.).  
John Beard, “Science Fiction Films of the Eighties: *Fin de Siècle* Before its Time”, *Journal of Popular Culture* 32 (1998) 1: 1-13.

Film: *Tron* (USA 1982)

Assignment: Watch the film and read the texts for this class. Write a short literature comment of 300 to 400 words, including 3 questions for discussion, to be uploaded to Canvas at the latest at 10 am one day before the lecture. (Literature comments need to be provided for five out of seven lectures.)

**February 21      Lecture 4: “Disaster Stories in Film and Literature since 1950”**

Lecturer: Jerry Määttä

Place and time: V12, 17.15-19.00

Literature: Susan Sontag, “The Imagination of Disaster” (orig. 1965), in: *The Science Fiction Film Reader*, ed. Gregg Rickman, New York, Limelight Editions 2004, pp. 98-113.

Gill Branston, “The Planet at the End of the World: ‘Event’ Cinema and the Representability of Climate Change”, *New Review of Film and Television Studies*, 5 (2007) 2: 211-229.

Aris Mousoutzanis, “Apocalyptic sf”, in: *The Routledge Companion to Science Fiction*, eds. Mark Bould et al., London/New York, Routledge 2009, pp. 458-462.

Jerry Määttä, “Keeping Count of the End of the World. A Statistical Analysis of the Historiography, Canonisation, and Historical Fluctuations of Anglophone Apocalyptic and Post-Apocalyptic Disaster Narratives”, *Culture Unbound. Journal of Current Cultural Research* Vol. 7 (2015): 411-432.

Film: *28 Days Later* (GB 2002)

Assignment: Watch the film and read the texts for this class. Write a short literature comment of 300 to 400 words, including 3 questions for discussion, to be uploaded to Canvas at the latest at 10 am one day before the lecture. (Literature comments need to be provided for five out of seven lectures.)

**March 21      Seminar 2: Blog Posts**

Students will give each other written and oral feedback on their blog posts.

Place and time: V12, 17.15-19.00

Assignments: 1. Write two blog entries of 800 to 1000 words each as contributions to your group’s blog. The blog entries shall be textual and visual, they shall

use images and can also include video/audio formats. Post your two blog entries on your blog at the latest at 10 am four days before the seminar.  
2. Read and comment on two blog entries of your fellow students by using the comment function of their blogs. Upload all four files to Canvas at the latest at 10 am on the day of the seminar.

- March 28**      **Lecture 5: “The Genoist Society: Genetic Engineering in Science and Fiction”**
- Lecturer: Sabine Höhler  
Place and time: V12, 17.15-19.00  
Literature: Dorothy Nelkin and M. Susan Lindee, *The DNA Mystique: The Gene as a Cultural Icon*, Ann Arbor, University of Michigan Press 2004, Ch. 3: “Sacred DNA”, pp. 38-57.  
Marina Levina, “Cracking the Code: Genomics in Documented Fantasies and Fantastic Documentaries”, in: *SciFi in the Mind’s Eye: Reading Science through Science Fiction*, ed. Margret Grebowicz, Chicago/La Salle, Open Court 2007, pp. 231-242.  
David A. Kirby, “The New Eugenics in Cinema: Genetic Determinism and Gene Therapy in GATTACA”, *Science Fiction Studies* 27 (2000) 2: 193-215.  
Film: *GATTACA* (USA 1997)  
Assignment: Watch the film and read the texts for this class. Write a short literature comment of 300 to 400 words, including 3 questions for discussion, to be uploaded to Canvas at the latest at 10 am one day before the lecture. (Literature comments need to be provided for five out of seven lectures.)
- April 4**      **Lecture 6: “Aliens R Us: Othering the Future”**
- Lecturer: Anna Åberg  
Place and time: V12, 17.15-19.00  
Literature: Joseph Christopher Schaub, “Kusanagi’s Body: Gender and Technology in Mecha-anime”, *Asian Journal of Communication* 11 (2001) 2, pp. 79-100.  
Vivian Sobchack, “Postfuturism” (extract), in: Gill Kirkup, Linda Janes, Kathryn Woodward and Fiona Hovenden, *The Gendered Cyborg: A Reader*, London/New York, Routledge 2000, pp. 136-147.  
Naomi Zack, “The Island of Dr. Moreau: Interpretation of Images of Race and Species”, in: Margret Grebowicz (Ed.), *SciFi in the Mind’s Eye: Reading Science Through Science Fiction*, Chicago, Open Court 2007, pp. 25-37.  
Film: *Blade Runner* (USA 1982)  
Assignment: Watch the film and read the texts for this class. Optionally, listen to the Podcast episode. Write a short literature comment of 300 to 400 words, including 3 questions for discussion, to be uploaded to Canvas at the latest at 10 am one day before the lecture. (Literature comments need to be provided for five out of seven lectures.)

**April 18 Seminar 3: “Cyborgs R Us: Others and Othering in Science Fiction”**  
Place and time: V12, 17.15-19.00  
Literature: Hassan Melehy, “Bodies Without Organs: Cyborg Cinema of the 1980s”, in: *The Science Fiction Film Reader*, ed. Gregg Rickman, New York, Limelight Editions 2004, pp. 315-334.  
Assignment: Think of science fiction classics like *Frankenstein* (1931), *Blade Runner* (1982, 2017) or *Terminator* (1984): What is a cyborg and which role does the cyborg play in works of science fiction? Use the assigned texts to prepare for the classroom discussion. Search the internet and select film clips on the cyborg topic. Next to cyborg figures, there are many recurring human and non-human ‘Others’ in science fiction. Which are they? Upload the links to your selected film clips and a comment on why you chose them to Canvas at the latest at 10 am one day before the seminar.

**April 25 Lecture 7: “Science/Fictions of the Future: From Cold War Scenarios to Nuclear Waste Disposal Planning”**  
Lecturer: Hannah Klaubert  
Place and time: V12, 17.15-19.00  
Literature: Jenny Andersson, “The Great Future Debate and the Struggle for the World”, *The American Historical Review* 117 (2012) 5: 1411-30.  
Peter Galison, “The Future of Scenarios”, in: *The Subject of Rosi Braidotti: Politics and Concepts*, eds. Bolette Blaagaard and Iris van der Tuin, London: Bloomsbury 2014, pp. 38-46.  
*Optional:* Listen to episode 114 “Ten Thousand Years” of the podcast *99% Invisible*: <https://99percentinvisible.org/episode/ten-thousand-years/>  
Film: *The Heavens Call* (USSR 1959)  
Assignment: Watch the film and read the texts for this class. Write a short literature comment of 300 to 400 words, including 3 questions for discussion, to be uploaded to Canvas at the latest at 10 am one day before the lecture. (Literature comments need to be provided for five out of seven lectures.)

**May 2 Lecture 8: “Nuclear Winter in Science and Fiction”**  
Lecturer: Alicia Gutting  
Place and time: V12, 17.15-19.00  
Literature: Matthias Dörries, “The Politics of Atmospheric Sciences: ‘Nuclear Winter’ and Global Climate Change”, *Osiris* 26 (2011) 1: 198-223.  
Jonathan Hogg, *British Nuclear Culture: Official and Unofficial Narratives in the Long 20th Century*, London, Bloomsbury 2016, Ch. 6: “‘Abused technology’: Extreme Realism, 1975–1989”, pp. 133-158.  
Film: *Threads* (GB 1984)  
Assignment: Watch the film and read the texts for this class. Write a short literature comment of 300 to 400 words, including 3 questions for discussion, to be uploaded to Canvas at the latest at 10 am one day before the lecture. (Literature comments need to be provided for five out of seven lectures.)

**May 9**

**Seminar 4: Final Paper Draft**

Students will give each other feedback on a draft of their final assignments. We will have a final course discussion and evaluation.

Place and time: V12, 17.15-19.00

Assignments: The final course assignment consists of a written paper of 2000 to 2500 words.

1. Write a first draft of your final paper on a film/book/TV series/comic etc. of your choice. Relate to one or several themes and perspectives discussed in the course and use the material from the lectures, the course literature, class discussions and blog entries. The film/book/TV series/comic etc. must not be one of those we discussed in class. Upload your final paper draft to the assignment folder in Canvas at the latest at 10 am four days before the seminar.

2. Read the paper of one other student and provide feedback in written form at the latest at 10 am on the day of the seminar.

Final Papers are due Wednesday, May 24, 2023.