**Course TIK4001, Fall semester 2016**

**Preliminary outline. This draft: 11th June 2016**

**General considerations on the course TIK4001 for the fall 2016**

The course intends to:

* Renew and upgrade the structure and content of some of the modules of the course
* Increase consistency between the various topics (within each module, and among modules); avoid excessive fragmentation of lectures and lecturers
* Make active use of interactive teaching in addition to standard lectures: group work, oral presentations and debates, videos, study visits.
* Provide an earlier presentation of TIK’s research themes
* Provide an early introduction to empirical methods and approaches (see module 4)

**Course structure**

1. General introduction.

2. Introduction to STS.

3. Introduction to innovation studies.

4. Introduction to empirical data and methods.

**Number of lectures per week:** 4 lectures per week: 3 standard lectures, plus one lecture of a more interactive type (e.g. study visit, group-work tasks, videos, debates).

**Main lecturer in each module:** To increase consistency and avoid fragmentation, the coordinator of each module will also be the main lecturer of that part of the course. The coordinator of each module will have a few invited lectures from others at TIK.

**Module 1: General introduction.**

**Coordinator:** Taran Thune.

**Module duration:** 3 weeks.

**Period:** weeks 33-35.

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| **Dato** | **Hvem** | **Tema** | **Pensum (forslag)** |
|  |  | ***Uke 33:***  ***BLI KJENT MED FAGET*** |  |
| 15. aug  10.15-12 | Fulvio Castellacci, Taran Thune, Hilde Reinertsen, Håkon Normann & andre | *Velkommen til nye TIK studenter.*  Kort innføring i fagets målsetninger, undervisningsprofil, eksamen, studentgruppen  og faglige ansatte | - |
| 16. aug  10.15-12 | Taran Thune | *Hva er vitenskap og teknologi?*  En kort innføring i sentrale begreper og perspektiver som brukes i faget. | Sismondo (kap. 1) |
| 18. aug  10.15-12 | Taran Thune | *Hva er innovasjon?*  En kort innføring i sentrale begreper og perspektiver som brukes i faget. | Tidd & Bessant (kap. 1) |
| 18. aug  13.15-15 | Vegard Tveito | Arbeidsmetoder i faget | - |
|  |  | ***Uke 34 & 35:***  ***INTELEKTUELLE TRADISJONER*** |  |
| 22. aug  12.15-14 | Taran Thune | Filosofiske, historiske og sosiologiske  studier av vitenskap | Sismondo (kap. 2-5);  Eksempeltekster:  Merton 1973 (et kap.); Kuhn 1967 – utdrag |
| 23. aug  10.15-12 | Taran Thune | Konstruktivisme som vitenskapsteoretisk perspektiv | Sismondo (kap. 6,9);  Eksempeltekster:  Pinch & Bijker;  Latour & Woolgar (kap 2) |
| 25. aug  10.15-12 | Taran Thune & Magnus Gulbrandsen | Hva innebærer det å studere  forskning og forskere? | Eksempler på  deres tekster? |
| 29. aug  10.15-12 | Taran Thune | Studier av teknologi og teknologisk endring | Sismondo (kap 8);  Eksempeltekster:  Mokyr (kap. 5);  Hughes 1987 |
| 30. aug  10.15-12 | Taran Thune | Fra teknologistudier til innovasjon | Fagerberg 2003;  Eksempeltekster:  Nelson & Winter 1987, (kap 2);  Tidd & Bessant (kap. 2- 3) |
| 1. sep  10.15-12 | Jens Hansson & Håkon Normann | Hva innebærer det å studere teknologi og teknologisk utvikling i et samfunnsvitenskapelig perspektiv? | Eksempel (layers teksten til Olav)  Morlacchi & Nelson 2011 |
| 1. sep  12.15-13 | Taran Thune | Oppsummering:  Hva vi har lært så langt og veien videre i kurset | - |

**Module 2: Introduction to STS.**

**Coordinator:** Hilde Reinertsen.

**Module duration:** 4 weeks + 1 week essay.

**Period:** weeks 36-39.

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| **Dato** | **Hvem** | **Tema** | **Pensum (forslag)** |
|  |  | ***UKE 1: Hvilken rolle spiller vitenskap***  ***og teknologi i samfunnet og i våre liv?*** |  |
| 5. sep.  10:15–12:00 | Hilde Reinertsen | Introduksjon til modulen og STS som fagfelt | Asdal, Moser, Brenna 2007  (+ Sismondo og Sjølsvold) |
| 6. sep.  10:15–12:00 | Hilde Reinertsen | Det tekniske og det politiske | Berg 1999, Collins&Pinch 1998, Winner 1980 |
| 7. sep. | Hilde Reinertsen  (IKKE BEKREFTET) | Ekskursjon 1: Teknisk Museum | - |
| 8. sep.  10:15–12:00 | Hilde Reinertsen | Workshop: Det tekniske  og det menneskelige | Oudshoorn&Pinch 2003, Soneryd 2007, Turkle 2012, Wyatt 2003 |
| 9. sep | Hilde Reinertsen  (IKKE BEKREFTET) | Filmvisning: *Drone* | - |
|  |  | ***UKE 2:***  ***Hva gjør teknologiene? Styrer vi dem eller de oss?*** |  |
| 12. sep.  10:15–12:00 | Hilde Reinertsen | Har vi noe valg?  Sosial konstruksjon vs. teknologi-determinisme | Akrich 1992, de Laet & Mol 2000, Pinch&Bijker 1984, Wyatt 2007 |
| 13. sep.  10:15–12:00 |  | Teknologi og omsorg | Moser & Thygesen 2013, 2014; Pols, 2010 |
| 14. sep. | Hilde Reinertsen  (IKKE BEKREFTET) | Ekskursjon 2: Teknologirådet | Bruun Jensen 2005,  Callon et.al 2009 |
| 15. sep.  10:15–12:00 | Hilde Reinertsen | Ekspertise, kritikk og kontrovers | Asdal 2011 (kap 1, 4), Callon et.al 2009, Wynne 1992, Hilgartner 2000 |
|  |  | ***Uke 3: Hvordan blir vitenskap til?***  ***Inn i laboratoriet og ut igjen*** |  |
| 19. sep.  10:15–12:00 | Hilde Reinertsen | Inn i laboratoriet: Å produsere ny kunnskap | Kuhn 1962, Latour & Woolgar 1986, Asdal 2011 (introduksjon) |
| 20. sep.  10:15–12:00 | Tone Druglitrø | Etikk og verdier i laboratoriet | Druglitrø 2012,   Rader 2004 (+ Haraway) |
| 21. sep | Hilde Reinertsen  (IKKE BEKREFTET) | Ekskursjon 3: NDEVOR, UiO (Hjerneforskningslaboratorium) | - |
| 22. sep.  10:15–12:00 | Tone Druglitrø | Ut av laboratoriet: Hva skjer da? | Asdal 2011 (kap 1),  Callon 1984,  Felt & Fochler 2012,  Latour 1987 |
|  |  | ***Uke 4: Hvor ligger makten?***  ***Vitenskap, teknologi og politikk*** |  |
| 26. sep.  10:15–12:00 | Erlend Hermansen | Fra klimaforskning til klimapolitikk | Asdal 2011 (kap 6), Edwards 2010, Sundqvist et.al 2015, Wynne 2010, Callon et. al 2009 (+ Jasanoff) |
| 27. sep.  10:15–12:00 | Hilde Reinertsen | Politikkens teknologier | Asdal 2011 (kap 2,3,4,7), Foucault 2002, Law 2008, Singleton 2012 |
| 29. sep.  10:15–12:00 | Hilde Reinertsen | Oppsummering: STS som verktøy for å studere vitenskap, teknologi og politikk | - |
| 30.sep–7.okt |  | ***Uke 5:***  ***STS-essay*** |  |
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**Module 3: Introduction to innovation studies.**

**Coordinator:** Fulvio Castellacci & Håkon Normann

**Module duration:** 4 weeks + 1 week essay.

**Period:** weeks 41-44.

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| **Dato** | **Hvem** | **Tema** | **Pensum (forslag)** |
|  |  | ***Uke 41:***  ***The field of innovation studies*** |  |
| 10. okt  10:15–12:00 | Fulvio Castellacci | Introduction:  overview and objectives of this module |  |
| 10. okt  10:15–12:00 | Jan Fagerberg  (To be confirmed) | Studies of creation and use of knowledge:  Innovation as a multi-disciplinary field |  |
| 10. okt  10:15–12:00 | Jan Fagerberg  (To be confirmed) | Schumpeter and evolutionary economics |  |
| 14. okt  10:15–12:00 | Magnus Gulbrandsen | Types of innovation and how we measure them |  |
|  |  | ***Uke 42:***  ***Innovation at the firm-level*** |  |
| 17. okt  10:15–12:00 | Fulvio Castellacci | Innovation in firms: concepts and microfoundations |  |
| 18. okt  10:15–12:00 | Fulvio Castellacci | Modelling innovation and research and development |  |
| 20. okt  10:15–12:00 | Magnus Gulbrandsen | Management of innovation and R&D |  |
| 21. okt | Vegard Tveito & Jarle Hildrum  (To be confirmed) | Study visit: Telenor |  |
|  |  | ***Uke 43:***  ***Innovation in systems*** |  |
| 24. okt  10:15–12:00 | Håkon Normann | The innovation system approach |  |
| 25. okt  10:15–12:00 | Håkon Normann | Innovation in sectoral and technological systems |  |
| 27. okt  10:15–12:00 | Håkon Normann | Innovation and sustainability transitions |  |
| 28. okt  10:15–12:00 | Håkon Normann | Video / documentary & debate |  |
|  |  | ***Uke 44:***  ***R&D and innovation policy*** |  |
| 31. okt  10:15–12:00 | Jan Fagerberg  (To be confirmed) | Innovation policy:  Evolutionary and neoclassical perspectives |  |
| 1. nov  10:15–12:00 | Jan Fagerberg  (To be confirmed) | R&D and innovation policy: the Norwegian case |  |
| 3. nov  10:15–12:00 | Fulvio Castellacci & Håkon Normann | Conclusion: summary and group tasks |  |
| 4. nov | Håkon Normann  (To be confirmed) | Study visit: Research Council of Norway |  |
| 4.nov-11. nov |  | ***Uke 45:***  ***Innovation-essay*** |  |

**Module 4: Introduction to empirical data and methods.**

**Coordinator:** Fulvio Castellacci

**Module duration:** 3 weeks.

**Period:** weeks 46-48.

**Content:** This is a new module that has the objective to provide a general and accessible introduction to some of the more popular empirical approaches that are currently used in science, technology and innovation studies. The module is not intended to be a full introduction to empirical methods (which the students will have in the spring semester), but rather an easy and comprehensive overview to show the students the different ways in which researchers in these fields gather empirical data and analyze them empirically. Specifically, the idea that each lecture will focus on one classical paper published in the literature, and explain what empirical approach and practical steps have been done to produce that research.

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| **Dato** | **Hvem** | **Tema** | **Pensum (forslag)** |
|  |  | ***Uke 46:***  ***Qualitative data and methods (I)*** |  |
| 14. nov  9:15-10:00 | Fulvio Castellacci | Overview and objectives of this module |  |
| 14. nov  10:15–12:00 | Taran Thune | Design of case studies |  |
| 15. nov  10:15–12:00 | Jakoba Gonzalez | Interview-based research |  |
| 17. nov  10:15–12:00 | Hilde Reinertsen | Document and archival analysis |  |
|  |  | ***Uke 47:***  ***Qualitative data and methods (II)*** |  |
| 21. nov  10:15–12:00 | Tone Druglitrø | Actor-network theory and empirical applications |  |
| 22. nov  10:15–12:00 | Susanne Bauer | Digital sources and big data |  |
| 24. nov | Tone Druglitrø  (To be confirmed) | Group work or study visit |  |
| 25. nov  9:15–12:00 | All TIK’s  project leaders | Presentation of TIK research projects |  |
|  |  | ***Uke 48:***  ***Quantitative data and methods*** |  |
| 28. nov  10:15–12:00 | Fulvio Castellacci (examples: Artur, Simen, Christine) | Main data sources in STI studies |  |
| 29. nov  10:15–12:00 | Christine Mee Lie | Descriptive analysis of statistical data:  an introduction |  |
| 1. des  10:15–12:00 | Fulvio Castellacci | Regression analysis in STI studies:  an introduction |  |
| 2. des  10:15–12:00 | Fulvio Castellacci | Summary and group tasks |  |
| 2. des  13:15–14:00 | Kristin Asdal and Magnus Gulbrandsen  (To be confirmed) | Presentation of the spring specialization courses |  |
| 9.des-16.des |  | ***Uke 50:***  ***Final exam course TIK4001*** |  |

**Pensum / Reference list**

**To be added by the end of June**