**Tampereen yliopisto
Tampere University**

SAFER- Security and Safety Management

Research and education

For scientific and practical innovation
-> Towards a SAFER Future

Research and education are intertwined in universities
in general, and in the programme in particular

Phenomenon-based approach and learning

The main objective of the education (as well as of the research) is the continuous development towards a SAFER future.

Our goal is to do our best that you will become the experts who can work towards this main objective; in public sector, private companies, non-governmental-organisations (global, european, national), in society, communities, working environment…

This requires a lot from you too, not least because there are no simple solutions, no absolut truths, and the fields of security and safety are rapidly changing (from global to individual and organisational security and safety)

-> *this is our common challenge, exciting and inspiring!*

General Studies

SAFM02 / TTA-86067 - Introduction to Graduate Studies, 2 ECTS

- Contents:
    - General Orientation Course for International Students (not compulsory for Finnish students)
    - Introduction to Academic Culture and Degree Studies (not compulsory for Finnish students)
    - Orientation to studying in the Degree Programme and personal study planning (1 ECTS)
    - Basics of Information Literacy
    - SAFER Orientation, Introduction to Interdisciplinary Approach of the Programme (1 ECTS)

- Learning Outcomes

Upon completion of the course, the student is expected to grasp the principles of studying in the university and to be familiar with the Tampere University as a study environment. The student is also expected to be aware of the structure, requirements and learning outcomes of her/his degree programme, the learning, study guidance and counselling opportunities available, and the basic concepts of good scientific practices. The student is expected to be able to apply this knowledge in the planning and completion of her/his studies, and to be capable of planning and assessing her/his studies throughout the completion of the degree.

SAFM01 / TTA-86076 - Introduction to Security Studies, Governance and Safety Management, 5 ECTS

- Description

What is security. What is safety. Conceptual maps and theoretical approaches of security studies, security governance and safety management. The significance of interdisciplinary framework (social sciences, leadership and management studies, technology) and holistic approach for security and safety

- Learning Outcomes

Students will be familiar with the key concepts and theoretical approaches of security studies, security governance, safety management and risk governance. Students will understand the significance of interdisciplinary holistic approach to security and safety of societies and organizations. During the course, the student develops an understanding of the importance of conceptualizations of security, safety and risk.

SAFM01 / TTA-86076 Programme: Venue PINNI B 4115, City centre campus

Tuesday 3rd September, at 9.15 - 12 (Sirpa Virta and Jouni Kivistö-Rahnasto)

FIRST MEETING:

9.15 Introduction of the programme, agenda setting

9.45 What is meant by interdisciplinary framework (in theory and in practice)?

10.30 coffee break

10.45 Holistic approach for security and safety; security and safety research groups and research projects, research interests et c (*what we have done and are doing*)

11.30 Instructions for learning diary and project work

SAFM01 / TTA-86076 programme 10th September – 1st October (PINNI B 4115)

Tuesday 10th September, at 9.15 -12 (*Sirpa Virta*) Setting the scene: conceptual maps, good security governance, leadership and management as means towards a safer future

Tuesday 17th September, at 9.15 -12 (*Sirpa Virta*) continues: theoretical approaches

Tuesday 24th September, at 9.15 – 12 (*Jouni Kivistö-Rahnasto*) Setting the scene: safety management, risk management and engineering

Tuesday 1st October, at 9.15 – 12 (*Jouni Kivistö-Rahnasto*) continues

SAFM03 / TTA-86086 - Current Trends in Security and Safety Management, 5 ECTS

- Content

Development of contemporary security environment, in international, national and local context, and challenges to security governance, leadership and management. Development and challenges of safety management of organisations, work safety and risk management

- Learning Outcomes

After completion of the course the student understands how security governance, safety management and various practices are embedded in the broader economic, social and political contexts and their changes. The student is able to analyse various approaches to security and safety at the individual, organizational, national, regional and global levels. S/he understands and is able to apply the most recent research on security governance and safety management.

Preliminary programme, 21st October -

However, starting day Thursday 10th October: Security and Safety Research Symposium, at 9-17, Main Building / City centre campus

- Based on the symposium presentations, you are asked to make a poster (instructions later) for a poster sessions in the end of November

- Please register: https://events.tuni.fi/turvallisuussymposium2019/

Visiting lecturers and variety of themes (= current trends) starting 21st October

MABMP01 / YHTTAY-62066 - Advanced Introduction to Research Methods, 5 ECTS

- Content

This course focuses on the key characteristics of academic research, methodology, and argumentation. Students will learn about the most important qualitative and quantitative research methods in the fields of business, governance and politics, and learn to apply them in practice through exercises.

- Learning Outcomes

After completing the course students are able to

- recognise and distinguish between various kinds of research methods, become familiar with the methodological traditions in one's own field of study and to identify one's own position in that framework.
- recognise and distinguish between various kinds of research designs. To raise questions about research ethics in each method.
- outline a possible research design and to reflect on it from different methodological perspectives. As a result, to be able to choose research methods suitable for one's own research design and questions.
- practice peer work and seminar work skills, such as giving feedback.
- demonstrate knowledge of academic writing skills expected at the master's level

KKSU1 - Finnish Elementary Course 1, 3 ECTS1 / KIE-10016 - Starting Finnish, 3 ECTS

- Content

During the course, students are acquainted with the Finnish sound and spelling system, basic grammar and core vocabulary. Students engage in pronunciation, sound recognition, and structural and communicative exercises that focus on the topics covered

- Learning Outcomes

Upon successful completion of the course, students will know the foundations of Finnish pronunciation and the most common core vocabulary. In addition, they will be able to use and understand short and simply structured Finnish expressions that concern some of the most common everyday matters (introducing themselves, buying and paying, telling the time, food, asking and answering questions, location and moving around).

SAFS01 - Societal Security: Contemporary Challenges, 5 ECTS

- Content

Societal security as a field of security studies, relationship between societal security, internal security, everyday security and other fields of security and safety. Contemporary phenomena like for instance asylum flows, climate change, cyber crime, robots and their relationship to security and safety issues. Prevention, preparedness, protection, capacity building and other elements of societal security dynamics. Governance of societal security, networks and processes. Changing security regimes and role of state and security authorities. The whole-of-society approach to security governance and management. Threat and security risk assessment practices. The role of technology in societal security problem solving and development

- Learning Outcomes

This course introduces students to societal security as a field of security studies, relationship between societal security, internal security, everyday security and other fields of security and safety. Upon completion of the course students will be able to develop leadership skills, understand international, political and other interdependencies of security governance, changing security regimes, the role of threat and risk assessments, as well as the role of technology in solving societal security problems

SAFS02 - Governance of Security, 5 ECTS

- Content

Strategies, models and practices of security governance and management in societies, in public organizations and local communities. The contingent nature of security and implications for leadership and security strategies. Complexity and wicked security problems (from global security to local and individual security and safety). Multilevel governance, partnerships, networks and smart security ecosystems. Integrated security and safety management systems of organizations. Democratic and administrative accountability

- Learning Outcomes

Upon completion of this course, students will be familiar with the different theoretical models and approaches of security governance, leadership and management that help societies, organizations and communities maintain and improve security. Students will be familiar with the key concepts and principles of security governance, leadership and management of security-related phenomena in public organizations. Students will have the skills to develop activities that improve societal security, security of public organizations and security culture, and formulate as well as implement security strategies. In addition, students will be familiar with the responsibilities of security managers and their required expertise, and the importance of citizens' perspective in societal security design.

SAFS03 - Approaches to International Security Studies, 5 ECTS

- Content

Theories and approaches in International Security Studies (ISS); disciplinary evolution of ISS; security as a political concept

- Learning Outcomes

Upon completing the study unit students are familiar with the main theoretical approaches in International Security Studies (ISS). Students are able to analyze security as a political concept as well as to evaluate and discuss different theories on international security. They are also familiar with the multidisciplinary evolution of the ISS and its background in peace and conflict research as well as strategic studies and the widening and deepening of the international security agenda from 1980s onwards. The students have a preliminary understanding on how different methodological and theoretical commitments influence research design and selection of research materials in ISS. The students can also critically analyze ethical questions relating to the changing nature of war, organized violence and other complex security related issues. The study unit develops students' abilities to understand how sustainable ecological development, human security and organized violence are interconnected on global, regional, national and local levels.

SAFS04 - Current Themes in International Security, 5 ECTS

- Content

Topical themes and practices in international security, including changing nature of war and organized violence

- Learning Outcomes

After completing the study unit students understand how different conceptualizations and worldviews on security politics affect international policies, strategies and practices in relation to variety of current themes and complex challenges such as: changing nature of conflicts and warfare; gendered violence; environmental security and global climate change, including water and food security, cyber security; political, economic and social security; weapons of mass destruction and non-proliferation. The study unit will enhance students' interaction and communication skills, including argumentation and presentation skills that they need when participating public debate on security politics and international security, and general understanding on how to communicate their expertise in a policy relevant manner.

SAFS05Global and EU Security Governance, 5 ECTS

- Content

Global security assemblages, structures and organisations. European union security governance systems and structures, strategies and approaches. EU security research. Blurring boundaries of private and public security, military and civil security

- Learning Outcomes

Students will get knowledge on the global and the EU security governance systems, structures, strategies and current challenges. Students are able to analyze global and European multi-level security governance systems, strategic management of security, national security strategies and trends.

SAFS06 - Crisis Management and Leadership, 5 ECTS

- Content

Crisis management research. Crisis management as part of security governance, and in relation to risk governance, disaster and emergency management. Leadership, strategic and operative management in various types of crisis. Crisis management cycle. Crisis communication. Logistical and other special elements

- Learning Outcomes

Students will understand how different types of crisis are managed, the differences and similarities between crisis, disaster and emergency management and many elements included in crisis management. Students will develop expertise in crisis management in general and in organizations.

SAFS07 - Master's Thesis (including Seminar and Maturity Test), 35 ECTS

- Content

By the conclusion of the seminar, a student is expected to be able to assess alternative approaches to research in order to select and justify appropriate research methods. The student can use relevant analytical techniques for analyzing qualitative and quantitative data and s/he can reflect on the findings of her/his research. The student can demonstrate an understanding of ethical issues in research. The aim of the Master's Thesis is to show the in-depth knowledge of chosen topic, the mastery of appropriate theories and research methods and the capability of scientific expression.

When submitting her/his Master's Thesis for examination, the student is expected to know and observe the sound scientific practice. The texts of all Master's Theses will be checked by the supervisor in the Turnitin plagiarism detection software before grading

- Learning Outcomes

The seminar is designed to provide a student with knowledge and tools required to develop and undertake research in the field fo the specialisation in question. S/he will evaluate research methodologies, develop research strategies and select research methods for answering research questions. The seminar also covers the themes related to the practical writing of the Master's Thesis, working with and presentation of one's own thesis and reading and critically commenting seminar papers written by other students. The student is familiar with the principles of sound scientific practice and knows how to implement them.

Advanced studies:

Safety Management and Engineering

TTA-86046 Enterprise HSEQ management, 5 ECTS

- Upon completion of this course, student will be familiar with the different theoretical models and approaches that help organisations maintain and improve their health, safety, environmental and quality (HSEQ) performance.

- Student will have an understanding of the underlying factors of occupational accidents and incidents and be familiar with the special considerations that must be taken into account when developing the activities of safety-critical organisations.

- Student will be familiar with the key concepts and principles of safety management systems.

- Student will have the skills to develop activities that improve organisational safety management and safety culture.

- Student will be able to apply indicators to promote safety.

- In addition, student will be familiar with the responsibilities of safety specialists and their required expertise.

TLO-35237 Information Security Management , 5 ECTS

- After the course the student has a basic understanding of information security and the value of information to business.

- The student understands the process of managing information security and the role of information security policies in management.

- The student can apply this knowledge from the business perspective to the context of managing a company.

- The student is able to plan the implementation of an information security awareness program, and assess the state of information security in a company.

TTA-86056 Safety and risk analysis, 5 ECTS

- This course introduces students to basic risk identification techniques and the assessment of workplace hazards.

- Upon completion of this course, student will be able to identify risks associated with manufacturing, industrial processes, work environments and working conditions and have the ability to determine the potential impact of these risks.

- Student will be able to apply the basic techniques to perform qualitative risk analyses and define the level of risk. In addition, student will be familiar with physical and chemical hazards, their potential effects in work environments and the basic methods of identifying hazards in the workplace.

TTA-86026 Safety Engineering, 5 ECTS

- Upon completion of this course, student have an in-depth understanding of the principles and methods of safety engineering concerning individual machines, extensive production systems and the process industry.

- Student will be familiar with the key safety engineering technologies and have the knowledge and skills to improve the safety of individual machines and large-scale processes.

- Student will be familiar with the essential requirements that apply to the user manuals, markings and technical documentation of machinery.

- Student will be able to carry out all the measures set forth in the EU's Machinery Directive to ensure that machines meet the common minimum requirements for health and safety before they may be placed on the EU market.

- In addition, student will be familiar with the safety requirements related to the acquisition of machinery and production systems.

MEI-66006 Systems RAMS Engineering, 5 ECTS

- The student is able to apply RAMS engineering methods and tools in innovative system-service design and development process. (RAMS = Reliability, Availability, Maintainability and Safety)

1 Introduction of Systems RAMS Engineering Application and Management.

2 Modeling and analysis of Systems failure cause-consequence logic.

3 Specification and Allocation of Systems RAMS Design Requirements.

4 Methods for seeking out and selecting Systems design solutions from RAMS point of view.

5 Application of RAMS design review to Probabilistic Risk Assessment (PRA) in system-service design and development process.

MEI-66216 Systems Reliability Centered Maintenance, 5 ECTS

- The student is able to apply Reliability Centred Maintenance (RCM) analysis in a systematic evaluation approach for developing and optimizing a maintenance programme (which consists of Corrective, Time Based and Condition Based maintenance).

1 Reliability Centered Maintenance Approach

2 Service and repair process design and development

3 Design and development of spare part service

4 Models and methods for advance warning of system failure and prediction of remaining useful life after advance warning

5 Optimization of system specific maintenance service program to achieve required availability and safety with minimum costs.

Master's Thesis in Safety Management and Engineering (including Seminar and Maturity Test), 35 ECTS

- The programme culminates in a Master's Thesis, which is a large independent scientific assignment. It is written independently by each student.

- The students gain ability to understand the scientific and professional concepts of the major.

- With the thesis the students demonstrate that they know how to analyze big entities, use relevant literature, gather appropriate empirical data, write research reports in a creative manner, and deduce relevant conclusions.

- With the help of the thesis, the students show their capability to understand the big picture. In connection with the thesis, the students have to write a proficiency test, which is an essay written on a topic related to the thesis.

- The maturity test demonstrates the students' command of the thesis topic.

Elective Studies

Possible electives

- You can include both tracks' advanced studies courses in to your studies, as electives
- Interdisciplinary studies between the Security Governance and the Safety Managment and Engineering – all cources
  - Safety Management and Engineering for the Security Governance students, especially
    - TTA-86046 Enterprise HSEQ management
    - TLO-35237 Information Security Management
    - TTA-86056 Safety and risk analysis
    - TTA-86026 Safety Engineering
  - Security governance for the Safety management and engineering students, especially
    - SAFS01 Societal security; contemporary challenges
    - SAFS02 Governance of security
    - IR and international themes' courses (global, EU, crisis management…)

Possible electives, other

Policing, security and public order (5 ECTS), at Police University College

Other programmes' studies (check if available): Leadership for Change –programme, Peace –programme, …

Other courses available, in other disciplines and faculties (check availability)