Questionnaire (version of October 2023) **Natural-Science Disarmament Courses**

Course Description Götz Neuneck 19.10.2023

Date	2005 until 2022
Lecturer	Götz Neuneck (partially with H.Spitzer, G. Kirchner, M. Kalinowski et al.)
Institution (department, university)	U Hamburg, Physics Faculty and Master Programme “Peace and Security Studies”
Course Title	Natural science contributions to peace and conflict research
Language	German partially English
Time (number of hours (45 or 60 minutes?) per week, no. of weeks, no. of days if block, how often per year	2 x 45 Minutes a week during the Wintersemester, 14 sessions. Additionally a seminar on special Topics such as Space, Verification, nuclear issues etc.
Audience (students of which disciplines, interdisciplinarity)	Beginners and Postgraduates, MIN-Faculty, Masters Programme, other Faculties in General Interdisciplinary lectures
Credits given - for what (oral/written exam ...)	3-4 ECTS for lecture and same for seminars; Test for Undergraduates, oral exam for postgraduates
Status in department/university/ field of study, obligatory or voluntary	Postgraduates Interdisciplanry Master Programme approved by 4 Faculties,
Connection with other course(s)/ integration in field of study	One module in the master programme and additional credit points in some other faculties
Additional activities/material (Model UN, visits, invited speakers, videos, ...)	Invited speakers for some modules: Bio-weapons, C-Weapons, Climate and Security, invited speakers from the Foreign Office
Presentations/papers available? To whom?	Yes Powerpoint and papers of the seminar talks
Internet site of course	yes
Curriculum/list of units (add below or attach)	Attached
Filled in by	Götz Neuneck
Date	19.10.2023
Agreement to publish this	ok

1. Lecture Intro: Natural scientists and their work: The example of the Iranian nuclear program.
2. Natural science basics
3. Function /effects of nuclear weapons: From nuclear fission to the first efforts to restrict their use
4. Horizontal proliferation: the proliferation of nuclear weapons, their production and technologies, and the NPT regime
5. Vertical proliferation: the superpowers arms race and bilateral arms control
6. Verification of the NPT: safeguards and material balancing
7. The Comprehensive Nuclear Test Ban Treaty CTBT
8. Biological weapons: History, production and impact, new developments, arms control.
9. Chemical weapons: History, effect, arms control
10. Nuclear disarmament and its verification

11. Military application in outer space and arms control
12. Missile threat and missile defense
13. Revolutions in warfare, new technologies and conventional arms control
14. Practice and new developments in arms control