

Department of Transdisciplinary Science and Engineering 4th Year Orientation

April 5, 2021
GSEP Faculty

Common requirement for graduation in Tokyo Institute of Technology

- See Table 2 of "Study Guide".
- Liberal arts course group are amended for only GSEP students. Review the requirements through the following link:

https://www.titech.ac.jp/english/enrolled/life/resources/pd f/agreement.pdf



Requirement for graduation in the Department of TSE

In addition to the common requirements of Tokyo Tech, the following conditions should be satisfied.

- All 30 credits of required subjects (◎) in the list of the subjects in the Department of TSE should be obtained.
- 2. "Research Opportunity in Laboratories" and "Independent Research Project" should be obtained.
- 3. 50 credits in the major course in the list of the subjects in the Department of TSE should be obtained.
- 4. 124 credits should be obtained in total.



Independent Research Project (IRP)

- The purpose of the IRP is to have students put together the theory, the experimental work, the investigation, the planning, and other such aspects of their work on their specific topics, to bring the academic achievement they have cultivated up to that point into focus on deeper understanding of the courses in their field of study, and to acquire the methods of putting research into organized order as well as how to write reports, give presentations, and other such skills.
- Format of the report of IRP will be distributed.
- Research topic should be discussed with the academic supervisor of your lab.
- Register IRP through Tokyo Tech Portal. Deadline is April 23.



Advanced Independent Research Project (AIRP)

- AIRP is a course taken after completing the IRP in order to conduct further research at a deeper level, to begin preparing to conduct research for a Master's Degree, or to conduct a new independent research project for the Bachelor's Degree at a different laboratory from the one where the independent research project for the Bachelor's Degree was conducted, or by some other such method to conduct research at a deeper level and to increase the breadth of learning.
- AIRP should be conducted at the lab where IRP was conducted.
- There is no requirement to submit the reports and presentations.



Ethics Education

- Level 1: 1st year to 3rd year in bachelor's program
 (before starting "Independent Research Project")
- Level 2: 4th year in bachelor's program (From the start of "Independent Research Project") to master's program
- Level 3: Doctoral program

Liberal Arts Courses

- ©Tokyo Tech Visionary Project(LAH.C101)
- OEthics in Engineering A/B/C(LAH.T105, T206, T305)
- OFrontiers of Science and Technology (LAS.F101)

Major Courses

- OProcesses for Creation in Science and Technology [School of Environment and Society] (XES.P101)
- OSchool of Environment and Society Academic Group Literacy (XES.A101)
- ©Research Opportunities at Laboratories (TSE.Z381)
- ©Independent Research Project (TSE.Z389)



Online Bulletin

Slack and Mailing List TSE/GSEP English Website http://www.tse.ens.titech.ac.jp/en/

COVID-19

COVID-19 updates for all students

https://www.titech.ac.jp/english/enrolled/health/coronavirus.html





Tokyo Tech

Research ethics education

- Approach in Tokyo Tech -

Office of Education and International Cooperation (Japanese only) http://www.eduplan.titech.ac.jp/w/creative subject/ethic student/

Tokyo Tech Code of Conduct for Researchers

(Basic Responsibilities of Researchers)

 Researchers shall recognize that they are responsible for assuring the quality of the specialized knowledge and skills that they themselves create, and for using their expert knowledge, skills, and experience to contribute to the health and welfare of humankind, the safety and security of society, and the sustainability of the global environment.

The Science Council of Japan's "Code of Conduct for Scientists" Article 1. Basic Responsibilities of Scientists has similar text.



Features of Tokyo Tech's Education on Responsible Conduct for Research



Three levels of educational targets

Level 1 (1st- to 3rd-year undergraduate students): Basic Level 2 (4th-year undergraduate students and master's students): Advanced Level 3 (Doctoral students): More advanced

- Fourteen learning and educational targets divided into four categories
 - Academic integrity
 - 2. Roles and social responsibilities of researchers
 - 3. Responsible Conduct of Research (RCR)
 - 4. Compliance with laws and ordinances
- With respect to the teaching method, there are no common courses across the whole Institute. Each School and Department is given discretion to determine necessary methods.

14 Learning and Educational Targets for Research Ethics Education



1. Academic integrity

- a) Establishment of awareness as a Tokyo Tech Student
- b) Develop ethical sensibility that allows one to identify ethical issues involved in the implementation of research and technology
- c) Acquire skills required to resolve ethical issues

2. Roles and social responsibilities of researchers

- a) Understand general roles and social responsibilities of researchers
- b) Understand ethical principles relevant to one's field

3. Responsible Conduct of Research (RCR)

- a) Acquire knowledge and understanding of responsible conduct of research (RCR) and research misconduct (5 minor targets)
- b) Acquire knowledge and understanding of correct data handling for RCR
- c) Understanding on meaning and importance of authorship
- d) Acquire knowledge and positive attitude for building a sound environment that promotes RCR (3 minor targets)

4. Compliance with Laws and Ordinances

- a) Acquire knowledge and understanding of laws and policies related to RCR (6 minor targets)
- b) Acquire knowledge and understanding of regulations and policies concerning research misconduct
- c) Acquire knowledge and understanding of regulations and policies concerning collaborative research
- d) Acquire knowledge and understanding of conflicts of interest
- e) Become able to use research funds in an appropriate manner

Education Method (available research ethics courses and resources)

	Courses	Online education	Laboratory education	Other
Level 1	 Courses: Tokyo Tech Visionary Project (100-level required courses) Frontiers of Science and Technology (100-level virtually required) Ethical Engineering A, B, and C (100- to 300-levels elective) Liberal Arts Final Report (300-level required courses) First-Year Courses, Major Courses offered by Departments Courses involving laboratory experiments 	 SPOC Japan Society for the Promotion of Science Research Fellowship (JSPS), e-Learning Course on Research Ethics (el-CoRE) 	N.A.	 Guidances and orientations by each School and Department Tokyo Tech portal site on fair promotion of research activities summarizing related information including policies and code of conduct The Open University of Japan: Atarasiijidai no gijyutusyarinnri (Engineering Ethics in a New Era)
Level 2	 Career Development Courses: Career Design, Ethics of Engineers (400- to 500-levels electives required) Ethics of Scientists (400-level required) Ethics in Engineering, Essence of Humanities and Social Sciences 2 (400-level elective required) 	In addition to the above: Association for the Promotion of Research Integrity (APRIN) e-Learning program (formerly CITI Japan)	 Research ethics education in laboratory settings Education using "The Lab," visual education material on research ethics education distributed by JST Utilize check list 	Same as above
Level 3	Career Development Courses: Career Design, Ethics of Engineers (600-levels electives required) Liberal Arts Courses: Path-Breaking Liberal Arts Courses, Independent Studies (600-levels required)	Same as above	In addition to the above: Research ethics education in laboratory settings	Same as above

Evaluation with Checklist



About the Checklist

- 1. Students are expected to fill in the checkboxes and have them confirmed by their academic supervisor. Laboratories are responsible for implementing this procedure at least once a year. Completion of required courses will be checked via the Web System for Students and Faculty.
- 2. Students' attainment of educational objectives is confirmed around 'acts' including signatures, course completion, and laboratory activity participation.

Although possible methods of confirmation are listed in the checklist, they are by no means exhaustive. Educational objectives may still be ticked off if they can be regarded as having been met through other acts. For example, if a student establishes an understanding of the roles and social responsibilities of a researcher through his/her participation in discussions based on The Lab, he/she may tick off educational objective 2a.

Note that '●' used in front of a confirmation method indicates that the method includes quizzes, reports, or tests that may be used to verify the solid acquisition of knowledge. '◆' on the other hand indicates that confirmation is necessary through additional means such as participating in discussions and being asked questions on research ethics. Resources for research ethics education in laboratory settings are also available from the Institute (e.g., "The Lab" and Tokyo Tech SPOC, quizzes prepared for ethics learning).

3. Level 1 is a subset of level 2, and level 2 is a subset of level 3. Students who reach level 2 objectives are also considered to have fulfilled level 1 objectives.

Evaluation by the Checklist



Level 2 Checklist

Level 1 is a subset of level 2. Students who reach level 2 obejectives are also considered to have fulfilled level 1 obejectives.

	Educational objectives		Points to ascertain	Possible methods of confirmation	Check box
1	Academic Integrity	(a) Establish awareness of the roles and responsibilities as a Tokyo Tech student	Does the student have sufficient self-awareness of standards upheld as a member of Tokyo Tech? Examples • Has he/she read the Institute's education policy or the "Seven Tokyo Tech Principles for Good Practice in Learning"? • Is he/she an autonomous learner who is keen to advance his/her own studies? • Does he/she appreciate cultured activities, have communication skills, and have interests that extend to wide areas of science and technology?	●3 credits from Humanities and Social Science Courses (preferably completion of Leadership Workshop) ◆Familiarity with the research ethics resources listed in the Attachment	
		of research and technology (advanced level)	Can the student identify ethical issues in case studies?	Complention of "Tokyo Tech Science, Engineering, AI and Data Ethics"(SPOC)	
		(c) Acquire skills required to resolve ethical issues (advanced level)	Does the student understand ethical decision making methods such as the Seven Step Guide?	●Complention of "Tokyo Tech Science, Engineering, AI and Data Ethics"(SPOC)	
2	Social responsibilities of researchers		Does the student understand the "Code of Conduct for Researchers at Tokyo Institute of Technology"?	◆Familiarity with the research ethics resources listed in the Attachment (a signature is a must for the Code of Conduct for Researchers at Tokyo Institute of Technology)	
			Does the student understand the basic responsibilities of researchers? Does the student understand the impact science and technology have on society? Can the student clearly explain his/her research to people outside the research community (i.e., dissemination of information)?	●Complention of "Tokyo Tech Science, Engineering, AI and Data Ethics"(SPOC) ●Completion of eL-CoRE	
		(b) Understand ethical principles that are relevant to one 's field (e.g., engineering ethics, information ethics, ethics where human participants are involved in research) (advance level)	Does the student understand ethical principles that are relevant to his/her field?	●Method specified by the relevant department, etc. (e.g., completion of a course) ●Complention of "Tokyo Tech Science, Engineering, AI and Data Ethics"(SPOC)	

Evaluation by the Checklist



Level 2 Checklist

			 Students who reach level 2 obejectives are also considered to have fulfilled level 1 		£
		Educational objectives	Points to ascertain	Possible methods of confirmation	Checkbox
3	Responsible conduct of research (RCR)	(a) Acquire knowledge and understanding of responsible conduct of research (RCR) and research misconduct (advanced level)	Does the student understand the basic concepts concerning RCR and why the practice is necessary? Does he/she understand: •what constitute research misconduct (fabrication, falsification, and plagiarism) and questionable research practice (QRP); •what factors lead to research misconduct and QRP; •how complaints are filed and investigative procedures are carried out for research misconduct; •the role of ethics review; and •limitations of regulations and policies related to RCR, differences in standards and codes of conduct between fields, organizations, and laboratories?	Method specified by the relevant department, etc. (e.g., completion of a course) Completion of eL-CoRE eAPRIN	
		(b) Acquire knowledge and understanding regarding the correct handling of data for responsible conduct of research (advanced level)	Does the student understand how data ¹ should be collected, managed, and processed? Does he/she understand: *the purpose of keeping laboratory notebooks and how to maintain them, as well as what to record and methods of recording; *practical and correct ways of handling data in his/her research field (i.e., ways of collecting, recording, managing, sharing, and owning data)?	Method specified by the relevant department, etc. (e.g., completion of a course) Completion of eL-CoRE eAPRIN	
		(c) Understand the meaning and importance of authorship (advanced level)	Does the student understand the meaning and importance of authorship? Does he/she understand: the rights, implications, and responsibilities associated with authorship; the international standards for authorship; the roles and responsibilities that come with being an author or a co-author of academic journals; and the issues surrounding inappropriate authorship (e.g., gift and ghost authorship)?	Method specified by the relevant department, etc. (e.g., completion of a course) Completion of eL-CoRE eAPRIN	
		(d) Acquire knowledge and a positive attitude on building sound environment for promoting RCR	Does the student understand the need to build a sound environment for promoting RCR and is he/she taking steps in support of it? •Does he/she contribute towards building a sound research environment (e.g., clarify the roles and responsibilities of mentors and trainees, and participate in establishing an open research environment)? •Does he/she understand the importance and methods of research ethics education? •Does he/she actively consider ways of avoiding ethical issues from arising in research?	●Completion of eL-CoRE ●eAPRIN	

Methods of Education



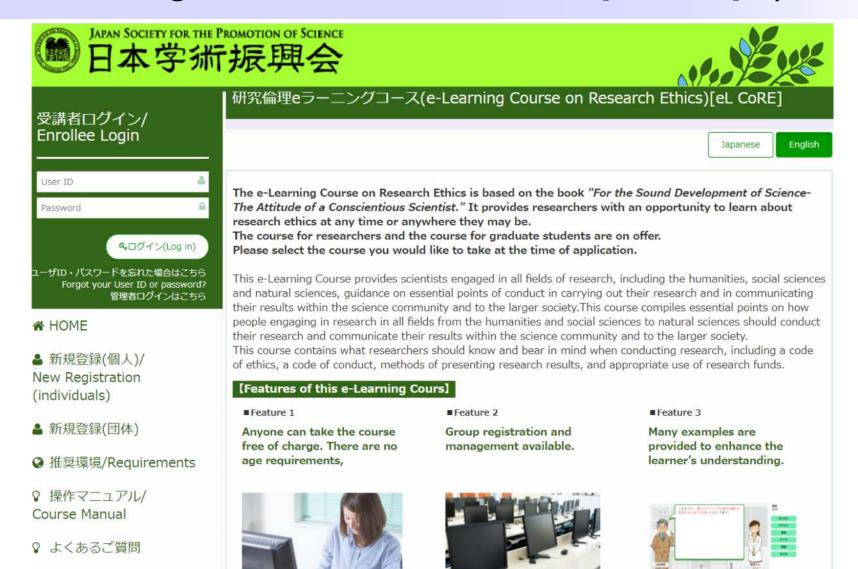
Guidance, Orientation, and Lectures

- Guidance and orientation by each School, Department, and Graduate Major
- Lectures and seminars related to research ethics offered by each School, Department, and Graduate Major

Online Education

- Japan Society for the Promotion of Science Research Fellowship e-Learning Course on Research Ethics (eL-CoRE)
- Association for the Promotion of Research Integrity (APRIN) e-Learning program (formerly CITI Japan)
- Tokyo Tech SPOC course: "Science, Engineering, AI & Data Ethics" (edX)

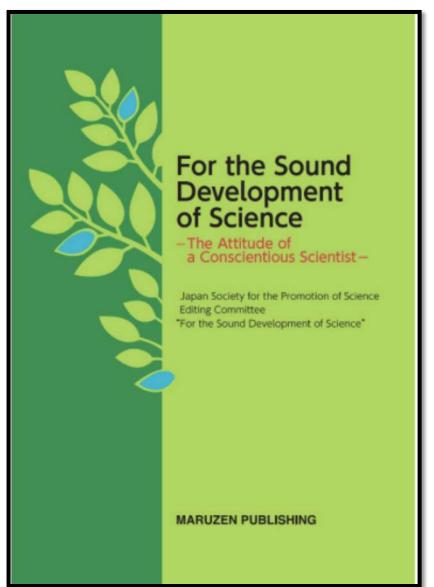
e-Learning Course on Research Ethics [eL CoRE] by JSPS



URL: https://elcore.jsps.go.jp/top.aspx

"Green Book"









国立大学法人東京工業大学

メインメニュー ▶ <u>国立大学法人東京工業大学</u> ▶ 責任ある研究行為:基盤編 (RCR) ▶ <u>責任ある研究行為について / Responsible Conduct of Research RCR</u>

責任ある研究行為について/Responsible Conduct of Research_RCR

はじめに、テキストを受講してください。 テキストの受講を完了すると、クイズを受けることができます。

テキストを読む/Read the text

もう一度クイズを受ける/Re-take the quiz

Tokyo Tech SPOC -Tokyo Tech Science, Engineering, Al and Data Ethics 2020 | edX-



Case study material "The Lab"

Japan Science and Technology Agency (JST): Research ethics education DVD developed by the U.S. Department of Health and Human Services (HHS), Office of Research Integrity. All episodes have been translated. Japanese version was released in April 2015.

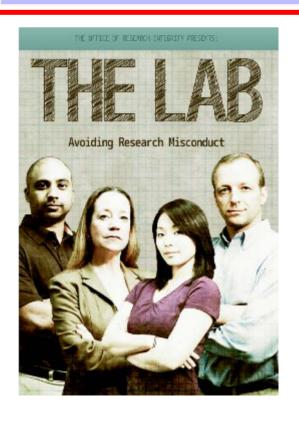






21

Features of "The Lab"



- 1. Interactive. (Enables active learning and simulation)
- Consider specific problem from each stakeholder's position (Research Integrity Officer (RIO), principal investigator, postdoctoral researcher, graduate student).
- 3. Different decision making and action will result in different ending.
- 4. Result of superior decision making is depicted.
- 5. Learn the required values and qualities of a researcher.
- 6. Learn the methods of ethical decision making.
- 7. Already translated into Chinese and Spanish, allowing for international comparison and discussions.

Mission of Tokyo Institute of Technology

Tokyo Institute of Technology seeks to contribute to civilization and the welfare of humankind by educating students to acquire necessary expertise in liberal arts and scientific expertise, and aims to develop competent citizens par excellence as future industrial engineers, industrial managers, and science and engineering researchers and educators, researching the theory and application of science and engineering deeply with academic mastery to promote development of science and technology.

National University Corporation Tokyo Institute of Technology Organization Management Regulations, Article 2, Paragraph 2.

Tokyo Tech Code of Conduct for Researchers (Repost)

(Basic Responsibilities of Researchers)

1. Researchers shall recognize that they are responsible for assuring the quality of the specialized knowledge and skills that they themselves create, and for using their expert knowledge, skills, and experience to contribute to the health and welfare of humankind, the safety and security of society, and the sustainability of the global environment.

Science Council of Japan's "Code of Conduct for Scientists" Article 1. Basic Responsibilities of Scientists has similar text.



Code of Conduct for Researchers at the Tokyo Institute of Technology

捏造とは? 改ざんとは? 盗用とは?

Examples of Misconduct in Research /不正の事業

- . In an academic thesis, a researcher publishes unreproducible data as if they have been reproduced with
- . Prior to presenting a paper at a conference, a researcher falsilys unavailable raw data to suit the researcher's ourposes.
- A researcher presents in a thesis or report another party's ideas another text collected from the internet or a conference as if the content were the researcher's own.
- 再提性がないデータを、あたかも確実に係られたデータとして確文に掲載した
- ◆保会発表を終にして見らようなデータがでなねったので、生データを加了して発表した。
- インターネットや研究会発表などから様た技人のアイディアや文書を、自分のものとして論文やレポートに

Code of Conduct for Researchers at the Tokyo Institute of Technology 市市工業士学における研究者等の行動相節

Punitive provisions for misconduct in research /不正行為による順利

- Disciplinary actions, including dismissal, suspension from duty, pay cut and/or accordance with Article 43 of the Employment Regulations.
- Guidance and supervision, including written warning, verbal warning or caution, is Article 45 of the Employment Regulations.
- Various penalties, including but not limited to the suspension of eligibility to appreciantly funds under resourch propriets and the obligation to repay those funds including the case of mission of Caret in-Auth of Scientific Research.
- Receipt of a grant-in-aid through misconduct or dishonesty: repayment of all resilter a grant-in-aid for five years
- A person who misuses research funds, a person who conspired in his/her mis 3. A person recognized as being involved in misconduct as well as the person resp
- 2 and 3: Return of the research funds in whole or in part, suspension of eligibility to a
- Misponduct on the part of a researcher may become the subject of a civil action or o
- Any researcher or administrator who through willful intent or gross reglect as compressation of the said demages in accordance with Article 45 of the Employment
- *太学就要規則第43条による弊収解算、停御、減給、収告の無収払分。
- 本学就業規則第45条による場合、裁集注意、注意の指導監督措置。 競争的資金には、それぞれ制度等に応募資格停止、加算金を含めた資金の返進などのベナ
- 科学研究費助収事業の場合
- 1 不正义は虚偽による受給・研究者の全額返復、免募責格の停止5年 2 不正使用した本人、共謀した者及び研究者の管理責任者
- 不正行為に関与と認定された本人及び設定された論文の内容等に責任を負う者 2及び3:研究者の一部又は全部の返復、広幕資格の停止1~10年。
- 本学または資金配分機関からの民事訴訟及び刑事告訴を受けることがある。 本学試業規則第46条により、研究者及び事務職員等は、故意又は重大な過失により本

Information relating to misconduct in research activi to the Counseling Service office. Details are 不正行為に関する通報は下記の窓口で受け付

General Reporting and Counseling Service Extension: 7697 /内疆: 769

- If, upon investigation, a report of misconduct is deemed to have been made with make Riseaacts Misconduct may also necessary action against the informant, including the anotion fling a criminal pompriser.
- 3. Information provided by anonymous sources will be accepted as well.
- 1. 脚束によること、海線要は、不利益も物格いを挙げることはありません。
- 2. 調査の結果、簡単による適種と利用した場合は氏名の公表、常成成分、共享告発等の必要な 3. 匿名による情報提供も受け付けます。

Please contact the Research Planning Division if you have any inquiries a 行動装置パンフレットの内容についてのお問い合わせは研究推進部長

Extension: 7843 /内臓: 7643 Email: kenkli

Code of Conduct for Researchers at the Tokyo Institute of Technology 東京工業大学における研究者等の行動規範

Established November 21, 2006 / Revised August 23, 2013 平成20年11月21日制定/平成25年8月23日改訂

I. Responsibilities of Researchers / I. 研究者の責務

1. Basic Responsibilities of Researchers / 1. 研究者の基本的責任

Researchers shall recognize that they are responsible for assuring the quality of the specialized knowledge and skills that they emselves create, and for using their expert knowledge, skills and experience to contribute to the health and wettere of humankind the safety and security of society and the sustainability of the global environment.

研究者は、自らが生み出す専門知識や技術の質を招保する責任を有し、さらに自らの専門知識、技術、経験を述かして、人類の健康と福祉。 社会の安全と安康、チレて地球運賃の移動性に貢献するという責任を有する。

2. Attitude of Researchers / 2. 研究者の姿勢

Researchers shall always make judgments and act with honesty and integrity, endeavoring to maintain and improve their own expertise, abilities and skills, and shall make the utmost effort to scientifically and objectively demonstrate the accuracy and validity of the knowledge they create through scientific research. 研究者は、常に正直、破実に判断、行動し、自らの専門知識・関力・技芸の維持向上に努め、科学研究によって生み出される知の正確さや 正当性を科学的に示す最善の努力を払う。

Researchers shall recognize that scientific autonomy is upheld by public trust and the mandate of the people, understand the relationships between science, technology, society, and the natural environment from a wide-ranging perspective, and act in an appropriate manner

研究者は、科学の音様性が社会からの信頼と負託の上に減り立つことを自覚し、科学・技術と社会・自然環境の関係を広い視野から理解し、

4. Research that Answers to Social Wishes / 4. 社会的期待に応える研究

Researchers shall recognize that they are responsible for answering to the wishes of society to investigate into truths and to achieve various issues. When using research funds that are to be provided for establishing the research environment and for conducting research, researchers shall always recognize that such broad social expectations exist.

研究者は、社会が抱く真理の解明や様々な課題の達成へ向けた期待に応える責務を有する。研究環境の整備や研究の実施に供される研究 資金の使用にあたっては、そうした広く社会的な制格が存在することを常に自覚する。

5. Accountability and Disclosure / 5. 説明と公開

Researchers shall strive to disclose and actively explain the roles and significance of their own research, evaluate the possible effects of their research on people, society and the environment as well as the changes that their research might engender, neutrally and objectively disclose the results of this evaluation, and build a constructive dialogue with society

研究者は、自らが権わる研究の意義と役割を公開して機械的に説明し、その研究が人間、社会、環境に及ぼし得る影響や配こし得る変化を 評価し、その軽果を中立性・実験性をもって公表すると共に、社会との確認的な対話を築くように努める。

6. Dual Use of Scientific Research Outcomes / 6. 料学研究の利用の再義性

Researchers shall recognize that there exist possibilities that their research results, contrary to their own internions, may be used for destructive actions, and shall select appropriate means and methods as allowed by society in conducting research and publicizing the

研究者は、自らの研究の成果が、研究者自身の意識に反して、破壊的行為に易用される可能性もあることを認識し、研究の実施、成果の 公表にあたっては、社会に許容される透切な手段と方法を選択する。

II. Research Integrity / II. 公正な研究

7. Research Activities / 7. 研究活動

Researchers shall act with integrity according to the spirit of this Code of Conduct in drafting, planning, applying for, implementing, and reporting their own research. By reporting their research results through such means as pagers, researchers shall take responsibility as well as obtaining recognition for their achievements in accordance with the role that they project. Researchers shall ensure that research and survey data are recorded, stored and rigorously handled, and not only refrain themselves from any misconduct such as fabrication, faisification or plagiarism, but also refrain from aiding or abetting such misconduct.

研究者は、自らの研究の立案・計画・申請・実施・報告などの追程において、本成動の趣旨に沿って誠実に行動する。研究者は研究成果を 論文などで公表することで、各点が某たした役割に応じて功績の認知を得るとともに責任を負わなければならない、研究・調査データの 記録保存や撤正な取扱いを徹底し、ねつ造、改ざん、盗用などの不正行為を為さず、また妨板しない。

8. Establishing Sound Research Environments and Thorough Educational Enlightenment

8. 研究環境の整備及び教育研究の撤回

Researchers shall recognize that establishing and maintaining fair research environments where responsible research can be conducted is one of their important duties, and shall work continuously to improve the quality of research environments in the researchers community and their own institutions, and toward educations enlightenment preventing resourced. Moreover, they shall also seek the understanding and cooperation of the public in achieving these goals.

研究者は、責任ある研究の実施と不正行為の際止を可能にする公正な環境の確立・維持も自らの重要な意味であることを自覚し、研究者 コミュニティ及び自らの所属組織の研究環境の質的点と、ならびに不正行為染止の教育情景に継続的に取り組む。また、これを達成する

9. Consideration for Research Subjects / 9. 研究計算などへの記録

Researchers shall respect the dignity and rights of individuals who cooperate in their research, and shall safeguard and give proper consideration to their welfare. They shall also treat animals and other research subjects with all due care and respect. 研究者は、研究への協力者の人株、人権を募集し、福利に記載する。動物などに対しては、真摯な無能でこれを扱う。

Researchers shall constructively criticize the research results of other researchers'; humbly listen to the criticism of others, and exchange opinions with an attitude of sincently. Moreover, they shall properly give credit to other researchers' intellectual findings and achievements, as well as respecting the chord and intellectual irreport rights of others. They shall also participate actively in muhall assessment among researchers in the researchers' continuity, particularly of their field of expertise.

経営者は、他者の成果を適切に出刺すると問題に、自らの経営に対する他等には課修に其を傾け、制御な難奪で無罪を受える。他者の 知的成果などの養護を正然に評価し、名誉や知的財産務を募集する。また、研究者コミュニティ、特に自らの専門領域における研究者 相互の評価に維持的に参加する。

III. Science in Society /II. 社会の中の科学

11. Dialogue with Society / 11. 社会との対数

Researchers shall participate actively in dialogue and exchange with citizens, for better mutual understanding between society and the researchers' community. As well, in order to resolve various issues and realize welfare in society, they shall also work to provide scientific advice effective for policy making to persons involved in the planning and determination of policies. On such occasion, involved in the planning and determination of policies. On such occasion, involved in the planning and the researchers shall aim to give advice based on consensus among researchers, and, when differences of opinion exist, shall offer explanations that are easy to understand.

研究者は、社会と研究者コミュニティとのより負い順耳理解のために、市然との対談と交流に精務的に参加する。また、社会の様々な 課題の解決と福祉の実現を図るために、政策立案・決定者に対して政策形成に有効な科学的助言の提供に努める。その際、研究者の合意に 基づく約首を目指し、意見の相違が存在するときはこれを傾り易く説明する。

12. Scientific Advice / 12. 科学的助育

Researchers shall conduct research activities with the objective of contributing to public welfare, and offer fair advice based on objective and scientific evidence. At that time, they shall be aware of the gravity of the impact and of their responsibility that their statements may make on public opinion building and policy making, and shall not abuse their authority. As well, researchers shall make maximum efforts to ensure quality in their scientific advice, and at the same time clearly explain the uncertainty associated with scientific knowledge as well as the diversity of opinions.

研究者は、公共の福祉に責することを目的として研究活動を行い、客観的で科学的な機能に基づく公正な助言を行う。その際、研究者の 発言が主論及び改策形成に対して与える影響の重大さと責任を自覚し、極威を濫用しない。また、科学的助言の質の確保に最大限努め、 国時に科学的知見に係る不確実性及び見解の多様性について明確に設明する。

13. Scientific Advice to Policy Planners and Decision Makers / 13. 政策立案・決定者に対する科学的助言

When researchers ofter scientific advices to present who pain or decide on policy, they shall recognize that while is smellful increasing. It is something to be duly respected in the process of creating policy, it is not the only basis on which policy decisions are made. In the event that a policy decision is made that diverges from the advice of the researchers' community, researchers shall request, as recessary, accountability to sociously from the policy glainers and/or decision maker.

研究者は、政策立案・決定者に対して科学的助言を行う際には、科学的知見が政策形成の過程において十分に軽重されるべきものであるが、 政策決定の地一の判断相当ではないことを認識する。研究者コミュニティの助言とは異なる政策決定があされた場合、必要に応じて改策 企業・決定者に社会への説明を要請する。

IV. Legal Compliance /IV. 法令の遵守など

14. Compliance with Laws and Regulations / 14. 法令の遵守

Researchers shall observe all laws, regulations, and relevant rules in their activities, including the implementation of research and the use of research funds.

研究者は、研究の実施、研究費の使用等にあたっては、法令や関係規則を遵守する。

15. Rejection of Discrimination / 15. 差別の排除

In their research, education, and academic activities, researchers shall respond to others fairly on a scientific basis, respect individual freedom and character, and not discriminate against individuals based on race, gender, status, ideology and beliefs, or religion. 研究者は、研究・教育・学会活動において、人種、ジェンダー、地位、思想・信美、宗教などによって個人を差別せず、科学的方法に基づき

公平に対応して、個人の自由と人格を尊重する。 16. Avoiding Conflicts of Interest / 16. 利益相反

In their research, reviews, evaluations, judgments, scientific advice and other scientific activities, researchers shall pay sufficient head to the presence of conflict of interest between includings and organizations, or between different organizations, and shall properly address problems paying all due affection to the public interest.

経改者は、自らの研究、審査、評価、判断、科学的動音などにおいて、個人と組織、あるいは異なる組織型の利益の衝突に十分に注意を払い。 公共性に配慮しつつ適切に対応する。

17. Responsibilities of Individuals Who Support Research / 17. 研究を支援する者の責任

Administrative staff and other individuals who support researchers for their research activities shall strive toward both enhancement of the research support environment and development of research activities in line with the purpose of this code of conduct, in particular, supporters of research shall not only refrain from misconduct or complicitly in misconduct in the management of research funds but shall also make efforts to prevent misconduct and to manage research appropriately.

事務職員等、研究者の研究活動を支援する者は、本規範の適当に沿った研究活動の展開と研究支援環境整備の高度化との共進的な推進に 講道する、特に研究者の情報においては不正行為を為さず、また効率しないことはもとより、不正行為の禁止と適正な管理に努める。

ms with the statement made by the Science Council of Japan, "Code of Conduct for Scientists" (dated January 25, 2013). 日本学術会議声明(科学者の行動機能について)(平成25年1月25日)に準能しています。