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"Rather fail with honor than succeed by fraud."

- Sophocles

"Most people say that it is the intellect which makes a great scientist.

They are wrong: it is character."

- Albert Einstein

Introduction

Scientific research is grounded in values such as **integrity, honesty, trust, curiosity, and respect for intellectual achievement**.

The expression of these values in the diverse styles and approaches of the various scientific disciplines has contributed directly to the discovery of knowledge and thus to the achievements of today's scientific research enterprise.

Ideally, it is the challenge of gaining a measure of truth that motivates scientists to formulate, test, and revise their hypotheses in ways that minimize errors.

As we have demonstrated in this lecture, the research process includes the construction of hypotheses; the development of experimental and theoretical paradigms; the collection, analysis, and handling of data; the generation of new ideas, findings, and theories through experimentation and analysis; timely communication and publication; refinement of results through replication and extension of the original work; peer review; and the training and supervision of associates and students. All values summarized in this section and the ones discussed previously (skepticism, rationalism etc, critical thinking) apply to all stages of research process.

Almost all the values in the science is based on an **honor system** and summarized by the concept of **research integrity: the adherence by scientists and their institutions to honest and verifiable methods in proposing, performing, evaluating, and reporting research activities**.

The public expects to reap considerable benefit from the creative and innovative contributions of scientists. As science becomes increasingly intertwined with major social, philosophical, economic, and political issues, scientists become more accountable to the larger society of which they are a part; As a consequence, it is more important than ever that individual scientists and their institutions periodically reassess the values and professional practices that guide their research as well as their efforts to perform their work with integrity.

Before proceeding with the discussion of the details of research integrity, it is better to have an overview of the nature of science.

Integrity in research

The following discussion has been adapted from the following source by minor changes:

[**Integrity in Scientific Research: Creating an Environment That Promotes Responsible Conduct**](#), The National Academies Press, (2002) (Click for free on-line version.) It is a perfect guide for every researcher)

Following is also a perfect guide and strongly recommended to all new researchers:

[**On Being a Scientist: Responsible Conduct in Research, Second Edition**](#) The National Academies Press, (1995) (Click for free on-line version.)

Integrity characterizes both *individual researchers* and the *institutions* in which they work. For individuals, it is an aspect of moral character and experience. For institutions, it is a matter of creating an environment that promotes responsible conduct by embracing standards of excellence, trustworthiness, and lawfulness that inform institutional practices.

For the individual scientist, integrity embodies above all a commitment to intellectual honesty and personal responsibility for one's actions and to a range of practices that characterize responsible research conduct. These practices include:

- intellectual honesty in proposing, performing, and reporting research;
- accuracy in representing contributions to research proposals and reports;
- fairness in peer review;
- collegiality in scientific interactions, including communications and sharing of resources;
- transparency in conflicts of interest or potential conflicts of interest;
- protection of human subjects in the conduct of research;
- protection of human subjects in the conduct of research;
- humane care of animals in the conduct of research; and
- adherence to the mutual responsibilities between investigators and their research teams.

Individual scientists work within complex organizational structures. Factors that promote responsible conduct can exert their influences at the level of the individual; at the level of the work group (e.g., the research group); and at the level of the research institution itself. These different organizational levels are interdependent in the conduct of research. Institutions seeking to create an environment that promotes responsible conduct by individual scientists and that fosters integrity must establish and continuously monitor structures, processes, policies, and procedures that:

- provide leadership in support of responsible conduct of research;
- encourage respect for everyone involved in the research enterprise;

- promote productive interactions between trainees and mentors;
- advocate adherence to the rules regarding all aspects of the conduct of research, especially research involving human subjects and animals,
- anticipate, reveal, and manage individual and institutional conflicts of interest;
- arrange timely and thorough inquiries and investigations of allegations of scientific misconduct and apply appropriate administrative sanctions;
- offer educational opportunities pertaining to integrity in the conduct of research; and
- monitor and evaluate the institutional environment supporting integrity in the conduct of research and use this knowledge for continuous quality improvement.

Integrity of individual scientists

The following section elucidates (clarifies) a range of key practices that pertain to the responsible conduct of research by individual scientists.

Intellectual Honesty in Proposing Performing, and Reporting Research

Intellectual honesty in proposing, performing, and reporting research refers to honesty with respect to the meaning of one's research. It is expected that researchers present proposals and data honestly and communicate their best understanding of the work in writing and verbally. The descriptions of an individual's work found in such communications frequently present selected data from the work organized into frameworks that emphasize conceptual understanding rather than the chronology of the discovery process. Clear and accurate research records must underlie these descriptions, however. Researchers must be advocates for their research conclusions in the face of collegial skepticism and must acknowledge errors.

Accuracy in Representing Contributions to Research Proposals and Reports

Accuracy in representing one's contributions to research proposals and reports requires the assignment of credit. It is expected that researchers will not report the work of others as if it were their own. This is **plagiarism**. Furthermore, they should be honest with respect to the contributions of colleagues and collaborators. Decisions regarding authorship are best anticipated at the outset of projects rather than at their completion. In publications, it should be possible in principle to specify each author's contribution to the work. It also is expected that researchers honestly acknowledge the precedents on which their research is based.

Fairness in Peer Review

(Peer: person of equal rank or standing)

Fairness in peer review means that researchers should agree to be peer reviewers only when they can be impartial (objective) in their judgments and only when have revealed their conflicts of interest. Peer review functions to maintain the excellence of published scientific work and ensure a merit-based system of support for research. A delicate balance pervades (penetrates) the peer-review system, because the best reviewers are precisely those individuals who have the most to gain from "insider information": they are doing similar work and they will be unable to "strike" from memory and thought what they learn through the review process. Investigators serving as peer reviewers should treat submitted manuscripts and grant applications fairly and confidentially and avoid using them inappropriately.

Collegiality in Scientific Interactions, Including Communications and Sharing of Resources

Collegiality (cooperative work between colleagues) in scientific interactions, including communications and sharing of resources requires that investigators report research findings to the scientific community in a full, open, and timely fashion. At the same time, it should be recognized that the scientific community is highly competitive. The investigator who first reports new and important findings gets credited with the discovery.

It is not obvious that rapid reporting is the approach that is always the most conducive to progress. Intellectual property provisions and secrecy allow for patents and licensure and encourage private investment in research. Furthermore, even for publicly funded research, a degree of discretion may permit a research group to move ahead more efficiently. Conversely, an investigator who delays reporting important new findings risks having others publish similar results first and receiving little recognition for the discovery. Knowing when and how much to tell will always remain a challenge in scientific communication.

Once scientific work is published, researchers are expected to share unique materials with other scientists in a reasonable fashion to facilitate confirmation of their results. When materials are developed through public funding, the requirement for sharing is even greater. Public funding is based on the principle that the public good is advanced by science conducted in the interest of humanity. This commitment to the public good implies a responsibility to share materials with others to demonstrate reproducibility and to facilitate the replication and validation of one's work by responding constructively to inquiries from other scientists, particularly regarding methodologies.

Collegiality and sharing of resources is also an important aspect of the interaction between trainees and their graduate or postdoctoral advisers. Students and fellows will ultimately depart the research team, and discussion of and planning for departure should occur over the course of their education. Expectations about such issues as who inherits intellectual property rights to a project or to the project itself upon the trainee's departure should be discussed when the trainee first joins the research group and should be revisited periodically over the Course Of the project.

Transparency in Conflicts of Interest or Potential Conflicts of Interest

A conflict of interest in research exists when the individual has interests in the outcome of the research that may lead to a personal advantage and that might therefore, in actuality or appearance, compromise the integrity of the research. The most compelling (persuasive) example is competition between financial reward and the integrity of the research process. Religious, political, or social beliefs can also be undisclosed sources of research bias.

Many scientific advances that reach the public often involve extensive collaboration between academia and industry. Such collaborations involve consulting and advisory services as well as the development of specific inventions, and they can result in direct financial benefit to both individuals and institutions. Conflicts of interest reside in a situation itself, not in any behavior of members of a research team. Thus, researchers should disclose all conflicts of interest to their institutions so that the researchers and their work can be properly managed. They should also voluntarily disclose conflicts of interest in all publications and presentations resulting from the research. The scientific institutions, including universities, research institutes, professional societies, and professional and lay (nonprofessional) journals, should embrace disclosure of conflicts of interest as an essential component of integrity in research.

Protection of Human Subjects in the Conduct of Research

The protection of individuals who volunteer to participate in research is essential to integrity in research. The ethical principles underlying such research have been elaborated on in international codes and have been integrated into many national regulatory frameworks. Elements included in such frameworks pertain to the quality and importance of the science, its risks and benefits, fairness in the selection of subjects, and, above all, the voluntary participation and informed consent of subjects. To ensure the conformance of research efforts with these goals, institutions carry out extensive research subject protection programs. To be successful, such programs require high-level, functioning institutional review boards, knowledgeable investigators, ongoing performance assessment through monitoring and feedback, and educational programs.

Humane Care of Animals in the Conduct of Research

The humane care of animals is essential for producing sound science and its social benefits. Researchers have a responsibility to engage in the humane care of animals in the conduct of research. This means evaluating the need for animals in any particular protocol, ensuring that research animals' basic needs for life are met prior to research, and carefully considering the benefits of the research to society or to animals versus the likely harms to any animals included as part of the research protocol. Procedures that minimize animal pain, suffering, and distress should be implemented, Research protocols involving animals must be reviewed and approved by properly constituted bodies, as required by law and professional standards.

Adherence to the Mutual Responsibilities Between Investigators and Their Research Teams

Adherence to the mutual responsibilities between investigators and members of their research teams refers to both scientific and interpersonal interactions. The research team might include other faculty members, colleagues (including co investigators), and trainees (undergraduate students, graduate and medical students, postdoctoral fellows), as well as employed staff (e.g., technicians, statisticians, study coordinators, nurses, animal handlers, and administrative personnel). The head of the research team should encourage all members of the team to achieve their career goals, The interpersonal interactions should reflect mutual respect among members of the team, fairness in assignment of responsibilities and effort, open and frequent communication, and accountability. In this regard, scientists should also conduct disputes professionally.

Mentoring and Advising

Mentor is often used interchangeably with faculty adviser. However, a mentor is more than a supervisor or an adviser. An investigator or research adviser may or may not be a mentor. Some advisers may be accomplished researchers but do not have the time, training, or ability to be good mentors. For a trainee, "a mentoring relationship is a close, individualized relationship that develops over time between a graduate student (or other trainee) and a faculty member (or others) that includes both caring and guidance" (University of Michigan Handbook). A successful mentoring relationship is based on mutual respect, trust, understanding, and empathy. Mentoring relationships can extend throughout all phases of a science career, and, as such, they are sometimes referred to as mentor-protégé or mentor-apprentice relationships, rather than mentor-trainee relationships.

The National Academies committee believes that mentor should be the dominant and usual role of the laboratory director or research advisor in regard to his or her trainee. With regard to such mentor-trainee relationships, responsibilities include a commitment to continuous education and guidance of trainees, appropriate delegation of responsibility, regular review and constructive appraisal of trainees, fair attribution of accomplishment and authorship, and career guidance, as well as help in creating opportunities for employment and funding. For the trainee, essential elements include respect for the mentor, loyalty to the research group, a strong commitment to science, dedication to the project, careful performance of experiments, precise and complete record keeping, accurate reporting of results, and a commitment to oral and written presentations and publication. It should be noted that most academic research institutions play a dual role. On the one hand, they are concerned with producing original research; on the other, with educating students. The two goals are compatible, but when they come in conflict, it is important that the educational needs of the students not be forgotten. If students are exploited, then they will learn by example that such behavior is acceptable.

Support of integrity by the research institution

The individual investigators and the laboratory or research units carry out their functions in institutions that are responsible for the management and support of the research carried out within their domains. The institutions, in turn, are regulated by governmental and other bodies that impose rules and responsibilities. The vigor (physical strength), resources, and attitudes with which institutions carry out their responsibilities will influence investigators' commitment and adherence to responsible research practices.

Provide Leadership in Support at Responsible Conduct of Research

It takes the leadership of an institution to promulgate a culture of responsible research. This involves the development of a vision for the research enterprise and a strategic plan. It is the responsibility of the institution leadership to develop programs to orient new researchers to institutional policies, rules, and guidelines; to sponsor opportunities for dialogue about new and emerging issues; and to sponsor continuing education about new policies and regulations as they are developed. Furthermore, institutional leaders have the responsibility to ensure that such programs are carried out, with appropriate delegation of responsibility and accountability and with adequate resources.

Encourage Respect for Everyone Involved in the Research Enterprise

An environment that fosters competence and honest interactions among all participants in the investigative process supports the integrity of research. Institutions have many legally mandated policies that foster mutual respect and trust—for example, policies concerning harassment, occupational health and safety, fair employment practices, pay and benefits, protection of research subjects, exposure to ionizing radiation, and due process regarding allegations of research misconduct. State and local policies and guidelines governing research may be in effect as well. It is anticipated that through a process of self-assessment, institutions can identify issues and develop programs that further integrity in research. Fair enforcement of all institutional policies is a critical element of the institutional commitment to integrity in research. That is not enough, however.

Support Systems

Within the research institution, there can be multiple smaller units (e.g., departments, divisions within a department, research groups within a division). Within these institutional subunits, there will always be power differences between members of the group. Consequently, research institutions require support mechanisms—for example, ombudspersons—that research team members can turn to for help when they feel they are being treated unfairly. Institutions need to provide guidance and recourse to anyone with concerns about research integrity (e.g., a student who observes a lack of responsible conduct by a senior faculty member). Support systems should be accessible (multiple entry points for those with questions) and have a record of reaching objective, fact-based decisions untainted (defect less) by personal bias or conflicts of interest. Lack of recourse (access to a source of help or protection) within the institution for those individuals who have concerns about possible misconduct will undermine efforts to foster a climate of integrity. Equally important to having support systems in place is the dissemination (distribution) of information on how and where individuals may seek such support.

The ultimate goal for institutions should be to create a culture within which all persons on a research team can work effectively and realize their full potential.

Promote Productive Interactions Between Trainees and Mentors

Mentors play a special role in the development of new scientists. A mentor must consider the student's core interests and needs in preference to his or her own. Trainees and mentors are codependent and, at times, competitive. Trainees depend on their mentors for scientific education and training, for support, and, eventually, for career guidance and references. Mentors tend to be role models as well. Mentors depend on trainees for performing work and bringing fresh ideas and approaches to the research group. They can enhance the mentor's reputation as a teacher and as an investigator. Institutions should establish programs that foster productive relations between mentors and trainees, including training in mentoring and advising for faculty. Moreover, institutions should work to ensure that trainees are properly paid, receive reasonable benefits (including health insurance), and are protected from exploitation. Written guidelines, ombudspersons, and mutual evaluations can help to reduce problems and identify situations requiring remediation. As mentioned earlier in this chapter, the dual role academic research institutions play in both producing original research and educating students can be balanced, but when they come in conflict, educational interests of the student should take precedence.

Advocate Adherence to the Rules Regarding All Aspects of the Conduct of Research, Especially Research Involving Human Subjects and Animals

Effective advocacy by an institution of the rules involving the use of human subjects and animals in research involves much more than simply posting the relevant federal, state, and local regulations and providing "damage control" and formal sanctions when irregularities are discovered. At all levels of the institution, including the level of the dean, department chair, research group leader, and individual research group member, regular affirmation of the guiding principles underlying the rules is essential. The goal is to create an institutional climate such that anyone who violates these guiding principles through words or deeds is immediately made aware of the behavior and, when indicated, appropriately sanctioned.

Anticipate, Reveal, and Manage Individual and Institutional Conflicts of Interest

Research institutions must conduct their work in a manner that earns **public trust**. To do so, they must be sensitive to any conflict of interest that might affect or appear to affect their decisions and behavior in ways that could compromise their roles as trustworthy sources of information and policy advice or their obligations to ensure the protection of human research subjects. As research partnerships between industry and academic institutions continue to expand, with the promise of considerable public benefit, the management of real or perceived conflicts of interest in research requires that institutions have a written policy on such conflicts. The policy should apply to both institutions and individual investigators.

Institutional Conflicts of Interest

Institutions should have clearly stated policies and procedures by which they will guard against compromise by external influences. As with individual conflicts of interest, institutional leadership is not in the best position to determine whether a particular arrangement represents an unacceptable or manageable conflict of interest. Institutions should draw on independent reviews by external bodies and should have appropriate procedures for such reviews. Factors of concern include not only direct influences on institutional policy but also indirect influences on the use of resources, educational balance, and hiring of faculty.

Institutional Responsibility for Investigator Conflicts of Interest

The policy on conflicts of interest should apply to individuals who are directly involved in the conduct, design, and review of research, including faculty, trainees, students, and administrators, and should clearly state their disclosure responsibilities. The policy should define conflicts of interest and should have means to convey an understanding of the term to the parties involved. It should delineate the activities and the levels and kinds of research-related financial interests that are and are not permissible, as well as those that require review and approval. The special circumstances associated with research involving human subjects should be specifically addressed. Beyond meeting their responsibility to ensure the dissemination and understanding of their policies, institutions should develop means to monitor compliance equitably. Detailed descriptions of institutional responsibilities in this area were recently reported by the Association of American Universities .

Arrange Timely and Thorough Inquiries and Investigations of Allegations (statement of accusation) of Scientific Misconduct and Apply Appropriate Sanctions

Every institution must have in place policies and procedures for responding to allegations of research misconduct. Their effectiveness depends on investigation of allegations of misconduct with vigor and fairness. The institution should embrace the notion that it is important to the quality and integrity of science that individuals report possible research misconduct. Means of protecting any individual who reports possible misconduct in good faith must be instituted.

In carrying out their responsibilities, institutions must ensure that faculty, students, and staff are properly informed of their rights and responsibilities. Those likely to receive allegations—for example, administrators, department chairs, and research group chiefs—must be fully informed of institutional provisions and trained in dealing with issues related to research conduct or misconduct. Mechanisms must be in place to protect the public's interest in the research record, the research subjects' health, and the financial interests of the institution, as well as to ensure notification of appropriate authorities. Clear lines of authority for management of the institution's response must exist, and, where indicated, appropriate sanctions should be applied or efforts should be made to protect or restore the reputations of innocent parties.

Offer Educational Opportunities Pertaining to Integrity in the Conduct of Research

Research institutions should provide students, faculty, and staff with educational opportunities related to the responsible conduct of research. These offerings should encourage open discussion of the values at stake (investment) and the ethical standards that promote responsible research practices. The core objective of such education is to increase participants' knowledge and sensitivity to the issues associated with integrity in research and to improve their ability to make ethical choices. It should give them an appreciation for the diversity of views that may be brought to bear on issues, inform them about the institutional rules and government regulations that apply to research, and instill (introduce gradually) in them the scientific community's expectations regarding proper research practice. Educational offerings should be flexible in their approach and be cognizant (being fully aware of) of normative (standard) differences among disciplines. Such programs should offer opportunities for the participants to explore the underlying values that shape the research enterprise and to analyze how those values are manifested in behaviors in different research environments

It is expected that effective educational programs will empower individual researchers, students, and staff in making responsible choices in the course of their research. Regular evaluation and improvement of the educational and behavioral effectiveness of these educational offerings should be a part of an institutional assessment.

Monitor and Evaluate the Institutional Environment Supporting Integrity in the Conduct of Research and Use This Knowledge for Continuous Quality Improvement

There is a need for continuing attention toward sustaining and improving a culture of integrity in research. This requires diligent (hardworking) oversight by institutional management to ensure that the practices associated with integrity described above are carried out. It also requires examination of the policy-making process, the policies themselves, their execution, and the degree to which they are understood and adhered to by those affected. If researchers and administrators believe that the rules are excellent and that the institution applies them equitably, then the institutional commitment to integrity will be clear.

Ethical issues in research

Any ignorance of, or deviation from the integrity of research ((consciously or unconsciously) results with ethical misconduct in research.

Research has been done on the basis of traditional scientific honesty and thrust for centuries. In those times, the satisfaction of the scientific curiosity was the major driving force for the researchers. However, especially within the last two decades, the number of misconduct incidences has increased considerably due to the following reasons (Ethical Issues in Scientific Research (in Turkish), TUBA-Türkiye Bilimler Akademisi, 2002. On-line version is available in www.tuba.gov.tr):

1. Lack of scientific education
2. Increased need for financial support or sponsorship resulting with an aggressive competition between researchers.
3. The pressure of "scientific publication" criteria in professional promotions or appointments of the researchers. For example, one has to have at least one international publication in a respected journal for a PhD Student to be able to defense his thesis in our University. This pressure may lead to improper attempts for quick accomplishments.
4. An exponential increase in the scientific studies and researchers, also increased the probability of scientific misconducts.

Misconduct is viewed as a serious professional deviation which is subject to sanctions imposed by the university or the institution of the researcher, sponsoring agencies, vocational or professional bodies or associations, and also in some cases the government.

In today's world, each institution has its own rules, regulations, guidelines on the institution's ethical standards. And these institutions have ethical boards composed of respected professors or researchers to monitor these standards.

Although the institutions draw a general framework of the ethical standards, some professional bodies publish their standards of ethics (ethics codes). Such standards or codes of ethics (e.g., codes of ethics in chemistry, law, engineering, (even mechanical engineering, computer engineering), medicine etc.,) are available for almost all professions. For example all medicine graduates should take an oath on the ethical rules known as Hippocrates oath.

Definition of Research Misconduct

The National Academy of Sciences delineates three types of such behaviors in the research environment:

1. misconduct including fabrication, falsification, or plagiarism;
2. questionable research practices such as maintaining poor records of research work or permitting honorary authorship of research papers or reports; and
3. misconduct such as sexual harassment or violation of government regulations.

Similarly, **Research misconduct** is defined as follows in the [University of Pittsburgh Research Integrity Policy](#).

1. fabrication, falsification, plagiarism or other practices that seriously deviate from those that are commonly accepted within the scientific

misconduct = violation of ethical rules

*Possible reasons:
- Lack of education
- competition for financial support
- "publication" pressure in appointments and promotion
- increased number of researchers*

misconduct → sanctions

Research institutions have their own policies

Verbal definitions may differ but the meaning and consequences are the same

Ethics should be maintained in all stages of research process

community for proposing, conducting, or reporting research;

2. material failure to comply with Federal requirements for protection of researchers, human subjects or the public or for ensuring the welfare of laboratory animals; or
3. failure to meet other material legal requirements governing research. It does not include honest error or honest differences in interpretations or judgments of data.

Types of ethical misconduct

TÜBİTAK (Turkish Scientific and Technical Research Council) defined the following types of misconduct in the "Rules of Operation" (by the Board of Research and Publication Ethics):

1. Following are examples of unethical conduct, to be considered by the Board, which may be noted at the time of preparation, proposal, execution, conclusion of any research project and publication of results:
 - *Fabrication*: To produce, report or publish data, which are not obtained in the research.
 - *Falsification*: To make alterations on research materials, equipment, operations, research records and data in a manner leading to different results.
 - *Plagiarism*: To use someone else's ideas, methods, data, texts or figures without giving appropriate credit, including reference, permission and acknowledgment.
 - *Duplication*: To publish (or to submit for publication) the same research results in more than one journal.
 - *Least Publishable Units*: To produce multiple publications by dividing research results into groups in a manner to damage the integrity of the work.
 - Failure to acknowledge the support of any institution or establishment, in presentations and publications.
 - Omission of the names of those who significantly contributed to the research/article or involving in unauthorized authorship practice or changing the order of authors without the written consent of all co-researchers/co-authors.
 - Other actions which do not conform to the principles of research and publication ethics.

TUBA describe some additional types of misconduct. Here are some:

- Ghost Authorship or Honorary Authorship: Deliberate addition of the name of famous scientists having no contribution for easy publication. Usually "many" is involved; totally unacceptable.
- Gift Authorship: Addition of the names of noncontributing persons due to two reasons; 1- name of the old supervisor of the young scientists, or the members of his/her group, 2- name of totally irrelevant persons in need of publication

Honest scientific community have humorous terms for misconduct:

Fabrication - dry labbing, desk research

Duplication - salami slicing

Condition for classification as an unethical conduct:

*- deliberate misconduct or serious negligence
- presence of concrete and sufficient evidence
- serious investigation*

Turkish:

Fabrication - Uydurmacılık

Falsification - Sahtecilik, saptırma veya aldatmaca

Plagiarism -

Aşırmacılık, İntihal, Duplication - yinelenen yayın

Honorary Authorship - Onursal yazarlık

Ghost Authorship - Sanal veya gölge yazarlık

for academic appointment or promotion.

- Careless research

2. The following conditions must be satisfied to classify a case as an "unethical conduct":

- Such incident should have been committed deliberately or as a result of a serious negligence.
- The claim has to be examined by the Investigation Commission and must be proven with concrete and sufficient evidence.

Definition of the ethical misconduct in different sources may have verbal differences but the main concept or the types are universal. Some behaviors may be considered as an ethical issue by different institutions. For example TUBA considers "careless research" as an ethical issue. Some institutions extend the definition of the misconduct such that even preparation of CV's must be prepared honestly.

Following is a detailed guide for researchers especially working in a university. (This section was taken with minor changes from the [Guidelines for Ethical Practices in Research](#) of Pittsburgh University.

Plagiarism

Authors who present the words, data, or ideas of others with the implication that they are their own, without attribution in a form appropriate for the medium of presentation, may be guilty of plagiarism and thus of research misconduct. This stricture applies to reviews and to methodological and background/historical sections of research papers as well as to original research results or interpretations. If there is a word-for-word copying beyond a short phrase or several words of someone else's text, that section should be enclosed in quotation marks or indented and referenced to the original source. The same rules apply to grant proposals or to papers submitted for academic credit.

An author should cite the work of others even if he or she had been a co-author or editor of the work to be cited or had been an adviser or student of the author of such work. Plagiarism not only violates the standard code of conduct governing all researchers, but in many cases could constitute an infraction of the law by infringing on a copyright held by the original author or publisher.

The work of others should be cited or credited, whether published or unpublished and whether it had been written work or an oral presentation. Each journal or publisher may specify the particular form of appropriate citation. One need not provide citations, however, in the case of well-established concepts that may be found in common textbooks or in the case of phrases which describe a commonly-used methodology or previous research. Special rules have been developed for citing electronic information.²

Referencing

The issue of referencing seems very complicated to the novice, but in reality, it is very simple. When including an equation, idea, or information that is not common knowledge throughout the field, it must be referenced. There are no exceptions. Equations that are common knowledge need not be referenced. For example, the equations for performing a linear regression analysis do not need to be referenced. If one wishes to include Newton's equations of motion in a publication, these do not need to be referenced, as they are common knowledge throughout the scientific community. However, information regarding the

- use quotation marks for word-for-word copying of short phrases of others.

- cite even if you are the co-author of the original text.

- unpublished data is also cited

- if an idea, equation or information that is not "common knowledge throughout the field", it must be cited.

(e.g., Newton's equations, avagadro's number are not cited)

-in case of doubt - peer consultation

chromatic dispersion of fused silica should be referenced.

When one is in doubt whether or not to reference a particular piece of information, a colleague or peer in the field can be consulted as to whether he or she considers this to be common knowledge. If doubt still exists, it is better to provide a reference.

Misuse of Privileged Information

One particularly serious form of plagiarism is the misuse of privileged information taken from a grant proposal or manuscript received for peer review. In such a case, the plagiarism is a serious matter of theft of intellectual property because it not only deprives the original author of appropriate credit by citation but could also preempt priority of first publication or use of the original idea to which the source author is entitled. Also, one who breaches confidentiality by showing a privileged document to an unauthorized person can be held to a shared responsibility for any subsequent plagiarism of the document committed by that unauthorized person.

theft of intellectual property during the peer review (e.g., thesis jury members, referees etc.)

3. Data

a. Integrity of Data

Fabrication and falsification of research results constitute serious misconduct. It is a primary responsibility of a researcher to avoid either a false statement or an omission that distorts the truth. In order to preserve accurate documentation of observed facts with which later reports or conclusions can be compared, every researcher has an obligation to maintain a clear and complete record of data acquired. "Records should include sufficient detail to permit examination for the purpose of replicating the research, responding to questions that may result from unintentional error or misinterpretation, establishing authenticity of the records, and confirming the validity of the conclusions."

-maintain a clear and complete record of data acquired

"Records should include sufficient detail to permit examination for the purpose of replicating the research, responding to questions that may result from unintentional error or misinterpretation, establishing authenticity of the records, and confirming the validity of the conclusions."

Meticulous record-keeping is a sound scientific practice which provides an accurate contemporaneous account of observations that becomes a permanent reference to the researcher who otherwise might not remember several weeks, months, or years later exactly what had been observed or what methods had been used. It is also an accurate record for others who may want to replicate the observation or to apply a method to other situations. In addition, it is an aid in allowing the eventual sharing of information with others and as documentation that might disprove any subsequent allegation of fabrication or falsification of data.

In many fields of laboratory research, it is standard practice to record data in ink in an indexed permanently bound laboratory notebook with consecutively numbered pages. Research methods, including statistical treatments, should be either described in the notebook or referenced by citation to some other primary or secondary source. Information on materials used, along with their sources, should be recorded. Entries should not be erased or whited out. If mistakes are to be corrected, a thin line should be drawn through the erroneous entry so as not to obscure it and an initialed dated correction written separately near the original entry or in the margin. All entries, or at least all pages of a notebook should be dated and initialed. Such records may be important at a later date in establishing scientific priorities or intellectual property claims.

- record in ink in a permanently bound consecutively page numbered note-book

All data should be recorded contemporaneously with the production or observation of the data. If some data are obtained as printouts from instruments or computers, these printouts should be appropriately labeled and pasted into

- paste the printouts to notebook if possible, else store

the notebook or, if pasting is not possible, stored securely and referenced in the notebook as to storage location. If unique critical materials, such as cell lines, archeological artifacts, or synthetic chemical intermediates, are prepared or discovered, they should be preserved and appropriately labeled, and explicit instructions should be written in the notebook as to where they can be found. Extensive data sets may be stored either as hard copy or on disks. In such cases, carefully documented definitions for codes should be stored, together with rules for applying them to the clinical or field data and notes.

securely

*- erase no entry.
Draw a thin line over
the erroneous data.*

*-keep carefully
labeled samples of
your products*

b. Use and Misuse of Data

Researchers should acquaint themselves with the current relevant quantitative methods for processing data, including graphical and tabular methods of presentation, error analysis, and tests for internal consistency.

Research integrity requires not only that reported conclusions are based on accurately recorded data or observations but that all relevant observations are reported. It is considered a breach of research integrity to fail to report data that do not support or that even contradict the conclusions, including the purposeful withholding of information about confounding factors. If some data should be disregarded for a stated reason, including an approved statistical test for neglecting outliers, the reason should be stated in the published accounts. A large background of negative results must be reported. Any reckless disregard for the truth in reporting observations may be considered to be an act of scientific misconduct.

*- get acquainted with
data processing
methods (graphs,
tables, error analysis
etc.,)*

Modifying a protocol in the midst of a clinical or epidemiological study or changing the character of a study (*e.g.*, from an exploratory to a confirmatory study) might in some cases be considered improper or even be viewed as scientific misconduct.

*- record observations
as well*

Expenditure of government grant funds for fabricated or falsified research is not only a violation of research ethics but also a crime and those responsible may be subject to prosecution with the possibility of a demand for restitution of funds to the government, a fine, and/or imprisonment.

c. Ownership of and Access to Data

Research data are not the property of the researcher who generated or observed them or even of the principal investigator of the research group but belong to the University or research institution, which can be held accountable for the integrity of the data even after the researchers have left the University. Reasonable access to data, however, should normally not be denied to any scientific member of the research group in which the data were collected. If there is any possibility that a copyright or patent application might emerge from the group project, a written agreement should specify the rights, if any, of each member of the group to the intellectual property.

*- Research data are the
property of University;
not yours*

*- You may be asked
to leave a copy of
your data before you
leave the institution*

A principal investigator who leaves the University is entitled to make a copy of data to take to another institution so as to be able to continue the research or, in

*Share your data with
scientific community.
You have common*

some cases, to take the original data with a written agreement to make them available to the University on request within a stated time period. A formal Agreement on Disposition of Research Data should be negotiated in such cases. Each student, postdoctoral fellow, or other investigator in a group project should come to an understanding with the research director or principal investigator, preferably in writing, about which parts of the project he or she might continue to explore after leaving the research group. Such an understanding should specify the extent to which a copy of research data may be taken. Co-investigators at another institution are entitled to access the data which they helped to obtain.

interests

For unique materials prepared in the course of the research, such as intermediates in a chemical synthesis, autoradiograms, cell lines, and reagents, items that can be proportioned should be divided among members of a research group at different locations under negotiated terms of a transfer agreement. For non-divisible items, the nature of the assignment should be clearly stipulated in the agreement.

Since the scientific enterprise is a cooperative endeavor encompassing many persons who now or in the future might pursue common research interests, and since it is in the interest of all to rely on the contributions and findings of others, every investigator has an obligation to the general scientific community to cooperate by sharing of data. Other virtues of sharing data include the facilitation of independent confirmation or refutation of reported outcomes. It is generally accepted that the data underlying a research publication should be made available to other responsible investigators upon request after the research results have been published. A researcher who has access to a unique set of experimental or observational data, *e.g.*, from a satellite or from an archeological site, has an obligation either to publish research results within a reasonable time or to make the data available to others who will be able to do so.

The National Science Foundation has a specific requirement that data, samples, physical collections and other materials created or gathered in the course of NSF-supported research be shared in a timely manner. The U.S. Public Health Service (PHS) insists that not only data but also unique materials (such as cell lines, cloned DNA, or reagents) developed with PHS funds should be made available to qualified individuals in the scientific community after the associated research results have been published or provided to the sponsoring agency.

d. Storage and Retention of Data

Data should be stored securely for at least five years after completion of the project, submission of the final report to a sponsoring agency, or publication of the research, whichever comes last. Some agencies that sponsor research may specify a longer period for which data must be retained.

Store your data securely for at least 5 years.

4. Authorship and Other Publication Practices

Publication of research results is important as a means of communicating to the scholarly world so that readers may be informed of research results and other researchers may build on the reported findings. In fact, it is an ethical obligation for an investigator at the University to make research findings accessible, in a manner consistent with the relevant standards of publication. Publication should be timely but should not be hastened unduly if premature publication involves a risk of not subjecting all results to adequate internal confirmation or of not thinking out adequately all interpretations. Violations of the guidelines suggested

below are departures from desirable practice and in extreme cases may be considered as research misconduct.

a. Criteria for Authorship

Publication must give appropriate credit to all authors for their roles in the research. If more than one person contributes significantly, the decision of which names are to be listed as co-authors should reflect the relative contributions of various participants in the research. Many professional associations and research journals have specified criteria for authorship. One common standard appearing in many of these statements is that each author should have participated in formulating the research problem, interpreting the results, and writing the research paper, and should be prepared to defend the publication against criticisms. Other statements require meeting two or three of the above criteria and, with respect to the last of these requirements, a more limited expectation is often prescribed that each author should be prepared to defend against criticism those portions of the publication falling within his or her particular area of expertise. A person's name should not be listed as author without his or her knowledge, permission, and review of the manuscript.

A procedure that has been adopted by some journals and some universities or departments is that each author must sign a statement attesting to having read and approved the final manuscript and/or to having made a substantial contribution to the manuscript. Departments or other academic units might consider drawing up statements of criteria and procedures for certification for authorship appropriate to their own units.

A person whose contribution merits co-authorship should be named even in oral presentations, especially when abstracts or transactions of the proceedings of a conference at which a paper is presented will be published. The entitlement to authorship should be the same whether or not a person is still at the original location of the research when a paper is submitted for publication.

Just as one should include as co-authors all those who have a right to be so listed, so one should avoid the listing of so-called honorary authors, who do not meet the criteria for authorship. All versions of standards for authorship suggest the use of alternative forms of acknowledgment within the paper, *e.g.*, for technical assistance, for providing research materials or facilities, or for meeting some but not all of the stated criteria for authorship. To avoid misunderstandings and even recriminations, the inclusion and exclusion of names of research participants as co-authors should be made clear to all participants in the research prior to submission of the manuscript.

b. Order of Authors

Customs regarding the order in which co-authors' names appear vary with the discipline. Whatever the discipline, it is important that all co-authors understand the basis for assigning an order of names and agree in advance to the assignments. A corresponding or senior author should be designated for every paper, who shall be responsible for communicating with the publisher and for informing all co-authors of the status of review and publication and of any changes in the list of co-authors.

c. Self-citations

In citing one's own unpublished work, an author must be careful not to imply an

- If more than one person contributes significantly, the decision of which names are to be listed as co-authors should reflect the relative contributions of various participants in the research.

- contributions should be acknowledged even in verbal presentations

- avoid honorary, ghost or gift authorships

- technicians or similar contributors are not listed as authors; they may be acknowledged in the acknowledgements section

- It varies with discipline

- A senior one must be assigned as the one for correspondence with editors

- Only accepted publications are cited.

unwarranted status of a manuscript. Thus, a paper should not be listed as submitted, in anticipation of expected submission. A paper should not be listed as accepted for publication or in press unless the author has received galley proof or page proof or has received a letter from an editor or publisher stating that publication has been approved, subject perhaps only to copy-editing.

- Avoid "submitted for publication"

d. Duplicate Publication

Researchers should not publish the same article in two different places unless there is very good reason to do so and unless appropriate citation is made in the later publication to the earlier one. The same rule applies to abstracts. If there is unexplained duplication of publication, sometimes referred to as self-plagiarism, a reader may be deceived as to the original amount of research data.

- Researchers should not publish the same article in two different places unless there is very good reason to do so and unless appropriate citation is made in the later publication to the earlier one.

It is poor practice in most fields to allow the same manuscript to be under review by more than one journal at the same time. Very often journals specify that a submitted work should not have been published or submitted for publication elsewhere, and some journals require that a submitted manuscript be accompanied with a statement to that effect.

An author should not divide a research paper which is a self-contained integral whole into a number of smaller papers merely for the sake of expanding the number of items in the author's bibliography.

- do not send to more than one publisher at the same time

- do not slice into smaller papers

5. Interference

Not only withholding of data but intentional removal of, interference with, or damage to any research-related property is improper and could be classified as scientific misconduct.

Obligation to Report

a. Reporting Suspected Misconduct

Reporting suspected research misconduct is a shared and serious responsibility of all members of the academic community. Any person who suspects scientific misconduct has an obligation to report the allegation to the dean of the unit in which the suspected misconduct occurred or to another senior University administrator.

- It is your responsibility to report misconduct

- All allegations are kept secret

Curriculum Vitae

A biographical sketch incorporated into a grant proposal or a curriculum vitae used in an application for a fellowship or any other position must follow the same standards of accuracy as a research publication. Inflated or otherwise inaccurate listings of educational background or academic status with an intent to deceive, including degrees, employment history, and professional accomplishments, are just as reprehensible as irresponsible entries in a list of publications and in some cases could be considered as falsification and categorized as misconduct.

CV Preparation is serious:

- follow the same standards of accuracy

- standard list of references

In listing publications it is recommended that clearly labeled separate sections should be used for referenced research publications, chapters for books

summarizing or reviewing a field, books or monographs, and abstracts. A separate additional listing of public presentations may be another appropriate category. No item should be listed more than once in the same category. Some schools of the University have established standard formats for curricula vitae.

Responsibilities to Funding Agencies

An investigator should be aware of the seriousness of a research proposal. The same standards of accuracy pertain to proposals as to manuscripts submitted for publication. Description of experiments not yet performed as evidence in support of the proposed research, for example, is considered to be fabrication and is subject to a finding of scientific misconduct, even if the proposal is rejected for funding or is withdrawn before full consideration for funding. The same definition of plagiarism applies to a proposal, including background and methodological sections, as to a publication.

Investigators who enter into agreements with commercial sponsors of research should familiarize themselves with the special terms of such agreements, such as those, for example, concerning reporting of results, disclosure of inventions, and confidentiality. Failure to comply with the provisions might sometimes constitute a breach of contract.

- The same standards of accuracy pertain to proposals as to manuscripts submitted for publication.

There are various resources in the WEB. on the various aspects of the research ethics. One very useful one is provided by Indiana University: [Research Ethics Resources on the World Wide Web](#). You can get quick access to numerous on-line sources through this page.

Researchers who are proved to violate the research ethics rules are subject to serious sanctions (penalties imposed for disobedience). For example [TUBITAK](#) has the following sanctions:

Sanctions

Article 8. *Researchers/authors who are proved to have violated ethics shall be subjected to the following sanctions:*

1. *All the ongoing projects of a researcher, whose unethical conduct has been verified by the Board and approved by the Science Board, shall be cancelled. Decision of cancellation shall be notified through the Presidency to all institutions, the principal investigator and other researchers of the cancelled project work for or are related to or are members of.*
2. *No assignment or support in connection with the Council shall be given to those who are convicted by an unethical conduct charge (research/publication) for a period of five years as of the date of the decision of the Science Board; their assignments, if any, shall be cancelled. The convicted cannot make publications in the journals and books of the Council and cannot make any presentations at meetings supported by the Council.*
3. *Any published article where violation of publication ethics has been verified will be retracted and the decision will be published in the journal together with its justification.*
4. *Previous Council supported projects and the publications in the Council journals of those who are proved to have violated publication ethics may be subjected to*

investigation, if deemed necessary.

5. *Authors, who are convicted by publication ethics violation and the nature of violation shall be notified in writing to the institutions, they work for or are members of and to the journals concerned (for the purpose of announcement of duplication).*

Professional ethics

As it was mentioned earlier, mainly professional bodies (like American Chemical Society, Institute of Electrical and Electronics Engineers (IEEE) etc.,) publish codes of ethics in their professional area.

Codes of ethics are controversial documents. Some writers have suggested that codes of professional ethics are pointless and unnecessary. Many others believe that codes are useful and important.

Here are 6 possible functions of a code of ethics in professional areas (Harris, Charles E., Jr., Michael S. Pritchard and Michael J. Rabins. Engineering Ethics: Concepts and Cases. Belmont, CA: Wadsworth Publishing, 1995.):

1. it can serve as a collective recognition by members of a profession of its responsibilities.
2. it can help create an environment in which ethical behavior is the norm.
3. it can serve as a guide or reminder in specific situations...
4. the process of developing and modifying a code of ethics can be valuable for a profession.
5. a code can serve as an educational tool, providing a focal point for discussion in classes and professional meetings.
6. a code can indicate to others that the profession is seriously concerned with responsible, professional conduct

Davis give four reasons why professionals should support their profession's code especially in engineering (Davis, Michael. "Thinking like an Engineer: The Place of a Code of Ethics in the Practice of a Profession". *Philosophy and Public Affairs* 20.2 (1991): 150-167:

1. supporting it will help protect them and those they care about from being injured by what other engineers do.
2. supporting the code will also help assure each engineer a working environment in which it will be easier than it would otherwise be to resist pressure to do much that the engineers would rather not do.
3. engineers should support their profession's code because supporting it helps make their profession a practice of which they need not feel...embarrassment, shame, or guilt.
4. one has an obligation of fairness to do his part...in generating these benefits for all engineers.

Illinois Institute of Technology Center for the Study of Ethics in the Professions has an excellent web page titled "[CODES OF ETHICS ONLINE](#)". It provides a library of codes categorized by profession. One can get direct access to the codes of ethics in almost all professions by proper browsing.

Here are two examples.

Organization : [American Chemical Society](#)
Verified on : 12/11/2002
Source : [The Chemist's Code of Conduct](#)
Previous Version(s) : None

The Chemist's Code of Conduct

American Chemical Society

The Chemist's Code of Conduct

The American Chemical Society expects its members to adhere to the highest ethical standards. Indeed, the federal Charter of the Society (1937) explicitly lists among its objectives "the improvement of the qualifications and usefulness of chemists through high standards of professional ethics, education and attainments..."

Chemists have professional obligations to the public, to colleagues, and to science. One expression of these obligations is embodied in "The Chemist's Creed," approved by the ACS Council in 1965. The principles of conduct enumerated below are intended to replace "The Chemist's Creed". They were prepared by the Council Committee on Professional Relations, approved by the Council (March 16, 1994), and adopted by the Board of Directors (June 3, 1994) for the guidance of society members in various professional dealings, especially those involving conflicts of interest.

Chemists Acknowledge Responsibilities To:

The Public

Chemists have a professional responsibility to serve the public interest and welfare and to further knowledge of science. Chemists should actively be concerned with the health and welfare of co-workers, consumer and the community. Public comments on scientific matters should be made with care and precision, without unsubstantiated, exaggerated, or premature statements.

The Science of Chemistry

Chemists should seek to advance chemical science, understand the limitations of their knowledge, and respect the truth. Chemists should ensure that their scientific contributions, and those of the collaborators, are thorough, accurate, and unbiased in design, implementation, and presentation.

The Profession

Chemists should remain current with developments in their field, share ideas and information, keep accurate and complete laboratory records, maintain integrity in all conduct and publications, and give due credit to the contributions of others. Conflicts of interest and scientific misconduct, such as fabrication, falsification, and plagiarism, are incompatible with this Code.

<p>The Employer</p> <p><i>Chemists should promote and protect the legitimate interests of their employers, perform work honestly and competently, fulfill obligations, and safeguard proprietary information.</i></p> <p>Employees</p> <p><i>Chemists, as employers, should treat subordinates with respect for their professionalism and concern for their well-being, and provide them with a safe, congenial working environment, fair compensation, and proper acknowledgment of their scientific contributions.</i></p> <p>Students</p> <p><i>Chemists should regard the tutelage of students as a trust conferred by society for the promotion of the student's learning and professional development. Each student should be treated respectfully and without exploitation.</i></p> <p>Associates</p> <p><i>Chemists should treat associates with respect, regardless of the level of their formal education, encourage them, learn with them, share ideas honestly, and give credit for their contributions.</i></p> <p>Clients</p> <p><i>Chemists should serve clients faithfully and incorruptibly, respect confidentiality, advise honestly, and charge fairly.</i></p> <p>The Environment</p> <p><i>Chemists should understand and anticipate the environmental consequences of their work. Chemists have responsibility to avoid pollution and to protect the environment.</i></p>

Organization	Accreditation Board for Engineering and Technology
Verified on	03/20/98
Source	http://www.abet.org
Previous Version(s)	None
CODE OF ETHICS OF ENGINEERS	
The Fundamental Principles	
<i>Engineers uphold and advance the integrity, honor and dignity of</i>	

the engineering profession by:

I. using their knowledge and skill for the enhancement of human welfare;

II. being honest and impartial, and serving with fidelity the public, their employers and clients;

III. striving to increase the competence and prestige of the engineering profession; and

IV. supporting the professional and technical societies of their disciplines.

The Fundamental Canons

1. Engineers shall hold paramount the safety, health and welfare of the public in the performance of their professional duties.

2. Engineers shall perform services only in the areas of their competence.

3. Engineers shall issue public statements only in an objective and truthful manner.

4. Engineers shall act in professional matters for each employer or client as faithful agents or trustees, and shall avoid conflicts of interest.

5. Engineers shall build their professional reputation on the merit of their services and shall not compete unfairly with others.

6. Engineers shall act in such a manner as to uphold and enhance the honor, integrity and dignity of the profession.

7. Engineers shall continue their professional development throughout their careers and shall provide opportunities for the professional development of those engineers under their supervision.

Academic freedom

In 1940, following a series of joint conferences begun in 1934, representatives of the American Association of University Professors and of the Association of American Colleges (now the Association of American Colleges and Universities) agreed upon a restatement of principles set forth in the 1925 Conference Statement on Academic Freedom and Tenure. This document known as "[1940 Statement of Principles on Academic Freedom and Tenure](#)" declares that:

Institutions of higher education are conducted for the common good and not to further the interest of either the individual teacher¹ or the institution as a whole. The common good depends upon the free search for truth and its free

exposition.

Academic freedom is essential to these purposes and applies to both teaching and research. Freedom in research is fundamental to the advancement of truth. Academic freedom in its teaching aspect is fundamental for the protection of the rights of the teacher in teaching and of the student to freedom in learning. It carries with it duties correlative with rights.

In this Statement the academic freedom is described as:

- a. Teachers are entitled to full freedom in research and in the publication of the results, subject to the adequate performance of their other academic duties; but research for pecuniary return should be based upon an understanding with the authorities of the institution.

- b. Teachers are entitled to freedom in the classroom in discussing their subject, but they should be careful not to introduce into their teaching controversial matter which has no relation to their subject.^[2] Limitations of academic freedom because of religious or other aims of the institution should be clearly stated in writing at the time of the appointment.^[3]

- c. College and university teachers are citizens, members of a learned profession, and officers of an educational institution. When they speak or write as citizens, they should be free from institutional censorship or discipline, but their special position in the community imposes special obligations. As scholars and educational officers, they should remember that the public may judge their profession and their institution by their utterances. Hence they should at all times be accurate, should exercise appropriate restraint, should show respect for the opinions of others, and should make every effort to indicate that they are not speaking for the institution.^[4]

Please note that the term "teachers" applies to all academic staff in universities.

On the other hand, the academic freedom is not a total freedom. Most universities define the academic freedom for their staff in their policies. These definitions are sometimes included in the staff contracts. Following is a good example to policies of universities in this regard:

Stanford University	Research Policy Handbook	Document 2.3
Title:	Academic Freedom	
Originally issued:	Sept 10, 1974	Current version: April 16, 1998
Classification:	STANFORD UNIVERSITY POLICY	

Summary:

Assures the fullest protection of freedom of inquiry, thought, expression, publication and peaceable assembly at Stanford University.

Related Research Policy Handbook Documents:**2.1 [Principles Concerning Research](#)****Authority:**

Adopted by the Senate of the Academic Council on April 18, 1974. Approved by the Board of Trustees on September 10, 1974. Amended by the Faculty Senate in April 1998 only to simplify the procedures by which grievances arising from the Statement are handled. Also published in the [Faculty Handbook](#).

Contact Person:

[Vice Provost and Dean of Research and Graduate Policy](#)

This Statement on Academic Freedom was adopted by the Senate of the Academic Council on April 18, 1974, and approved by the Board of Trustees September 10, 1974 upon the understanding that, as stated by the President of the University in his written recommendation to the Board, "The University's processes of search and evaluation are designed to produce the best possible persons for membership on the faculty. The Statement on Academic Freedom would in no way change that goal or the practices used to reach it."

Conforming to 1989 and 1990 actions of the Senate of the Academic Council on the recommendations of the Second Committee on the Professoriate, "faculty" refers to titles included in the "professoriate," defined (in the Stanford University [Faculty Handbook](#)) as: the tenure-line faculty; assistant professors (Subject to Ph.D.); the non-tenure line faculty; Senior Fellows and Center Fellows at specified policy centers and institutes; and the Medical Center Line faculty. The Statement was amended by the Senate of the Academic Council on April 16, 1998.

PREAMBLE

Stanford University's central functions of teaching, learning, research, and scholarship depend upon an atmosphere in which freedom of inquiry, thought, expression, publication and peaceable assembly are given the fullest protection. Expression of the widest range of viewpoints should be encouraged, free from institutional orthodoxy and from internal or external coercion. Further, the holding of appointments at Stanford University should in no way affect the faculty members' rights assured by the Constitution of the United States. In furtherance of these general principles:

I.**Decisions concerning**

1. *the search for, and appointment and promotion of, faculty;*
2. *the assignment of teaching and other primarily academic responsibilities;*
3. *the support and sponsorship of scholarly research; and*

4. *any other granting or withholding of benefits or imposition of burdens shall be made without regard to a person's political, social, or other views not directly related to academic values or to the assumption of academic responsibilities; without regard to the conduct of a person holding an appointment at Stanford unless such conduct is directly related to academic values or to the assumption of academic responsibilities or is determined, in a proceeding pursuant to the Statement on Faculty Discipline, to come within the provisions of Section I of that Statement; and without regard to an individual's race, ethnic origin, sex or religion. Nothing in the foregoing shall be deemed to affect the University's application of affirmative action policies in its faculty search procedures.*

II.

The grievance procedures outlined in Section III are designed to assure that decisions by faculty members and administrators comply with the standards of academic freedom established in Section I. These procedures are internal to the University and are aimed at preserving confidentiality and academic integrity while protecting the rights of individual faculty members. The provisions of Section I do not create contractual rights subject to review by agencies outside the University. The procedures outlined in Section III, however, constitute the administrative remedies for faculty grievances covered by parallel rights established under applicable federal and state laws (such as Civil Rights Acts).

III.

The following procedures shall apply to all grievances (defined as in the Statement on Faculty Grievance Procedures) arising under this Statement on Academic Freedom:

1. *The rights herein conferred shall be enforceable only by a person who is directly aggrieved and who holds a faculty (as defined above) position; no other person or persons shall have standing to complain.*
2. *If any faculty member feels aggrieved by a decision that he or she believes to be in violation of this Statement, he or she may file a grievance pursuant to the Statement on Faculty Grievance Procedures and its attendant standing rules.*
3. *For grievances brought in whole or in part for alleged violation of the Statement on Academic Freedom, the rules and procedures of the Statement on Faculty Grievance Procedures shall be modified as follows:*
 - a. *For a grievance not arising out of a negative decision on appointment, reappointment or promotion (and therefore for which consideration by the Advisory Board would otherwise be unavailable), the grievance and appeal structure shall nonetheless include the Advisory Board as to that portion of the grievance raising an alleged violation of the Statement on Academic Freedom.*

- b. *To the extent that a grievance or appeal does not involve a violation of Section I.1 of this Statement (that is, relating to the search for, and appointment and promotion of, faculty), the Advisory Board may, at its option, refer the grievance to any faculty member or committee of faculty members as it deems appropriate, which faculty member or committee of faculty members shall consider the matter and make recommendations to the President directly.*
- c. *For each grievance or appeal raising an alleged violation of the Statement on Academic Freedom, the Standards for Review under Section V of the Statement on Faculty Grievance Procedures shall be expanded to include the consideration: "Did the decision give weight to one or more of the factors ruled out of proper consideration by Section I of the Statement on Academic Freedom?"*

There is a debate, however, about the limits of the academic freedom. Some believe that total freedom may result with irresponsible act. Such discussions are very common. One example is given here: [Can we afford academic freedom?](#) Whatever the limits, the academic freedom is a big value which guaranties the honest research and teaching.