Professional Ethics

Bachelor of Technology

III Year II Semester

G Prembihari Saran

Biju Patnaik University of Technology

1. Profession and Professionalism

1.1 Concept of Profession

A profession is an occupation based on specialized, systematic knowledge and skills, usually acquired through formal education and training, and practiced with a commitment to ethical standards and service to society.

Key characteristics of a profession:

- Specialized knowledge and training
    - Requires advanced study, certification, and continuous learning.
- Service orientation / public good
    - Oriented towards solving important social needs (health, justice, infrastructure, technology, education).
- Autonomy in practice
    - Professionals exercise independent judgment in their domain.
- Code of ethics and standards
    - Governed by professional bodies (e.g., Bar Council, Medical Council, IEEE, AICTE).
- Accountability and self-regulation
    - Professionals are accountable to clients, employers, regulators, and society; professional bodies oversee discipline.
- Professional identity and culture
    - Shared norms, language, and expectations among members of the profession.

In engineering and technology, the profession involves applying scientific knowledge responsibly to design and operate systems that serve human needs while protecting safety, health, and the environment.

1.2 Concept of Professional

A professional is an individual who:

- Is a qualified member of a recognized profession.
- Possesses specialized knowledge and skills in that field.
- Earns livelihood primarily through practicing that expertise (as opposed to an amateur or hobbyist).
- Is bound by a code of ethics, norms, and regulatory requirements.
- Commits to competence, integrity, and the public interest in practice.

Thus, being a professional is not only about what one knows (knowledge), but also how one behaves (attitude and ethics).

1.3 Concept of Professionalism

Professionalism refers to the attitudes, values, behaviors, and standards that characterize a good professional in practice.

Core elements of professionalism:

- Technical competence
    - Delivering high-quality, accurate, and reliable work; maintaining up-to-date knowledge.
- Ethical conduct
    - Honesty, fairness, respect, confidentiality, avoidance of conflicts of interest.
- Responsibility and reliability
    - Meeting deadlines, owning mistakes, not shifting blame.
- Respectful communication and behavior
    - Courtesy, non-discrimination, constructive feedback, teamwork.
- Commitment to improvement
    - Continuous learning, adopting best practices, openness to feedback.
- Adherence to professional codes and laws
    - Following legal, regulatory, and institutional norms even under pressure.

Professionalism is visible in everyday conduct: punctuality, preparedness, transparency, documentation, and consistency between words and actions.

1.4 Professional Accountability

Professional accountability means being answerable for one's decisions, actions, and omissions in professional practice.

To whom is a professional accountable?

- Self – personal integrity and conscience.
- Clients / users / students / patients – quality, safety, fairness.
- Employer / organization – agreed roles, policies, and resource use.
- Profession / professional body – adherence to code of ethics and standards.
- Law and regulatory authorities – legal compliance, safety, environmental norms.
- Society at large – long-term public welfare and trust in the profession.

Mechanisms of accountability:

- Documentation and traceability of decisions.
- Supervision, audits, performance appraisals.
- Disciplinary action by professional bodies.
- Legal liability (civil/criminal) for negligence or misconduct.
- Whistleblowing and grievance redress mechanisms.

1.5 Professional Risks

Professional risks are potential harms or negative consequences arising from professional decisions, actions, or failures.

Types of risks:

- Technical risks
    - Design flaws, software bugs, system failures leading to accidents or losses.
- Legal risks
    - Negligence, breach of contract, violation of standards or regulations.
- Ethical risks
    - Corruption, bribery, falsification of data, misuse of confidential information.
- Reputational risks
    - Loss of trust of clients, students, regulators, and the public.
- Health and safety risks
    - Unsafe practices affecting workers, users, or the environment.
- Career risks
    - Consequences of whistleblowing, resisting unethical orders, or refusing unsafe work.

Professionals must identify, assess, and manage these risks through good design, documentation, communication, insurance, adherence to standards, and ethical courage.

1.6 Profession and Craftsmanship

Craftsmanship focuses on skillful, careful, and high-quality execution of a task, often learned through practice and apprenticeship.

Profession vs. craftsmanship:

- A craftsperson:
    - Emphasizes hands-on skill and quality of work.
    - May not require formal academic education or licensing.

    - Traditionally judged mainly by product quality and timeliness.
- A professional:
    - Combines technical skill with formal knowledge, theory, and analysis.
    - Operates within a regulated framework and code of ethics.
    - Has broader responsibilities: safety, public welfare, social impact, law, and policy.

However, good professionals must also be good craftspeople—they must care about the quality and elegance of their work, not just meeting minimum requirements.

1.7 Conflict of Interest

A conflict of interest (COI) arises when a professional's personal interests (financial, familial, emotional, or other) could improperly influence their professional judgment or actions.

Types of COI:

- Actual conflict – personal interest is currently influencing decisions.
- Potential conflict – personal interest could influence a future decision.
- Perceived conflict – others might reasonably think the professional's judgment is biased, even if it is not.

Examples:

- An engineer recommending a vendor owned by a close relative without disclosure.
- A faculty member grading or selecting their own relative without safeguards.
- A procurement officer accepting gifts from suppliers competing for a contract.
- A doctor prescribing a drug from a company that sponsors their research.

Managing COI:

- Early and full disclosure to relevant authorities.
- Recusal from decision-making in conflicted matters.
- Organizational policies restricting gifts, secondary employment, and insider dealings.
- Transparent procedures and documentation.

The goal is not to eliminate all personal interests (impossible) but to prevent them from distorting professional decisions.

1.8 Distinguishing Features of a Professional

Key features that distinguish a true professional:

- Expert knowledge and skill in a recognized domain.
- Commitment to public interest beyond personal gain.

- Adherence to a code of ethics and legal norms.
- Autonomy with responsibility – freedom to decide, but accountable for outcomes.
- Honesty and integrity – truthfulness in data, reports, and communication.
- Respect for others – clients, colleagues, subordinates, superiors, and stakeholders.
- Confidentiality where required.
- Commitment to lifelong learning and self-improvement.
- Courage to act ethically even under pressure.

1.9 Role and Responsibilities of Professionals

Typical roles:

- Expert / problem solver – applying knowledge to diagnose and solve complex issues.
- Designer / innovator – creating systems, products, and processes.
- Advisor / consultant – giving objective, evidence-based advice.
- Manager / leader – coordinating teams and resources ethically.
- Educator / mentor – training juniors and developing capacity.
- Guardian of public interest – upholding safety, fairness, and sustainability.

Key responsibilities:

- Ensure safety and welfare of people and environment.
- Maintain competence and avoid practicing beyond one's expertise.
- Provide honest, complete information to clients, students, or users.
- Avoid conflicts of interest or manage them transparently.
- Report unethical or illegal practices through proper channels.
- Respect intellectual property and avoid plagiarism.
- Support equity and non-discrimination.

1.10 Professionals' Duties towards the Organization

Professionals owe several duties to their employer or organization:

- Loyalty (within ethical limits)
    - Act in the legitimate interests of the organization; avoid activities that harm it.
- Competent performance

    - Use skills diligently; avoid negligent or careless work.
- Compliance with lawful policies and procedures
    - Follow rules that are legal and ethically acceptable.
- Proper use of resources
    - Avoid misuse or wastage of funds, equipment, data, and time.
- Confidentiality
    - Protect trade secrets, strategic information, and sensitive data.
- Honesty in reporting
    - Accurate time sheets, expense claims, technical reports, and performance data.
- Constructive communication
    - Provide honest feedback, highlight risks, suggest improvements.

Where organizational demands conflict with ethics or law, the professional's higher duty is to the public interest and ethical standards, not blind obedience.

1.11 Organization's Duties towards Professionals

Organizations have ethical responsibilities towards their professionals:

- Fair employment practices
    - Non-discrimination, transparent recruitment and promotion, job security as per contract.
- Adequate and fair remuneration
    - Pay consistent with qualifications, market, and contributions.
- Safe and healthy work environment
    - Compliance with safety standards, reasonable workloads, and work–life balance.
- Respect for professional autonomy
    - Allow professionals to exercise technical judgment without undue interference.
- Support for ethical practice
    - Clear policies, training on ethics, and no retaliation for raising genuine concerns.
- Opportunities for development
    - Training, mentoring, career growth, and access to new knowledge.
- Due process in grievances and discipline
    - Fair hearing, transparency, and proportionate actions.

A healthy professional–organization relationship is based on mutual trust, respect, and shared ethical values.

2. Ethical Theories and Their Application

Normative ethical theories provide structured ways to reason about what is right or wrong. The main theories relevant here are: Consequentialism, Deontology, Virtue Theory, Rights Theory, and Casuist Theory.

2.1 Consequentialism

Definition:
Consequentialism judges actions by their outcomes or consequences. An action is morally right if it produces the best overall consequences (e.g., greatest net benefit or least harm).

The most well-known form is utilitarianism, which aims to maximize overall happiness or welfare.

Key features:

- Focus on results, not motives or rules.
- Compares outcomes for all affected stakeholders.
- Often uses cost–benefit, risk–benefit, or utility analysis.
- Can justify difficult trade-offs if they increase total benefit.

Example (engineering/IT):

- Deciding whether to recall a product:
    - Weighing the cost of recall versus potential harm to users if the defect remains. If recall prevents serious harm to many, consequentialism supports recall even if the short-term cost is high.

Strengths:

- Clear focus on overall welfare and real-world impact.
- Useful in policy, project evaluation, and safety decisions.

Limitations:

- May ignore individual rights if violating them increases total benefit.
- Difficult to measure and compare all consequences accurately.

2.2 Deontology

Definition:
Deontological theories judge actions by whether they follow moral duties, rules, or principles, regardless of the outcomes.

Immanuel Kant's theory is a central form of deontology.

Key ideas:

- Certain actions are intrinsically right or wrong (e.g., lying, killing innocents).

- Moral duties include:
    - Tell the truth.
    - Keep promises and contracts.
    - Respect persons as ends in themselves (not merely as means).
    - Treat similar cases similarly (fairness).
- Outcomes matter less than respecting moral rules and human dignity.

Example:

- A manager refuses to falsify test results for a client, even though lying could save the project and jobs. Deontology says lying is wrong because it violates the duty of truthfulness and respect for stakeholders.

Strengths:

- Protects individual rights and dignity.
- Offers clear rules that limit harmful actions.

Limitations:

- Can seem rigid when rules conflict (e.g., telling the truth vs protecting someone from harm).
- Sometimes ignores outcomes even when they are extremely serious.

2.3 Virtue Theory (Virtue Ethics)

Definition:
Virtue ethics focuses on the character of the moral agent rather than isolated actions. An action is right if it arises from a virtuous character—one that embodies traits like honesty, courage, fairness, and prudence.

Key ideas:

- Moral questions: "What should I do?" become "What kind of person should I be?"
- Virtues are stable traits developed through habit, reflection, and good upbringing.
- Emphasizes practical wisdom (phronesis) to balance different virtues in context.

Examples of professional virtues:

- Honesty – truthful communication and data reporting.
- Integrity – consistency between values and actions.
- Courage – standing up to unethical demands.
- Responsibility – owning mistakes, fulfilling commitments.
- Fairness – non-biased treatment of colleagues and students.

- Humility – acknowledging limits and seeking help when needed.

Example:

- An engineer who habitually double-checks safety-critical calculations, not because of fear of punishment, but because of a deep sense of responsibility and care, is acting from virtue.

Strengths:

- Provides a holistic view of moral life, not just rule-following.
- Encourages long-term personal development and good professional culture.

Limitations:

- Less precise rules for "what to do" in specific dilemmas.
- Virtues may be interpreted differently in different cultures or professions.

2.4 Rights Theory

Definition:
Rights-based ethics focuses on moral rights (e.g., to life, liberty, privacy, property, fair treatment). An action is wrong if it violates someone's legitimate rights, even if it has good consequences overall.

Types of rights:

- Negative rights – freedom from interference (e.g., freedom of speech, freedom from harm).
- Positive rights – entitlements to certain goods or services (e.g., education, basic safety measures).
- Legal vs. moral rights – what the law grants vs what moral reasoning supports (e.g., human rights).

Application:

- In engineering and technology:
    - Respecting users' privacy rights in data collection and AI systems.
    - Ensuring workers' right to a safe workplace.
    - Protecting intellectual property rights.

Strengths:

- Strong protection for individuals and minorities.
- Provides clear constraints on what cannot be done, regardless of utility.

Limitations:

- Conflicts between rights (e.g., right to know vs right to privacy).
- Requires careful reasoning to justify which claimed "rights" truly exist.

2.5 Casuist Theory (Case-based Ethics)

Definition:
Casuist ethics (from "case") uses analogical reasoning from prior cases to resolve new moral problems. Rather than starting from abstract principles only, it compares the current case with paradigm cases where moral judgments are clear, and reasons by similarity/difference.

Key features:

- Focuses on concrete details and context.
- Uses precedents and examples (like case law in the legal system).
- Helps in areas with rich case histories: medical ethics, business ethics, engineering disasters, etc.

Example:

- When assessing whether to release a partially tested software system, one might compare with:
    - Past catastrophic failures due to early release (e.g., medical device glitches).
    - Past successes when release was delayed for more testing.
- The morality of the current decision is judged in light of these analogous cases.

Strengths:

- Very practical and context-sensitive.
- Helps make nuanced judgments in complex real-world situations.

Limitations:

- Risk of inconsistency if cases are cherry-picked.
- Still needs underlying ethical principles to decide which similarities matter.

3. Key Ethical Terms

3.1 Moral Absolutism

Moral absolutism is the view that there are universal, objective moral principles that apply to all people, in all cultures, at all times.

Features:

- Some actions are always right or always wrong, regardless of circumstances (e.g., torture of innocents, genocide).
- Morality is independent of individual or cultural opinions.
- Provides clear, stable guidelines and a basis to condemn serious wrongs worldwide.

Concerns:

- May be too rigid to handle complex cultural practices and context.

- Risk of intolerance if one group assumes its moral code is the only correct one.

3.2 Moral Relativism

Moral relativism holds that moral judgments are relative to individuals, cultures, or societies. There is no single universal moral standard that applies to all.

Forms:

- Cultural relativism – what is right/wrong depends on cultural norms.
- Subjective relativism – what is right/wrong depends on individual beliefs.

Features:

- Emphasizes diversity of moral beliefs and practices.
- Encourages tolerance and openness to other cultures.

Concerns:

- If taken strictly, it becomes hard to criticize harmful practices (e.g., discrimination, exploitation).
- May lead to "anything goes" if no act can be called wrong across contexts.

3.3 Moral Pluralism

Moral pluralism is the view that there are multiple legitimate moral values or principles, none of which can capture the whole of morality alone.

Key ideas:

- Recognizes several moral values: welfare, rights, justice, virtue, autonomy, etc.
- These values can conflict in real situations, and no single theory (only consequences, only rules, only virtues) always dominates.
- Tries to find a "middle way":
    - Acknowledges some universal principles (like basic human rights).
    - Accepts that different cultures and traditions prioritize values differently.

Implication for professionals:

- When resolving dilemmas, one should consider several perspectives:
    - Consequences, rights, duties, virtues, and context.
- Encourages balanced, flexible, yet principled decision-making.

4. Resolving Ethical Dilemmas

An ethical dilemma arises when there are two or more conflicting moral values, duties, or outcomes, and choosing one option seems to violate another.

4.1 Typical Sources of Dilemmas in Professional Life

- Conflict between loyalty to employer and duty to public safety.
- Conflict between confidentiality and duty to report harm.
- Pressure to meet targets vs requirement of accuracy and honesty.
- Trade-offs between short-term cost and long-term environmental or social impact.
- Personal career interests versus fairness to others (e.g., students, colleagues).

4.2 A Systematic Approach to Resolving Ethical Dilemmas

A structured process helps prevent impulsive or biased decisions:

1. Recognize and clearly define the dilemma
    - What exactly is the moral problem? Is it a true dilemma or just a misunderstanding?
2. Gather relevant facts
    - Technical data, legal requirements, policies, constraints, stakeholders, uncertainties.
3. Identify stakeholders and their interests
    - Who will be affected (directly and indirectly)? How and to what extent?
4. Identify the values, duties, and rights involved
    - Honesty, safety, fairness, loyalty, confidentiality, public welfare, autonomy, etc.
5. Generate possible options
    - Avoid framing as only two extremes; look for intermediate or creative alternatives.
6. Evaluate options using multiple ethical lenses:
    - Consequentialism – Which option leads to the best overall outcomes or least harm?
    - Deontology – Which option best respects duties, rules, and promises?
    - Rights theory – Which option best protects the rights of all parties?
    - Virtue ethics – What would a virtuous professional (honest, fair, courageous) do?
    - Casuist reasoning – Is there a similar past case and how was it handled?
7. Consult codes, laws, and experienced colleagues
    - Professional codes of ethics, organizational policies, legal advice, mentors.
8. Make a decision and justify it

- Choose the option that strikes the most ethically defensible balance.
- Be prepared to explain your reasoning to stakeholders.

9. Act, document, and reflect
    - Implement the decision carefully, protect vulnerable parties where possible.
    - Reflect later: What was learned? Would something be done differently next time?

4.3 Practical "Tests" for Ethical Decision-Making

Professionals often use simple tests as quick checks:

- Publicity test – Would you be comfortable if your decision appeared on the front page of a newspaper or social media?
- Reversibility test – Would you accept this decision if you were on the receiving end?
- Harm/benefit test – Does this decision minimize harm and maximize reasonable benefit?
- Rights test – Does the decision respect all parties' basic rights?
- Justice/fairness test – Are benefits and burdens distributed fairly?

If a decision fails several of these tests, it likely needs to be reconsidered.