GEEM 445

Engineering Ethics and Professional Practices

GEEM 445: **Engineering Ethics and Professional Practices**

Distribution of Marks (2 Cr)

- **Final Exam: 60%**
- **Continuous Assessment: 40%**

Syllabus: GEEM 445

- Introduction to mode of communication
- Type of Project Proposals, Research Proposals
- Development of Technical and Financial Proposal, Implementation and Reporting
- Development Project: Development and Proposal writing
- Contractual Provision
- Techniques of Specification Writing
- Evaluation of Bids
- Project evaluation and Implementation
- Report Writing
- Professional ethics in Civil Engineering.

GEEM 445: Engineering Ethics and Professional Practices

Course Outcomes:

- Ability to **ascertain the essential elements** required at different phases of a project.
- Learning **code of ethics for engineers** and will be ability to take an ethical decision after critical analysis of the situation.
- Ability to make procurement of goods, works and services according to PPA & PPR.

References:

- Project Management-Planning and control, **5th Edition. By A. *Lester*.**
- Project Management, **by *S Choudhury*.**
- Engineering Ethics, Real World Case Studies by Steven K. Starret, Amy L. Lara and Carlos Berthia
- Project Management, A Managerial Approach, **8th Edition, *Jack R. Meredith and Samuel J. Mantel***
- Civil Engineer's Handbook of Professional Practice **by *Karen Lee Hansen and Kent E. Zenobia***
- Public Procurement Rules 2008 **by CPTU, IMED, MoP.**

What we are going to learn today:

- **Definition** of Professional Practices and professional communication.
- **Professionalism in work place**
- **Ethics & laws**
- **Communications and its importance**
- **Project**

Introduction

Professional Practices

Means one will **extend knowledge and skills** within a **practical environment**.

Professional

- A person who has a job that needs skill, education or training.

- Professional is **not a label**, you give yourself, it is a **description**, **you hope**, others will apply to you.

- Engage in specific activity as one's **main paid occupation** rather than pastime

Professionalism:

- A set of characteristics that displays one's to be a hardworking, dependable and respectful individual in informal setting.

Professionalism maintains in workplace: (EA EP O)

- **Ethical-**be ethical and realize the sensitivity of your position.
- **Attire**- always dressed professionally and appropriate.
- **Etiquette**-All etiquette should be professional and respectful.

(**customary code of polite behavior** in **society** or **among members of a particular profession** or **group**.)

- **Punctual**-be punctual and adhere to commitments.
- **Organized**-be organized, prepared and dedicated to your position.

Ethics:

- Ethics is generally **concerned with guidelines** for **morals** and/or **socially approved conduct.**
- **Ethical standards** generally apply to "**conduct that can or does have a substantial effect on people's lives**".

Ethics and morals:

Morals:

- Those rules we govern by; principles we live by.

Ethics:

- Field of **philosophy**.
- **Examine**s value judgement of right and wrong action.
- Careful **philosophical study** of morals

Law:

A set of **rules** that are **created** and are **enforceable** by social or governmental institutions to **regulate behavior**, with its precise definition of a matter of longstanding debate.

LAW

- **Creates rules** to guide **conduct.**
- **Balances** competing values**.**
- **Punishes for conduct** that is "illegal" through **formal structures.**

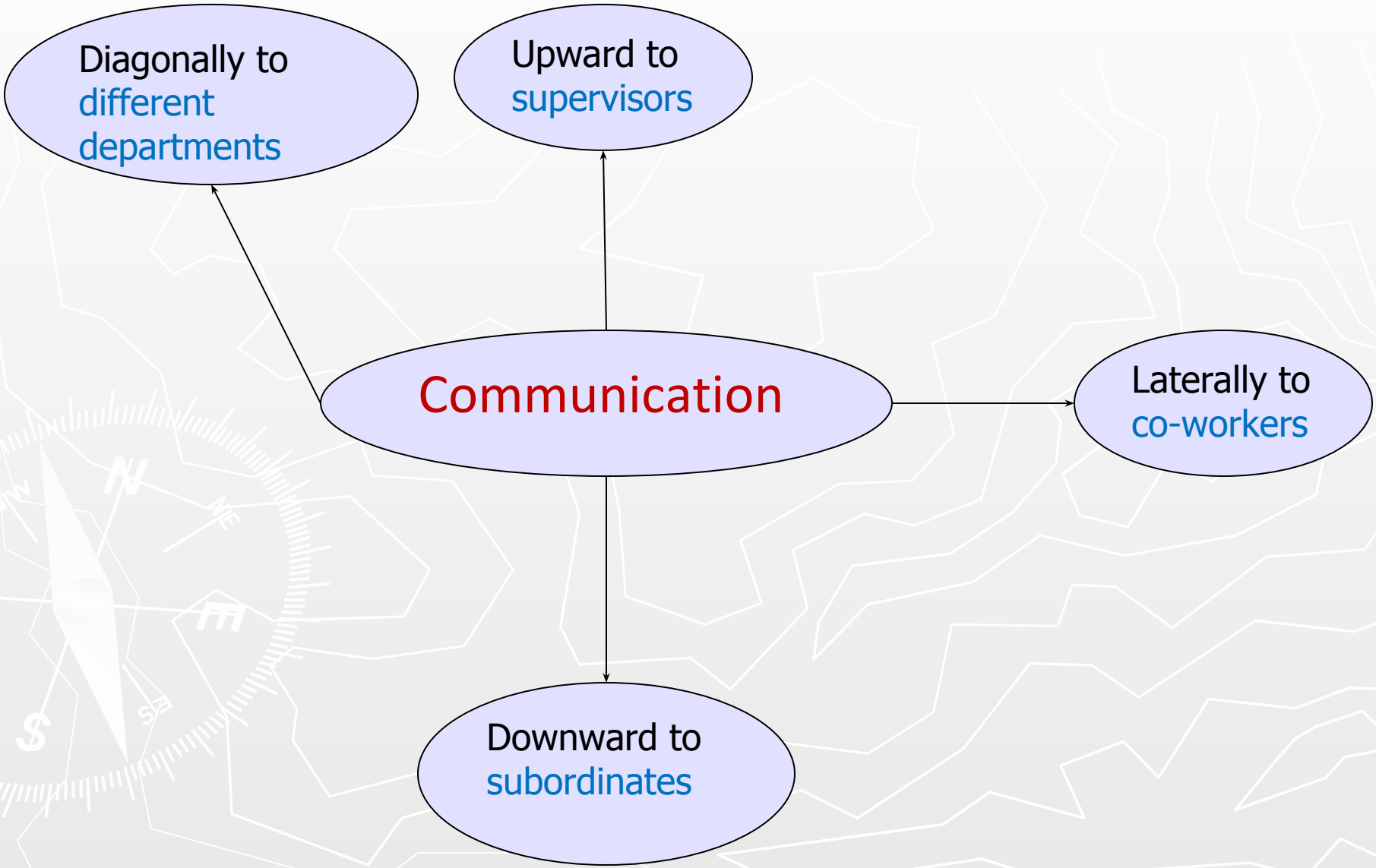
ETHICS

- **Offers guidance** on **conduct**.
- Addresses situations in which **competing values clash.**
- **Incentives and disincentives** may be created by "group" (formal or informal).

Communication

- Communication is the **transmission** of **information and meanings** from one individual or group to another.
- **Medium** be **oral or written or on line**.
- Good communication skills are considered so **desirable by all professionals**.
- **Accurate, effective and unambiguous communication** is actually **extremely hard**.

Mode of Workplace Communication



Importance of Professional Practices (BRAC-I)

- Establish **boundaries** for one's profession.
- Encourage **improvements** in one's field.
- Maintain **accountability** to ones' superior.
- Promote **respects** among other.
- Minimize **conflicts** in professional environment**.**

Importance of Professional Communication (MALEE)

- Enhance Effective L**eadership**.
- Encourage **Moral** development.
- Enhance the **Ability** to be **vocal.**
- Flourish **Employing** abilities.
- Increasing managerial **Efficiency**.

What is a project?

Project is defined as a **specific, finite activity** that **produces** an **observable and measurable results** under **certain preset requirements**.



What is a project?

- A project is a **temporary**, **unique** and **progressive endeavor/attempt** made to produce some kind of tangible or intangible **results** (a unique product, service, benefit, competitive advantages etc.

- Usually **includes a series of interrelated tasks** that are **planned for execution** over a fixed period of **time,** and within certain **requirements** and **limitations** such as cost, quality, performance etc.

Key characteristics of a Project:

- **Temporary**-a finite start time and a finite finish time.

  -**Start time**: when the project is initiated and its concept is developed.

  -**End time**: When all the objects are met or unmet.

- **Unique deliverable(s)-** Aim to produce some deliverables ie product, service or other.

  -should address a problem or need to analyze a problem before start of a project.

- **Progressive Elaboration-** with the progress of a project, continuous investigation and improvement become available.

Additional characteristics of a project

- **Purposeful**- to be rational and measurable.
- **Logical**- as it has a certain life cycle
- **Structured**- interdependencies between its tasks and activities.
- **Conflict**- as it tries to solve a problem that create some kind of conflict.
- **Limited** – by available resources.

Examples of Projects

- Development of a new product or service.
- **Constructing a building or a facility**.
- Renovating kitchen.
- **Designing a new transportation vehicle**.
- Acquiring a new or modified data system.
- **Organized/Conducting a meeting**.
- Implementing a new business process.

Stages of Project

Usually seven stages/processes through which practically every major project goes through. (IPA PIME)

Stages are:

- **Identification**- where one project **idea** out of several alternatives is chosen and defined.
- **Preparation**- **defined area is carefully developed** to the appraisal stage
- **Appraisal**- Every **aspect** of project is subjected to systematic and comprehensive evaluation and a project plan is prepared

- **Presentation**- detailed plan is **submitted** for **approval** and **financing** to the appropriate entities.
- **Implementation**-with the necessary approval and financing in place, the project plan is implemented
- **Monitoring**- at every stage, the **progress** of the project is assessed against the plan.
- **Evaluation**- upon completion, the project is **re-assessed** in terms of its efficiency and performance.

Project proposal

- An **initial document** that **transform an idea or policy** into details of an effective project.

- A **bid or offer** to perform a particular project for some one.

Project proposal includes:

- Technical background
- Survey results
- Recommendations
- Feasibility report etc.

Main Objective of the Project Proposal:

- To **approve the fund/grant** from authority which ensures their permission to conduct the proposed project.

Project proposal must includes:

- **Enough information** that enables the authority in making decision about the approval of the proposed project and hiring Project manager/project Director.

Information includes-outputs, costs, stakeholders, major risks, an estimate of time and resources required etc.

Categories of Project Proposal

- Internal project proposal
- External project proposal
- Solicited project proposal
- Unsolicited project proposal

Internal Project proposal:

- Proposal **written for someone within the organization**.

-does not contain much information.

External Project proposal:

- Proposal written by a separate, **independent consultant** suggesting to conduct a project for another company.

- Proposal from a company.

Solicited Project Proposal:

- Receiver of the proposal requested the proposal in someway.
- RFP is sent out by a company publicly.
- Confined to local level.

Un-Solicited Project Proposal:

- Proposal is not requested by the receiver.

Thanks