

# Chapter 5

## Regulatory Environment

# Engineering Council Act, 2057

- Engineering Council Ain, 2055, Section 37

## Main Objectives

- to make engineering profession effective
- to systematically and scientific regulation of Engineering Profession
- to register engineers in Engineering Council

# Categorization of Engineers

## Section 2 of Engineering Council Act

- General Registered Engineer (Bachelor)
  - Professional Engineers (Master)
  - Non-Nepalese Registered Engineers
- 
- Listed Engineering fields in Annex-1 of Act
  - Council Provide a certificate to an engineer
  - Engineer have to take 'oath'

# For Academic Institutions

- Section 3 of the Act states that educational institutions, organizations or any academy which intends to offer Bachelor, Master or any Post-graduate Engineering Degree will be first needed recommendation of the council before approval by government of Nepal

# Professional Moral and Conducts

- Section 4 of Act describes set of Moral
  1. Honesty and Discipline
  2. Loyalty and Morals
  3. Impartiality
  4. Performing only related Professional jobs
  5. Never act to lower the moral in Profession
  6. Personal Responsibility
  7. Name, Rank and Register Number
  8. Do not Publish statement to leave unnecessary Influence

# Examination

- Section 5 of Act states an examining committee of three member (under coordination of council member) shall examine any complaint registered against any engineer in the council
- may suspend engineer under examination
- produce recommendation on case
- remove or reinstate the engineer

# Provision for private practice and for employee engineers

No engineer should practice engineering profession without being registered in the council even if graduated from the institute recognized by the council.

- Apply for registration
- Checking of the application
- Register the name
- Certify the Registration (Inform if decided not to register)
- Removal of Name
- Cancellation of Certificate
- Registering the name

# Labor Act

Labor Act 2048 of HMG/N states that employees must be selected and appointed under section 3.4 of the Act as under:-

1. Required to advertise vacant positions and apply selection procedure,
2. Appointment letter with terms and conditions of employment- to be notify labor office,
3. The process applies to the contract workers and piece rate contracts,
4. Non-Nepalese are not allowed to employ- but they may engage with special permission from the labor department,
5. Nepalese workers are to be trained and non-Nepali workers need to be replaced gradually,



- Labor or employees are recruited and appointed in the following procedures:

### **Acquisition:**

Acquisition of labor is acquiring of labors. It is also known as hiring of labors.

# Hiring of the labor force required for any organization. It follows the following procedure:-

1. Children are not allowed to work as per article 5.1 of the labor Law.
2. Labors are not allowed to transfer to the similar job in the company.
3. Ownership change of the company does not affect the employees' service and service condition according to Article 8.
4. Protection of service: Employees/workers cannot be terminated without fulfillment the procedure stated in the labor act or regulation Article 10.
5. Temporary Layoff is permitted with half salary according to article 11.
6. Forced retirement at the age of 55 years is it can be extended for another 5 years, if the company needs to do.

# **Condition of work**

## **(Section 3, Article 16-20)**

1. Working hours per day is 8 hours or 48 hours of week.
2. The starting time of any work shall be decided by the management of the company.
3. The law has provision for rest and Tiffin time for all labors after every 5 hours of continuous work and then half an hour break for Tiffin and rest.
4. The law also provision for over time and has to paid 1,5 times more wage but the overtime is not a compulsion.
5. The law states that company requires to keep attendance record.

# **Compensation**

## **(Wage- Section 4, Article 21-26)**

1. Minimum wage, dearness allowance benefits to be set by a minimum wage setting committee(employee, HMG, management representative in equal number) - minimum wage information to be published in the gazette
2. Provision for annual increment- half a day wage
3. Payment of salary wage in time- management's responsibility
4. No pay cut except in the following conditions

# Conditions for pay cut (Article 24)

1. Imposed fine, pay cut for being absent
2. To cover the loss of the firm due to the negligence of the employee
3. For the benefit being provided
4. Excess payment
5. Medical benefit coverage during suspension
6. pay cut from the order of the court, govt. office
7. Tax deduction

# **Health and security provisions**

## **Section 5**

1. Clean working environment (article 27 ka)
2. Enough air and light at the work place, proper waste disposal system, protection from air and noise pollution, adequate working space (15 m<sup>3</sup> working space), safe drinking water, modern toilet facility at convenient place for both male and female employees, fire exit and extinguishes, smoke free environment, health check up each year.

# Health and security provisions

1. Eye protection- use of protection devices
2. Protection from chemicals
3. Protection from fire
4. Protection from dangerous machine
5. Lifting weight – specified maximum weight
6. Protection arrangement for workers who work in pressure plants.
7. Labor depart can order firms to apply safely measures

# Employee welfare

1. Provision for employee welfare
2. Compensation for injury or loss of body part
3. Gratuity, provident fund, medical expenses
4. Leave – public holidays, study leave, home leave, maternity leave, mourning leave, special leave
5. Housing arrangement (5% of the annual profit to be used for gradual development of housing facility)
6. Childcare provision (if more than 50 women employees)
7. Rest rooms and canteens (if more than 50 employees are working)



# Disciplining (section 8)

1. Types of punishment: Warning, stopping annual increase, expulsion
2. Bad manners (आचरण), physical attacks, terrors, destroying property, theft, misuse of resources, more than 30 days absence without notice, bribes ....  
(Article 51)
3. Clarification after having proof or evidence
4. Labor department can dismiss the employees
5. Managers or proprietors to be punished
6. Employees may appeal to the court within 35 days

# Resolving labor disputes

1. Provision for labor court
2. Personal claim or complain
  - To management, if not resolved
  - To labor office to be resolved within 15 days, if not then by labor offices chief within 7 days
  - If the decision is not acceptable, employee may file the case to the labor court.

# Process for collective bargaining

1. Claim or demand to be signed by 51% of the employees/workers and to be submitted to the management,
2. Negotiation between the representatives of two parties – agreement within 21 days
3. If not resolved negotiation in the presence of labor office
4. If not resolved negotiation (individual or committee) to be appointed and conflicts to be resolved within 15 days.
5. If the decision of the negotiation is not acceptable, parties may appeal to the HMGN within 35 days
6. If decision is not made within 60 days, workers may go on strike following the procedure stated in clause 76

# Process to go on strike

1. Required to inform before going on strike with demand (proposal) approved by 60% of the employees. Written information 30 in advance to the management, labor office, local administrator
2. If the above procedure is not followed, the management may close the operation by receiving the permission from the government.
3. If the laws have restricted employees of some enterprises of public importance, employees cannot go on strike.

# Collective bargaining

1. The outcome of the collective bargaining agreed and signed by the both parties, should be considered as law for the concerned parties
2. The signed contract shall be effective from the date of registration in the office or from the specified date.
3. Concerned parties may report the labor office if the signed agreement is not followed – labor office may implement the collective agreement following due process.
4. HMG can order to stop strikes in unusual circumstances

# Personal and Financial regulation, Tippani System.

- The difference in the performances among the organization is because of the personnel employed and maintained in there, others – such as equipment, plants and materials required for various levels of work are the same as specified for the work.
- This indicates to load more emphasis on the people employed in the organization.
- But how to acquire the most appropriate personnel for the jobs identified is the problem.

- In Nepal, the jobs that have to be done is described in a job description, although most of the offices and post do not have job description as such.
- This is so happened because the acquiring people in an organization used to be through relatives alone.
- The employed person used to learn all tricks and trade of the job later and accordingly used to be promoted. Recruiting and selecting was not a systematic and scientific.

- In Nepal, the needs and types of manpower is initiated through Tippani, a kind of notes on the issue concerned expressed by various levels of responsible positions.
- The system of hiring or acquiring manpower is basically as per Human Resource Acquisition described in the previous lesson, but recording and maintaining inventory of the staffs (human resource) need to be initiated in offices.



# Intellectual Property Rights

- Intellectual Property is the Right you have on your creation, like a film, a musical composition, an invention, a brand name etc.
- Like any other real property, you have the right to own and protect the creation of your mind. Such a Right is called an Intellectual Property.
- If you have an Intellectual Property (IP), over any of your works or ideas, others need to take your permission before using it.

- Otherwise, you can initiate a legal action against such persons.
- Intellectual Property refers to the right over the intellectual work and not the work itself.
- The work can be either artistic or commercial.
- The artistic work comes under the category of the copyright laws, while the commercial ones, also known as industrial properties, are ruled by patents, trademarks and industrial design rights.

- Copyright laws deals with the intellectual property of creative works like books, music, software, paintings etc.
- Industrial properties cover those created and used for industrial or commercial purpose.
- As stated earlier, intellectual property is categorized into various types as per the nature of work.

- The most common types of intellectual property are copyright, trademarks, patents and industrial design rights.
- Let's look forward at the different types of intellectual property rights.

# Copyrights

- A **copyright** is a right conferred on the owner of the literary or artistic work.
- It is an exclusive right to control the publication, distribution and adaptation of creative works.
- The right lies with the owner-cum-copyright holder for a certain period of time.
- As time lapses, the work can be republished or reproduced by others.

- Usually, the time span of a copyright extends through the entire life of the owner and lasts up to a period of about 50 to 100 years after death.
- In case of anonymous work, the right lasts for 95 years after publication or 120 years after the creation.

# Trademarks

- Trademark is a symbol, which is generally used to identify product, which indicates its source.
- A trademarks can be a combination of words, phrases, symbols, logos, designs, images or devices used by an individual, legal entity or business organizations to distinguish their product from the others.

- For example you can identify the products of NIKE Inc, through their logo, which is embossed on their products.
- Once registered trademarks are protected legally and the owners can sue persons who use their trademarks.



# Patents.

- Patents are rights related to new innovations.
- This right is conferred on persons who invent any new machine, process, article of manufacture or composition of matter, biological discoveries etc.
- In order to grant a patent, the invention should fit into the following criteria, which may differ from country to country.

- In general, the invention must be new, inventive and should be useful or can be applied in industries.
- The person who receives a patent for his invention has an exclusive right to control others from making, using, selling or distributing the patented invention without permission.
- Generally, the time limit of a patent is 20 years from the date of filing the application (for the patent)

# Industrial Designs

- These rights also come under intellectual property and protect the visual design of objects that are not purely utilitarian, but have an aesthetic or ornamental value.
- It can refer to the creation of a shape, color, pattern or a combination of all these things.
- It can be an industrial commodity or a handcraft.

- The design can be either two-dimensional (based on patterns, colors, and lines) or three-dimensional (as per shape and surface).
- An industrial design right is conferred after considering factors like novelty, originality and visual appeal.
- The person who has an industrial design right has the exclusive right to make or sell any object in which the design is applicable.
- The right is conferred for a period of 10 – 25 years.

**Comparison Chart between copyright, patent, design and trademark**

S. N.	Particulars	Copyright	Patent	Design	Trademark
1	Subject matter/coverage	Rights relate to work of authorship/literary work /artistic work- music, book, movies/painting/photos	Rights relate to new inventions/theory/principles/process/formula	Rights relate to shape , pattern , color of commodities, product	Rights related to word, symbol, picture, figure or combination of all these to recognize goods .products
2	Terms	a) lifetime+50 years b) 50 years from death of last surviving author c) for anonymous or pseudonym work – 50 yrs from first date of publication d) for applied art & photograph- 25 yrs from years form preparation of such work e) 50 yrs for work published after death of author	7 years and two time renewable (21 years)	5 years and two time renewable (15 years)	7 years and indefinite period as long as timely renewed
3	Infringement	Person other than owner comes up with same work there is no infringement	Confers statutory monopoly that prevents anyone other than patent holder from making, using or selling	Confers statutory monopoly that prevents anyone other than patent holder from making, using or selling	Confers statutory monopoly that prevents anyone other than patent holder from making, using or selling
4	Punishment on infringement	a) 10,000 to 100,000 or 6 months imprisonment or both b) 20,000 to 200,000 or one year imprisonment or both	250,000 to 500,000	Not more than 50,000	Not more than 100,000
5	Start of protection	As soon as work created	Until the patent is issued	As soon as design was created and registered	As soon as trademark was created and registered
6	Requirement of protection	Original	Novel/non obvious/useful	New and different	New and different
7	Fee for application, regn & renew	low	100,1000,300	100,700,200	100,400,150
8	Governing act	Copyright act 2059	Patent, design and trademark act 2022	Patent, design and trademark act 2022	Patent, design and trademark act 2022

# Building Act, Codes and bylaws

- Regulating building construction activities was essential for the purpose of keeping buildings safe from earthquake, fire and other natural calamities.
- For fulfilling this purpose **Building Act 2055 (1998)** was promulgated (circulated) and meantime, **Building rules 2062 (2005)** also came into operation.
- With reference to building rules, building are to be constructed following **National Building Code 2060**.

# List of codes in NBC

<b>Code Number</b>	<b>Code Title</b>
NBC 000: 1994	Requirements for State-of-the-Art Design: An Introduction
NBC 101: 1994	Materials Specifications
NBC 102: 1994	Unit Weight of Materials
NBC 103: 1994	Occupancy Load
NBC 104: 1994	Wind Load
NBC 105: 1994	Seismic Design of Buildings in Nepal

NBC 106: 1994	Snow Load
NBC 107: 1994	Provisional Recommendation on Fire Safety
NBC 108: 1994	Site Consideration for Seismic Hazards
NBC 109: 1994	Masonry: Unreinforced
NBC 110: 1994	Plain and Reinforced Concrete
NBC 111: 1994	Steel
NBC 112: 1994	Timber
NBC 113: 1994	Aluminium
NBC 114: 1994	Construction Safety
NBC 201: 1994	Mandatory Rules of Thumb: Reinforced Concrete Buildings With Masonry Infill
NBC 202: 1994	Mandatory Rules of Thumb: Load Bearing Masonry
NBC 203: 1994	Guidelines for Earthquake Resistant Building Construction: Low Strength Masonry
NBC 204: 1994	Guidelines for Earthquake Resistant Building Construction: Earthen Building (EB)
NBC 205: 1994	Mandatory Rules of Thumb: Reinforced Concrete Buildings Without Masonry Infill
NBC 206: 2003	Architectural Design Requirements
NBC 207: 2003	Electrical Design Requirements for (Public Buildings)
NBC 208: 2003	Sanitary and Plumbing Design Requirements



# Classification of NBC according to their uses

<u>SN</u>	<u>Type of Building Code</u>	<u>Purpose</u>
1	International State-of-Art Applicable codes: NBC 000	Applicable to large building structures. The structures must comply with existing international state-of-the-art building codes
2	Professionally Engineered Buildings Applicable codes: NBC 101 NBC 107 NBC 113 NBC 102 NBC 108 NBC 114 NBC 103 NBC 109 NBC 206 NBC 104 NBC 110 NBC 207 NBC 105 NBC 111 NBC 208 NBC 106 NBC 112	Building designed and constructed under supervision of engineers, buildings with plinth area more than 1000 sq. ft., buildings having more than 3 stories, buildings with span more than 4.5 m with irregular shapes
3	Mandatory Rules of Thumb Applicable codes: NBC 201, NBC 202, NBC 205	Buildings of plinth area less than 1,000 sq.ft, Building having stories less than 3, building having span less than 4.5m and regular shape less and constructed by technicians in the areas where professional engineer's service is not available
4	Guidelines of Remote Rural Buildings (Low Strength Masonry/ Earthen Buildings)  NBC 000 categorizes design and construction of buildings into four types according to their level of sophistication. (Classification of building codes)	Buildings constructed by local masons in remote areas and not more than 2 stories

- International State of Art
  - The major thrust of the code is aimed at the typical and most common buildings currently being constructed in Nepal.
  - It does not suggest as being practical for everyday consideration the sophisticated design analytical techniques that appear in the building codes of developed countries.
  - Under the first category International-State-of-the-Art, if consultants ensure that their designs meet corresponding international standards, the designs are considered to be in conformity with NBC.

- Professionally Engineered Building
  - It covers all usual structures such as hospitals, meeting halls, factories, warehouses, multi-storey buildings and residential buildings.
  - Buildings having plan area more than 1,000 S.ft, more than 3 storied and structural span of more than 4.5m which will be constructed under design and supervision of engineer falls in this category.

- Building of restricted size designed with simple Rule-of-Thumb – Mandatory rules of thumb (MRT)
  - It refers to buildings of restricted size designed with simple Rule-of-thumb, and mostly applies to remote areas where simpler buildings are prominent.
  - The requirements are in terms of limit on spans and height, minimum reinforcing and member sizes, position of earthquake-resisting elements and other such rules.

- Simple buildings that are constructed where professional engineers and technicians are not available, under supervision of middle level technicians of which plan area is less than 1000 Sq ft, less than 3 storied and structural span is less than 4,5 m tall fall in this category.
- NBC 201, 202 and 205 are applicable for building under this category and the code deals with Mandatory rules of thumb load bearing masonry and MRT reinforcement concrete building without masonry infill respectively.

- Guideline for remote rural building.
  - These guidelines address about a dozen typical building styles that have been condensed from an inventory of approximately fifty-five building types surveyed in 1993.
  - In the form of diagrams and descriptions aimed at technical advisor, house owners and lay-men, these guidelines emphasize those changes that should be made to current practices to improve the seismic resistance of these buildings not subjected to modern quantitative analysis and rational design consideration.

- The structures are normally of earthen construction (e.g. unburned masonry, mud-mortar, rubble, dry stone, wattle and daub).
- Whereas these recommendation are described as guidelines, it is intended to be mandatory for such structures built in areas controlled by a building permit-issuing local authority.

# Building bylaws

- There are building bylaws prepared by concerned town development committee and are followed by the municipality of the country.
- Building bylaws are prepared to ensure public health safety, planned urban development and planned built environment.



# Basic components of building bylaws

- a) Building
- b) Planning
- c) Enforcement

# Elements of building bylaws

- Right of Way (ROW)
  - A ROW is a right to make a way over a piece of land, usually to and from another piece of land. A right of way is a type of easement granted or reserved over the land for transportation purpose, such as a footway, carriageway, trail, driveway, rail line or highway. A ROW is reserved for the purpose of maintenance or expansion of existing services with the right-of-way.
  - In the case of an easement, it may be reverted back to the original owner if the facility is abandoned.

- Set Back:

- In land use, a setback is a distance which a building or another structure is set back from a street or road, a river or another stream, a shore or flood plain, or any other place which is deemed to need protection.
- Depending on the jurisdiction, other things like fences, landscape, septic tanks ,and various potential hazards or nuisance might be regulated.
- Setbacks are generally set in municipal ordinance or zoning.

- Floor Area Ratio (FAR)

- Floor Area Ratio, Floor Space Ratio, Floor Space Index, Site Ratio and plot ratio are all terms for the ratio of a building's total floor area to size of land upon which it is built.
- The terms can also refer to limits imposed on such a ratio.
- Formula :

**Floor Area Ratio = (Total covered area on all floors of all building on certain plot) / (area of the plot.)**

- Ground Coverage Ratio
- Height of the building
- Guidelines for cultural heritage zone
- Clearance required for important sites and from other elements.

- Elements of building by laws in planning segment
  - Land use
  - Size of the plot
  - Area and its depth and width ratio
  - Length of cul-de-sac (impasse / dead end)
  - Area of open space
  - Public facility requirement.

- Elements of building bylaws in Enforcement process segment.
  - Designing of building stages
  - Construction stages
  - Issuance of completion certificate
  - Use of constructed facility

# Business Law

- **Business** : It is the human activities that are related with production of goods and services or sales and purchase of goods and services or exchange of goods and services with a profit making objective.
- **Law**: It is the norms that are drafted and enforces by a state or local government in order to regulate the activities within the state or locality. All the laws that regulate the business law. Ignorance of law will not be excused.



# Source of business law in Nepal

- English business law
  - Common law of England
  - Law of merchants
  - Principal of Equality
  - Statue of legislature
  - Custom and usage
- Nepalese statutory act
- Judicial decisions
- Writing and opinions of scholars & commercial treaties and agreements.

# Types of business enterprises

- Sole ownership
- Partnership business organization
- Company
  - Private
  - Public
- Sole business : In this type of business organization, single person establishes, manages, organizes and controls the whole business and also singly liable towards the profit or loss of the business. It is registered under private registration act 2014.

- Characteristics of sole business
  - Sole ownership
  - Sole management and control
  - Unlimited liability
  - Limited areas of operation
  - Less legal formalities
  - Voluntary origin and end

- Limitation of sole business
  - Limited capital
  - Uncertain future
  - Absence of legal status
  - Chances of impractical decisions
  - Lack of specialization
  - Loss in absence of a key person.

# Partnership Business Organization

- In this type of business organization, more than one person join their hands to earn profit by investing collectively. This type of business organization is registered under partnership act 2020.

# Characteristic of Partnership Business

- Joint ownership
- Unlimited liability
- Shared profit and loss
- Established on the basis of agreement between persons
- Members do not have separate existence
- Joint management and control
- Joint agent slip
- Partnership right can not be transferred

# Limitation of partnership business

- Unlimited liability
- Uncertain existence
- Possibility of misunderstanding and friction between the partners
- Limited capital
- Difficulty in transferring ownership
- Lack of prompt decision
- Lack of public faith

# Company business organizations

- In this type of business organization, company is established under the Act of the country and has limited liability.
- Finance is collected through issuance of shares.
- Company is considered as an artificial legal person.
- Act 2053 regulates the incorporation of a company in Nepal.



- Company can further be divided into two as
  - Private limited company
  - Public limited company
- As per company Act 2053, private limited company has less than 50 shareholders and public limited company shall have minimum 7 share holders and no upper limit.

# Characteristics of company business organization

- Legal artificial person
- Perpetual existence
- Limited Liability
- Common seal
- Voluntary association of person
- Capital collected by issuing shares
- Transferability of representatives / effective management.
- Publication of financial statement
- Unlimited capital
- Public faith
- Unlimited business capability

# Limitation of company business organization

- Difficulty in formation
- Lack of personal interest
- Lack of secrecy
- Possibility of fraud
- Exploitation of shareholders
- Group formation of power
- Conflict of interest
- Absence of prompt decision
- Lack of closeness

# Cyber law

- Cyber law provides the legal framework related to the use of computer, information and communication and the government technology.
- It regulates the computer based activities including business (e-commerce) and the government (e-government).
- Nepal has enacted the **Electronic Transaction Act 2063 (ETA 2063)**, which comes into effective from December 8, 2006 and electronic transactions rule (ETR 2064) also came into force in 2007.

# Electronic Transaction Act

- Important terminology defined in ETA 2063.  
{Self Study}
- Important provision of ETA (2063) {Self Study}

**The End**