

Background

The Jigme Namgyel Engineering College is one of the constituent colleges of the Royal University of Bhutan. The College was established in 1974 and is Bhutan's oldest technical College offering diploma level programmes in engineering. The College offers Diploma programmes in Civil Engineering, Electrical Engineering, Mechanical Engineering, Computer Hardware and Networking, Electronics and Communication Engineering, Surveying and Materials and Procurement Management with well facilitated laboratories, access to high capacity computing facilities, state of the art Library and excellent sporting facilities.

Over the years, the College has collaborated closely with the stakeholders, especially the construction industries in providing laboratory services such as material testing and consultancy services for numerous projects.

In addition, the College has recently established a Center for Appropriate Technology that aims to serve the rural community and respond to their needs, strengthen JNP as a national asset, provide a practical knowledge base for ecologically friendly and culturally appropriate development in the region, and create meaningful source of income.

In order to reach the community and provide relevant assistance for mutual benefit, the College shares its resources with the community where possible. This booklet sets out the procedure and relevant charges to avail these facilities.

General Procedure for Renting JNEC Facilities

The Hirer Shall:

1. Seek approval from the President through an application letter.
2. Contact the respective In-Charge(s) and make necessary payment to the Accounts section based on the availability of the facility.
3. Take delivery of the facilities by producing the payment slip to the respective In-Charge(s).
4. Handover the facility in compliance with the terms & conditions set out in the policy document.

Terms and Conditions for Hiring Facilities

The general terms & conditions for renting/hiring facilities apply to the hirer and the College (JNEC) and thereby constitute an integral part of the hirer agreement between the hirer and the College (JNEC) regarding the hirer's hire/rent of the College's facilities.

1. All facilities/services provided by the College are subjected to availability.
2. Facilities/services cannot be confirmed or delivered until all rental/hire and other charges have been paid in full. No responsibility is accepted for non-delivery of facilities/services where payment has not been made in advance or made available at the time of delivery.
3. The hirer(s) shall be liable for any damage to the College hired/rented facilities.
4. Rental/hiring charges at the time of delivery are exclusive of the transportation charge and must be returned immediately following the usage.

5. Rates for the facilities/services are subjected to change without prior notice.
6. In case, the rented facilities is (are) not return within the stipulated time, 100% penalty on the rented charge in addition to the normal charge for the additional duration will be imposed.
7. For the space(s) rented for intended purpose (entertainment), the following needs to be strictly observed:
 - 7.1. Smoking is not permitted anywhere in the facilities
 - 7.2. Alcoholic beverages and chewing of *doma* is not permitted
 - 7.3. Loitering is not permitted in and around the facility premises.

8. Rental of Space

- 8.1. All properties belonging to the hirer, including any rubbish, must be removed and taken off from the premises immediately at the end of the period of hire.
- 8.2. The hired premises must be handed over in the condition in which they were received. This will mean careful cleaning and tidying after use. Lights and A/Cs are to be turned off, windows closed and doors locked.
- 8.3. Inform the manager(s)/In-Charge(s) on any damage observed before you take over the facility.

9. The Guest House Rental

- 9.1. Report any missing items or damages observed in the room immediately for replacement/repair. Failing to report such

observation may lead to payment of compensation by the occupant(s) of the room at the time of check out.

10. Furniture Rental/Hire

10.1. Furniture rented/hire beyond the College premises needs additional care during the transportation to/from the designated place.

11. Rental/Hire Machines/Equipment and Engineering Services

1.1. Contact the department (Civil, Electrical, Mechanical, IT) laboratory/workshop In-Charge(s) for the hiring of machine(s)/equipment for the specific purpose(s).

1.2. The hired equipment shall be delivered with the necessary accessories and the College shall provide an operator and appropriate charges for the operator(s) shall be borne by the hirer as per BCSR rules and regulations.

Booking and information:

For Guest House and all other facilities

Mr. Passang Dendup (Asst. Adm. Officer)

Phone. No. 17688470 (m)/07-260302 (office)

Mr. Chorten Dorji (Estate Manager)

Phone. No. 17439947 (m)/07-260302(office)

Mrs. Tshewang Pemo (Guest House Care Taker)

Mobile No. 17708615

For Computing Facility

Rate(s) for the Common Facilities

Sl. No.	Facilities	Rate / Day (Nu.)
1	Lecture Theatre (one time usage)	7000
1	Conference Hall (with projector)	4000

2	Conference Hall (without projector)	3000
3	Seminar Hall (with projector)	3000
	Seminar Hall (without projector)	2000
3	Classroom	500
4	Over Head Projector (OHP)	100
5	Personal Computer (with Internet facility)/computer	200
6	Personal Computer (without Internet facility)/computer	150
7	LCD beamer/Infocus machine	1500
8	Photocopy Service (per copy)	5
9	MP Hall for Entertainment purpose	2000
10	MP Hall for Non-entertainment purpose	1700
11	Plastic Chairs (per Chair/per day)	10
12	Classroom Tables (per Table/day)	50
13	Hostel Rooms (per head/bed/night)	50
14	Football Ground (per match)	300
15	Basketball Court (per match)	100
16	Volley ball Court (per match)	100
17	Lawn Tennis Court (per match)	150
18	Badminton Court (MP Hall, per day)	1000
19	PA System (set, per day)	1000
20	Archery Range (daytime)	1100
21	Archery Range (night)	1500
22	Comb, Spiral Binding per booklet	75
23	Printing, Scanning/page	5
24	Sofa Set (inclusive of one three seater, two single seater and a chokdom)	100

a. Guest House Service Charges

1. Nu. 150.00/bed/night for RUB employees.
2. Nu. 350.00/bed/night for others.
3. Nu. 200.00/bed/night for programmes/trainings/workshops conducted by the college
4. Executive room – 400/night
5. Nu. 1000.00/bed/night for International(s)

b. Materials from Central Store

1. Flag pole with *dhar* Nu. 10
2. *Rudhar* per roll Nu. 30
3. Traditional Tent: Nu. 2000/day

Rate(s) for Facilities in Department of Civil Engineering and Surveying

CIVIL & SURVEYING		
SL.No.	EQUIPMENT	RATE (Nu.)
1	Total Station with Accessories (Leica/ Trimble/ Sokkia)	10000/day
2	Theodolite (Sokkia make)	1250/day
3	Leveling Instrument	500/day
4	Plane Table	250/day
5	RKI with accessories	1050/day
6	Prismatic Compass	250/day
7	Measuring tape	100/day
8	Leveling Staff	100/day
9	Ranging Rod	50/day
10	Surveying Umbrella	100/day
11	Bipod - (Stand for holding prism)	150/day
12	Leica GPS	5000/day

13	Topographic Map Production	15000/acre
14	Cube Mould	250/set
15	Slump Apparatus	250/day

TEST ON CEMENT & CONCRETE

Sl. No.	Equipment	Standard(s)	Sample Size	Rate Nu.
1	Compressive Strength (Concrete Cubes)	IS:516-1958	3 Cubes	1000/Set
2	Standard Consistency Test (Initial & Final Setting)	IS:4031 (Part 5) 1988	5 Kg	1500/Set
3	Compressive strength Test (Cement Cubes)	IS:4031 (Part 6)	10 Kg	1000/Set
4	Slump Test (Workability)	IS:1199-1959		800/Set

TEST ON SOIL

Sl. No	Equipment	Standards	Sample Size	Rate (Nu.)
	Bearing Capacity Tests by SPT	IS: 21`31 & IS: 8009-1976 (Part I)	Site Map with infra. Layout/Site Investigation	10000/bore hole
1	Field Density (Core Cutter)	IS: 2720 (Part XXIX)-1975		1000/Piece
2	Field Density (Sand Replacement)	IS: 2720 (Part XXVIII) 1985		2000/Piece
3	Direct Shear Test	IS: 2720 (Part XXXIX) : Sec 1-1977	5-10 Kgs	2800/ 2 Samples
4	Liquid Limit Test/ Plastic Limit Test	IS: 2720 (Part V)-1985	5 Kgs	1200/3 Samples
5	Shrinkage Limit Test	IS: 2720 (Part V)-1986	5 Kgs	1200/3 Samples
6	Grain Size Analysis (Dry)	IS: 460-1962	5-10 Kgs	1200/3 Samples
7	Specific Gravity Test	IS: 2720 (Part III); Sec 2- 1980	5 Kgs	1000/3 Samples

8	Moisture Content Test (Oven-Drying)	IS: 2720 (Part II)-1973	1-2 Kgs	600/3 Samples
9	Compaction: Standard Proctor Test (Light)	IS: 2720 (Part VII)-1980	10-15 Kgs	2500/3 Samples
10	Permeability Test (Constant Head Method)	IS: 11209-1985	5-10 Kgs	1000/3 Samples

TEST ON COARSE AGGREGATES

SL. No.	Type of Test(s)	Standard	Sample Size	Rate (Nu.)
1	Abrasion Test	IS-2386 (5)	5 Kgs	2500/Set
2	Impact Test	IS-2386 (4)	5 Kgs	1200/Set
4	Shape Test	IS-2386 (1)	10 Kgs	2000/Set
5	Specific Gravity	IS:2386-1963 (Part 3)	10 Kgs	1000/Set
6	Water Absorption	IS:2386-1963 (Part 3)	10 Kgs	600/Set
7	Grading (Sieve Analysis)	IS:2386-1963 (Part 1)	10 Kgs	1500/Set

TEST ON FINE AGGREGATES

Sl. No.	Equipment	Standard	Sample size	Rate (Nu.)
1	Specific Gravity	IS:2386-1963 (Part 3)	10 Kgs	1000/Set
2	Water Absorption	IS:2386-1963 (Part 3)	10 Kgs	800/Set
3	Bulking of Sand	IS:2386-1963 (Part 3)	10 Kgs	600/Set
4	Silt Content of Sand	IS:2386-1963 (Part 3)	10 Kgs	500/Set
5	Bulk Density of sand	IS:2386-1963 (Part 3)	10 Kgs	500/Set
6	Grading (Sieve Analysis/Fineness Modulus)	IS:2386-1963 (Part 1)	10 Kgs	1500/Set

TESTS ON STEEL MECHANICAL PROPERTIES

Sl. No.	Equipment	Standard	Sample size	Rate Nu.
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1	Tensile Test (bar up to 40 mm diameter) for High strength steel (Fe415 & Fe500)	IS:1605-2005	3 bars (1m length)	1800/Set
2	Tensile Test (bar up to 40mm diameter) Fe250	IS:1605-2006	3 bars (1m length)	1500/Set
3	Bend Test	IS:1599-1974	3 bars (1m length)	1000/Set
4	Deformation and Surface Characteristics	IS:1786-1985	3 bars (1m length)	700/Set

BUILDING BRICKS TESTS

Sl. No.	Equipment	Standard	Sample size	Rate Nu.
1	Compressive Strength	IS:3495 (Part 1)-1976	5 bricks	800/Set
2	Water Absorption	IS:3495 (Part 2)-1976	5 bricks	500/Set
3	Efflorescence	IS:3495 (Part 3)-1976	5 bricks	500/Set

TEST ON BITUMEN

Sl. No.	Equipment	Standards	Sample Size	Rate (Nu)
1	Penetration Test	IS-1203	1 Kg	1000/Set
2	Softening Test	IS- 1205	1 Kg	1000/Set

PUBLIC HEALTH ENGINEERING

Sl. No.	Equipment	Sample Size	Rate (Nu)
1	pH Test	5 liters of sample water without air space	280/Sample
2	Turbidity		860/Sample
3	Electrical Conductivity		320/Sample
4	Oxidation Reduction Potential (ORP)		860/Sample
5	Dissolve Oxygen (DO)		860/Sample
6	Salinity		860/Sample
7	Total Dissolve Solid (TDS)		1750/Sample

8	Sea Water Specific Gravity	860/Sample
9	Temperature	860/Sample
10	Water Depth	860/Sample
11	Chemical Oxygen Demand (COD)	1950/Sample
12	Biological Oxygen Demand (BOD)	2000/Sample
13	Optimum Alum Dose Test	1160/Sample
14	Chloride	715/Sample
15	Phosphate	1700/Sample
16	Sulphate	965/Sample
17	Alkalinity	650/Sample
18	PM10 and SPM	4000/Sample
19	Hardness	700/Sample

Rate(s) for Facilities in Electrical Engineering Department

Sl. No.	Service Type	Rate(s) Nu.
1	Earthing value test (Of residential/commercial areas)	500/test
2	New Electrical installation test (IR, Continuity etc) as required.	500/test
3	Soil Resistivity test (for earthing site selection)	500/test
4	Under Ground cable fault location test	700/day for equipment
5	Dielectric Strength Test (esp. transformer oil)	100/Sample
6	Drilling machine (portable)	1000/ day
7	Metallic Ladder	150/day
8	Megger	700/day
9	Clamp Meter	300/day

Rate(s) for Facilities in Department of Mechanical Engineering

Sl. No.	Service Type	Rate(s) Nu.
1	Air Servicing for Car/vehicles	30(S) 80(E)
3	Portable Welding Machine	2000/day + TA/DA for the operator
4	Diesel Generator (within campus)	500/day
5	Guillotine Machine	800/hr

Notes: * S – Staff/Students, E – External (non-JNP), H – Heavy vehicle

Rate(s) for Facilities in Department of Information Technology

Sl. No.	Service Type	Staff/Student Rate Nu.	Others Rate Nu.
1	Software troubleshooting and configuration	50	100
2	Installation of the Operating Systems and other related Applications	100	200
3	Hardware and software troubleshooting, repair and maintenance	200	300
4	Splicing Machine		4000/day

Rate(s) for Issue of Duplicate certificate(s) or Mark-sheet(s)

Sl. No	Document type	Certificate Authentication Charge (Nu.)
1	Course Completion Certificate (Duplicate)	500/copy
2	Migration Certificate (Duplicate)	200/copy
3	Change/Replacement of mark sheet (duplicate)	300/semester
4	Consolidated/Overall mark sheet (Duplicate)	500/copy
5	Transfer Certificate (Duplicate)	300/copy
6	Provisional Certificate (Duplicate)	300/copy

Note: In the above mentioned "Duplicate" refers to the document which is issued for the second time to the individual who after taking the first issue request for the second time. The above rate(s) is inclusive of postal charges.

Rate(s) for Facilities in Centre for Appropriate Technology Centre:

Sl. No.	Name of Equipment & Tools	Rate/Hour	Remarks
1	Multi cutter	100/hr	Without energy
2	Straight Grinder	100/hr	Without energy
3	Jig Saw	100/hr	Without energy
4	Sabre Saw	100/hr	Without energy
5	Cordless Impact Drill	150/hr	
6	Random Orbit Sander	100/hr	Without energy
7	Shear	100/hr	Without energy
8	Angal Grinder	100/hr	Without energy
9	Metal Cutoff Grinder	150/hr	Without energy
10	Arc Welding Machine (3phase)	500/day	Without energy
11	Arc Welding Machine (1phase)	500/day	Without energy
12	Hydraulic Pipe Bending Machine	500/day	

Note: With energy in the campus Nu. 50/hr.