



Director Land Records and Surveys, Odisha

Board of Revenue, (LR & S Branch), Odisha, Cuttack

3rd Floor, Rajaswa Bhawan, Po – Chandinichowk, Cuttack-753002, Odisha

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Advertisement No. 4448 /LR&S
XXXVII-40/18

Date:- 19/11/18

Director, Land Records and Surveys, Board of Revenue, Odisha, Cuttack invites online applications from the resident of Odisha to join a short term course on “Licensed Surveyor” in the prescribed format on self financing basis.

1. Introduction to the course:-

The Government of Odisha enacted Odisha Special Survey and Settlement Act 2012 and Rule 2012 thereof to undertake Survey and Settlement Operation in the State by adopting Modern Technology (Differential Global Positioning System (DGPS), Electronic Total Station (ETS) , High Resolution Satellite Imagery (HRSI) and Aerial Photography and to prepare Digital Map and Record of Right(RoR). The said Act defines the Licensed Surveyor as a person Technically qualified to measure, draw sketch map or map according to the scale of plots and holding License from the Director to carry out work relating to survey and settlement and other such work as may be assigned to him from time to time. In order to create a pool of human resources with adequate expertise, knowledge so as to grant License of Licensed Surveyor to them for the purpose as envisaged in the said Act and Rule. The course will enhance the skill and capacity building of the applicants and help them for self employment. On successful completion of the course the applicant will be granted License of the “Licensed Surveyor” by the Director, Land Records and Surveys.

2. Duties of the Licensed Surveyor :-

- i. Prepare sketch map and map to scale as applied for by the land owners;
- ii. Prepare map to scale as required by the Government Authority or Public Body;
- iii. Prepare map to scale as required by the requisitioning body in the land acquisition proceedings;
- iv. Update maps prepared in course of cadastral and revisional surveys;

- v. Verify digital maps prepared through modern Technology and carry out ground realities exercises;
- vi. Prepare record of rights in the post-mapping stage, during field survey and settlement operations as well as facilitate updating of land records maintained in the revenue offices;
- vii. Facilitate inter-connectivity among revenue offices;
- viii. Prepare maps and record of rights during consolidation proceedings; and
- ix. Performance such other incidental duties relating to survey operation and preparation of record of rights as may be conferred by the Director or the Collector.

3. Fees and remuneration

The Director, Land Records and Surveys will fix the remuneration to be paid to the Licensed Surveyor for different types of works to be assigned to him. In case a work has been assigned to the Licensed Surveyor by a Department of Government or requisitioning body in land acquisition or any public body, the Licensed Surveyor shall be paid such remuneration as fixed by the Director, Land Records and Surveys from time to time.

4. Age limit:-

The minimum age of the applicant must be 18 years and maximum age will be 30 years **as on the date of application.**

5. Educational qualification:-

The applicant must have Diploma in any Engineering subject or Bachelor Degree in Science in any stream. **Applicants with higher Degree in Engineering above Diploma will be treated as Science Graduate.**

6. Duration of the Course:-

The course will be of 12 weeks

7. Syllabus

The syllabus of the course is available in the concerned website.

8. No. of Seats:-

20 nos. of seats for Diploma holders and 20 nos. of seats for Science Graduates.

9. Selection criteria:-

The selection of applicants is purely on mark basis of the aggregate marks obtained in Diploma or Graduation as the case may be. If suitable candidates are not available from any category, the seats can be filled up from another category.

10. Application Fee:-

The application for the course will be submitted through online. The Application fee is Rs. 200 (Rupees Two Hundred) only, which will be deposited in the account of "ODISHA LAND RECORDS MODERNIZATION SOCIETY" Saving Account No. 19120110012710, IFSC No. UCBA0001912, Bank Name - UCO Bank, Old Secretariat Branch, Cuttack. The Application fee should be deposited in the above account through Bank or online. The receipt / acknowledgement / proof of the deposit is to be uploaded during online filing of application.

Deposit through Cheque / Demand Draft / Money Order / IPO will not be accepted.

11. Course Fee:-

Rs. 8,000/- (Rupees Eight Thousand) to be payable **at the time of admission** in favour of "Principal, Government Polytechnic, Bhubaneswar"

12. Venue of the short course :-

At Government Polytechnic, Bhubaneswar

13. Accommodation:-

The trainees have to arrange their own accommodation. No TA / DA / other allowances will be admissible to the applicants during the entire duration of the course.

14. General Terms and Conditions:-

- Director, Land Records and Surveys reserves the right to reject any application without assigning any reason. Incomplete applications are liable to be rejected.
- **The course is meant for capacity building for self employment.** The Director, Land Records and Surveys will only grant license of the Licensed Surveyor to successful trainees.
- **The trainees cannot claim for regular appointment before the Director, Land Records and Surveys**
- Course Fee is Non Refundable, in case any candidate cancels his admission for any reason.

- Course Fee once paid will not be refunded & Course Fee is not transferrable.
- All the trainee will ensure discipline within the campus.
- Regular attendance will have to be maintained by the trainee as per course schedule & 80% attendance is compulsory in all subjects individually.
- Trainees will abide by the examination rules and regulations displayed on Notice Board of the training institute.
- Leave without information/ permission will not be entertained.
- Trainees going on leave or home during vacation should inform course coordinator compulsorily.
- No trainee shall be organize/ conduct any meeting within the campus.
- The Machines/ Equipment/ Furniture must be handled carefully. No act of damage to Director, Land Records and Surveys properly shall be carried out by the trainee, any loss or damage to property, including water & electricity usage.
- Smoking & chewing tobacco, possessing or drinking alcoholic beverages in any form is strictly prohibited within Director, Land Records and Surveys premises.
- Ragging is strictly prohibited in the premises.
- Writing any Comment/ Remarks/ Name on doors, walls, toilet, and notice board is strictly prohibited.
- The trainees should obey the rules and regulations of the Government Polytechnic, Bhubaneswar
- Violation of above & any other Rules, Regulations, Disciplines and Conduct are liable for disciplinary action.

15. Last date for receipt of Application:-

The last date for online submission of the application in response to this advertisement is **11.12.2018**. The system will be automatically disable from **12.12.2018** of the said date after which the application form for the particular post will not be generated any more at the candidate end.

16. Certificate Verification:-

Candidates three times of seats of seats shall be shortlisted in order of merit wise basing on the marks (as mentioned in **para 5 & 8**). The shortlisted candidates will be intimated for certificate verification and admission through the website. No TA / DA / any other allowance will be entertained to the applicants for certificate verification and admission.

17. Intimation regarding joining the course:-

After certificate verification the selected candidates will be intimated to register in the said course, otherwise the candidates will be rejected for enrolling the course.

18. How to file online application:-

For details and filling of online application please visit <http://revenueodisha.gov.in/> and read the instruction for smooth online filing given in the link of the web.

Memo No. 4449 dated 19/11/18.


19/11/18
Director, Land Records & Surveys

Copy forwarded to Principal Secretary to Government, Revenue & DM Department, Odisha for information and necessary action. He is requested to take steps for giving a link in the Revenue Department website for display of the advertisement and web hoist the online application module.

Memo No. 4450 dated 19/11/18.


19/11/18
Director, Land Records & Surveys

Copy forwarded to the Senior Technical Director, NIC, Bhubaneswar / System Analyst, NIC, Board of Revenue, Odisha, Cuttack for information and necessary action. They are requested to display the advertisement, Syllabus and take steps for hoisting of the online application in the concerned web by 19.11.2018 positively.

Memo No. 4451 dated 19/11/18.


19/11/18
Director, Land Records & Surveys

Copy forwarded to Chief Executive, ORSAC, Bhubaneswar / The Secretary, SCTE&VT, Bhubaneswar / Principal, Government Polytechnic, Bhubaneswar for information and necessary action.

Memo No. 4452 dated 19/11/18.


Director, Land Records & Surveys

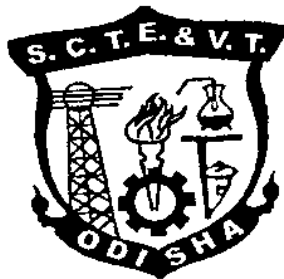
Copy forwarded to the Nazir, Nizarat Section of LR&S Wing, Board of Revenue for information and necessary action. He is requested to display the advertisement in the notice board(s) of Board of Revenue, Odisha, Cuttack for wide publicity.


19/11/18
Director, Land Records & Surveys

Online Application
to join a short term course on "Licensed Surveyor"

<http://www.sctevtservices.nic.in/licensesurveyor/>

Syllabus
Of
Short Term Course
on
License Surveyor
under
Revenue & Disaster Management Deptt.
Govt. of Odisha
(Effective FROM 2018-19 Session)



STATE COUNCIL FOR TECHNICAL EDUCATION
& VOCATIONAL TRAINING, ODISHA,
BHUBANESWAR

STATE COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING, ODISHA								
TEACHING AND EVALUATION SCHEME FOR Licensed Surveyor Course (I) of 2018-19								
S I. N o .	Training Centre Module	Week/Hrs.		Evaluation Scheme				
		Weeks	Hrs	Final Exams. Paper	Internal Exams	Final Exams	Exams (Hours)	Total
1	Institutional Module	4	144	Theory –Part A	10	40	1	50
2	ORSAC Module	2	72	Theory –Part B	10	40	1	50
3	Field Training at Tehsil Office	6	216	Practical	20	80	4	100
				Project	-	100	4	100
Grand Total		12	432		40	260	-	300
Each class is of 60 minutes duration. One week shall have 6 six working days and each day shall have 6 working Hours								
Minimum Pass Mark in Theory subject is 40% and in Practical subject is 60%. Pass mark shall be calculated taking Internal Exams and Final Exams together								
There shall be one Theory exams. Of 2 Hours duration consisting of Two Parts Part A- 1 hour and Part B- 1 Hour in one sitting. Practical and Project Examination shall be in separate sitting and of 4 Hours duration each.								

B. B. B. B.
11/10/18

Institutional Module (4 Week)

Period / Week: 6

En l Exams: 40 Marks

Total Hours: 144

I.A 10 Marks

Topic Wise distribution of periods

Sl. No.	Topics	Periods/Hrs.
1	Over view of the Course	2
2	Principles of survey	4
3	Basics on GPS & DGPS and ETS	8
4	High-Tech Survey using HRSI and Aerial Methodology	4
5	Survey & Settlement Act and rules 2012	3
6	Understanding of SOP with special emphasis on filling o Appendix -7	4
7	Basics on Latitude, Longitude and Map Projections	4
8	Survey of India Map Series	4
9	Cadastral Maps & Nomenclature	4
10	Map Reading and interpretation	7
11	Practical	100
	TOTAL	144

1st Week (36Hrs.)

1. Overview of the Course - 2 Hours

2. Principles of survey - 4 Hours

3.1 Plane Surveying

3.2 Geodetic Surveying

3.3 Instrumental Surveying

3.3.1 Chain Surveying

3.3.2 Compass Surveying

3.3.3 Plain Table Surveying

3.3.4 Theodolite Surveying

3. Basics on GPS & DGPS and ETS

- 8 Hours

4.1 GPS: - Global Positioning System

4.2 Functional Segment of GPS

4.3 Working Principle of GPS

4.4 GPS Signals

4.5 Errors of GPS

4.6 Positioning Methods

DGPS: - Differential Global Positioning System

4.7 Base Station Setup

4.8 Rover GPS Set up

4.9 Download, Post-Process and Export GPS data

4.10 Sequence to download GPS data from flashcards

4.11 Sequence to Post-Process GPS data

4.12 Sequence to export post process GPS data

4.13 Sequence to export GPS Time tags to file

ETS: - Electronic Total Station

4.14 Distance Measurement

4.15 Angle Measurement

4.16 Leveling

4.17 Determining position

4.18 Reference networks

4.19 Errors and Accuracy

4. Practical & Exercises on 3 & 4

- 25 Hours

2nd Week (36Hrs.)

5. High-Tech Survey using HRSI and Aerial Methodology

- 4 Hours

6. Survey & Settlement Act and rules 2012

- 3 Hours

7. Understanding of SOP with special emphasis

on filling of Appendix -7

- 4 Hours

8. Practical & Exercises on 7, 8 & 9

- 25 Hours

3rd Week (36Hrs.)

9. Basics on Latitude, Longitude and Map Projections - 4 Hour

10. Survey of India Map Series - 4 Hours

13.1 Open Series map

13.2 Defense Series Map

13.3 Map Nomenclature

13.3.1 Quadrangle Name

13.3.2 Latitude, Longitude and UTM's

13.3.3 Map Scale

13.3.4 Contour Lines

13.3.5 Magnetic Declination

13.3.6 Public Land Survey System

13.3.7 Field Notes

11. Practical & Exercises on 7, 8 & 9 - 25 Hours

4th Week (36Hrs.)

12. Cadastral Maps & Nomenclature - 4 Hours

16.1 Cadastral Map Preparation Methodology

16.2 Unique identification number of parcel

16.3 Positions of existing Control Points and its types

16.4 Adjacent Boundaries and Features, Topology Creation and verification.

13. Map Reading and interpretation - 7 Hours

Map Reading:

17.1 Direction (compass points, whole-circle bearing, reducing bearing)

17.2 Scale (Linear, Statement, Rational Factor)

17.3 Grid Reference and Grid Square (6 figure, 4 figure)

17.4 Signs and Symbols

Map Interpretation:

17.5 Interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.)

17.6 Interpret Physical landform (i.e.: Relief, Drainage Pattern etc.)

17.7 Problem Solving and Decision Making

14. Practical on 16 & 17 - 25 Hours

ORSAC Module (2 Weeks)

Period / Week: 6

End Exams: 40 Marks

Total Hours: 72

I.A: 10 Marks

Topic Wise distribution of periods

Sl. No.	Topics	Periods/Hrs.
1	Basics of Aerial Photography	4
2	Basics of Photogrammetry, DEM and ortho image Generation	7
3	Basics of GIS	4
4	Map Preparation using GIS	3
5	Basics of Map	2
6	Basics on Scale	2
7	Practical	50
	TOTAL	72

5th Week (36Hrs.)

15. Basics of Aerial Photography

- 4Hours

- 18.1. Film
- 18.2. Focal Length
- 18.3. Scale
- 18.4. Types of Aerial Photographs (Oblique, Straight)

16. Basics of Photogrammetry, DEM and ortho image Generation

- 7 Hours

Photogrammetry:

- 19.1 Classification of Photogrammetry
- 19.2 Aerial Photogrammetry
- 19.3 Terrestrial Photogrammetry

Photogrammetry Process:

- 19.4 Acquisition of Imagery using aerial and satellite platform
- 19.5 Control Survey
- 19.6 Geometric Distortion in Imagery

- 19.7 Application of Imagery and its support data
- 19.8 Orientation and Triangulation
- 19.9 Stereoscopic Measurement
 - 19.9.1 X-parallax
 - 19.2.2 Y-parallax
- 20. DTM/DEM Generation
- 21. Ortho Image Generation
- 17. Practical on 20 & 21** - 25 Hours

6th Week (36Hrs.)

- 18. Basics of GIS** - 4 Hours
 - 24.1 Components of GIS
 - 24.2 Integration of Spatial and Attribute Information
 - 24.3 Three Views of Information System
 - 24.3.1 Database or Table View
 - 24.3.2 Map View
 - 24.3.3 Model View
 - 24.4 Spatial Data Model
 - 24.5 Attribute Data Management and Metadata Concept
- 19. Map Preparation using GIS** - 3 Hours
 - 25.1 Prepare data and adding to Arc Map.
 - 25.2 Organizing data as layers.
 - 25.3 Editing the layers.
 - 25.4 Switching to Layout View.
 - 25.5 Change page orientation.
 - 25.6 Removing Borders.
 - 25.7 Adding and editing map information.
 - 25.8 Finalize the map
- 20. Basics of Map** - 2 Hours
 - 26.1 What is Map?
 - 26.2 How Maps Convey Location and Extent
 - 26.3 How Maps Convey characteristics of features
 - 26.4 How Maps Convey Spatial Relationship
 - 26.5 Classification of Maps
 - 26.5.1 Physical Map
 - 26.5.2 Topographic Map
 - 26.5.3 Road Map
 - 26.5.4 Political Map
 - 26.5.5 Economic & Resources Map

26.5.6 Thematic Map
26.5.7 Climate Map

21. Basics on Scale

- 2 Hours

27.1 Fractional or Ratio Scale
27.2 Linear Scale
27.3 Graphical Scale

22. Practical on 24, 25, 26 & 27

- 25 Hours

Field Training at Tehsil Office (6 Weeks)

Period / Week: 6

Practical and Exams: 80 Marks

Total Hours: 216

Practical Marks: 20 Marks

Project End Exams: 100 Marks

Topic Wise distribution of periods

Sl. No.	Topics	Periods/Hrs.
1	Practical on DGPS & ETS	60
2	Practical on Bhunaksha Software	12
3	Project Work	144
	TOTAL	216

7th Week & 8th Week :-

30. Practical on DGPS & ETS

- 60 Hours

31. Practical on Bhunaksha Software

- 12 Hours

9th Week, 10th Week, 11th Week and 12th week :-

32. Project Work

- 144 Hours

Evaluation Scheme

Theory Exams (2 Hours):

Part A (Basics of Remote Sensing & GIS)	40 Marks
Part B (Survey)	40 Marks

Practical Exams (4 Hours):

GPS, DGPS & ETS Survey etc.

Practical Record	10 Marks
Performance	50 Marks
Viva	<u>20 Marks</u>
	80 Marks

Project Evaluation(4 Hours)

Project Report	50 Marks
Project Presentation & Viva.....	<u>50 Marks</u>
	100 Marks

Internal Examination

Internal Exams shall be conducted by the Faculties concerned at the end of every week. The average marks of all the weeks shall be sent as Internal Marks of the subject in respect of the candidate.

REFERENCE Materials

1. <https://theconstructor.org/surveying/surveying-principles-methods-civil-engineering/1302/>
2. <https://www.novatel.com/an-introduction-to-gnss/chapter-2-basic-gnss-concept/>
3. http://gps.alaska.edu/jeff/Spatial_Reference/1reymueber_DCI_GIS.pdf
4. <https://drive.google.com/file/d/0B7srsI9Fr4QdUzAzSIFvZnNRkZSM/view>
5. Surveying and Levelling by N.N. Basak, 2nd Edition
6. https://2018.foss4g-na.org/sites/default/files/slides/survey_resurvey_cadastral_layer_Odisha.pdf
7. <http://www.lawsofindia.org/pdf/orissa/2012/2012OF5.pdf>
8. http://revenueodisha.gov.in/sites/default/files/document/DILRMP/SOP_MRII_2016.pdf
9. http://revenueodisha.gov.in/sites/default/files/document/Govt_Land/22958_4_8_14.pdf
10. <https://www.google.co.in/search?q=map+reading+analysis+interpretation+ppt&og=Map+reading+and+&aqs=chrome.3.69i57j0l5.9755j0j7&sourceid=chrome&ie=UTF-8>
11. Map Use: Reading, Analysis and Interpretation by Julia A. O. Muehrcke and Paul Muehrcke
12. <http://indiageospatialforum.org/2012/proceedings/pp/P%20K%20parida.pdf>
13. <http://www.indiana.edu/~paleoind/Resources/Guide%20to%20Topographic%20Maps.pdf>
14. <http://www.dst.gov.in/sites/default/files/nationalmappolicy.pdf>
15. Remote sensing and GIS / Basudeb Bhatta, 2nd edition, New Delhi, India, Oxford University Press, - Oxford higher education.
16. http://www.gisresources.com/basic-of-photogrammetry_2/
17. http://giswin.geo.tsukuba.ac.jp/sis/tutorial/Fundamentals_of_GIS_Estoque.pdf
18. Learning Material Approved by R&DM Deptt., Govt. of Odisha