

Lecture Plan
Department of Planning, School of Planning and Architecture, Vijayawada

Name of Course: Surveying and Photogrammetry (BPLN106)

Programme & Sem: **Bachelor of Planning (UG), Semester One**

Course Duration: July 27th to Nov 03, 2017

Course Coordinator: Shakthe S, Ms., Assistant Prof., Dept. of Planning
 (shakthecharan@spav.ac.in)

Number of Credits: 03

Total Periods/Week: 03 (see timetable for details)

Internal Assessment: 50 (minimum pass marks 50%)

End Evaluation: 50 (minimum pass marks 50%) – Written Exam.

Total Marks: 100 (to be converted to CGPA credit pattern as per regulations)

Subject Objective: *To acquire proficiency in basics of Geoinformatics covering the topics related to surveying, remote sensing, photography, Photogrammetry and GPS technologies.*

| Week | Lecture / Session Topic (Teaching-Learning Objective aimed) | Session Mode | References / Suggested Readings |
|-------------------------------|---|--------------|--|
| Week 1 (July 27) | | | |
| Week 2 (July 31- Aug 04) | Fundamentals of Surveying - Definitions, classifications, use, objectives and basic principles of surveying; Classifications of measurements and units, concepts of scales, maps and plan and use of conventional symbols | Lecture | 1. Punmia B.C (1989) Surveying Vol I & II, Laxmi Publications, New Delhi. |
| Week 3 (Aug 7-11) | Chain surveying and compass surveying, plain table surveying, computations of areas | Lecture | 2. Punmia B.C (1989) Surveying Vol I & II, Laxmi Publications, New Delhi. |
| Week 4 (Aug 14-18) | Internal Assessment I – Time bound written test | | |
| Week 5 (Aug 21-25) | Levelling and contouring. Conventional Surveying Methods - Definition, application, advantages and disadvantages, Principles | Lecture | 3. Punmia B.C (1989) Surveying Vol I & II, Laxmi Publications, New Delhi. 4. Bannister A, Raymond S and Baker R (1992), Surveying, Longman Scientific and Technical, England, Sixth Edition. |
| Week 6 (August 28- Sep 01) | Instruments used, steps in chain survey; Definition of framework of survey, survey | Lecture | 5. Bannister A, Raymond S and Baker R (1992), Surveying, Longman |

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| | lines, survey stations, base line, tie line, check line | | Scientific and Technical, England, Sixth Edition. |
| Week 7 (Sep 04) | Field Work | | |
| Week 8 (Sep 11-15) | Ranging and chaining a survey line; Plotting chain survey to prepare a plan, Laboratory exercises in chain surveying | Lecture and Field Practice | 6. Bannister A, Raymond S and Baker R (1992), Surveying, Longman Scientific and Technical, England, Sixth Edition. 7. Punmia B.C (1989) Surveying Vol I & II, Laxmi Publications, New Delhi. 8. Surveying – I Laboratory Manual, Department of Civil Engineering, G.H. Raisoni College of Engineering, Nagpur. |
| Week 9 (Sep 18-22) | Internal Assessment II – Assignments based on Laboratory Exercises & Viva Voce | | |
| Week 10 (Sep 25-29) | Laboratory exercises in compass surveying, plane table and levelling | Field Practice | 9. Surveying – I Laboratory Manual, Department of Civil Engineering, G.H. Raisoni College of Engineering, Nagpur. |
| Week 11 (Oct 02-06) | Contemporary Surveying Methods - Digital planimeter, total station, Global Positioning System. | Lecture | 10. Punmia B.C (1989) Surveying Vol III, Laxmi Publications, New Delhi. |
| Week 12 (Oct 09-13) | Differential Global Positioning System, GIS & Remote Sensing | Lecture | 11. Punmia B.C (1989) Surveying Vol III, Laxmi Publications, New Delhi. |
| Week 13 (Oct 16-20) | Photogrammetry- Photogrammetry as an alternative tool for surveying; Introduction to aerial remote sensing and aerial photographs, classification; Principles of stereoscopic vision | Lecture | 12. T. Schenk (2005), Introduction to Photogrammetry, The Ohio State University, Columbus 13. Wilfried Linder (2009), Digital Photogrammetry: A Practical Course, Springer Science & Business Media. |
| Week 14 (Oct 23-27) | Internal Assessment III – Time bound written test | | |
| Week 15 (Oct 30 – Nov 03) | Basic instruments - stereo-pair, pocket and mirror | Lecture | 14. T. Schenk (2005), Introduction to |

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| | stereoscopes, parallax bars; Principles of photogrammetry, Measurement of heights and depths; Introduction to digital photogrammetry. | | Photogrammetry, The Ohio State University, Columbus 15. Wilfried Linder (2009), Digital Photogrammetry: A Practical Course, Springer Science & Business Media. |
| | Applications in urban and regional planning, Laboratory Exercises | Lecture & Field Practice | 16. Surveying – I Laboratory Manual, Department of Civil Engineering, G.H. Raisoni College of Engineering, Nagpur. |

Note:

1. Any other closed holidays as declared by SPAV shall supercede the above lecture plan. Holidays shown above may alter as per Notice from time to time.
2. Assessment Sessions may be re-scheduled, with prior intimation.
3. Reading lists provided is not exhaustive and is subject to addition – students are advised to follow progression of class to keep abreast of the new reading lists, if any.