



Savitribai Phule Pune University

(Formerly University of Pune)

Three Year B.A. and B.Sc. Degree Program in Geography

(Faculty of Science & Technology)

T.Y.B.A. (Geography)

Choice Based Credit System Syllabus

To be implemented from Academic Year 2021-2022

T.Y.B.A. (Geography) Choice Based Credit System Syllabus

To be implemented from Academic Year 2021-2022

Course Structure

F. Y. B. A. GEOGRAPHY

Sr. No.	Semester	Course No	Name of the Course	Category
1	Semester I	Gg.110 (A)	Physical Geography	CC – 1 A
2	Semester II	Gg.110 (B)	Human Geography	CC – 1 B

S. Y. B. A. GEOGRAPHY

Paper Code	Semester	Paper	Subject
Gg: 210(A)	III	G2 CC1C	Environmental Geography I OR Economic Geography -I
Gg: 220(A)	III	S1 DSE 1 A	Geography of Maharashtra - I OR Population Geography – I
Gg: 201(A)	III	S2 DSE 2 A	Practical Geography – I (Scale and Map Projections)
(Value/skill based course)	III	SEC 2 A	Applied Course of Disaster Management
Gg: 210(B)	IV	G2 CC1D	Environmental Geography- II OR Economic Geography -II
Gg: 220(B) DSE 1 B	IV	S1 DSE 1 B	Geography of Maharashtra – II OR Population Geography – II
Gg: 201(B) DSE 2 B	IV	DSE 2 B	Practical Geography – II (Cartographic Techniques, Surveying and Excursion / Village / Project Report)
(Value/skill based course)	IV	SEC 2 B	Applied Course of Travel and Tourism Geography

T.Y.B.A. Geography

Paper Code	Semester	Paper	Subject
Gg: 310(A)	V	CC1E	Geography of Disaster Management-I OR Geography of Tourism- I
Gg: 320(A)	V	DSE 1 C	Geography of India –I OR Geography of rural development -I
Gg: 301(A)	V	DSE 2 C	Practical Geography – I (Techniques of Spatial Analysis)
(Value/skill based course)		SEC 2C	Research Methodology-I
Gg: 310(B)	VI	CC1F	Geography of Disaster Management-II OR Geography of Tourism -II
Gg: 320(B)	VI	DSE 1D	Geography of India -II OR Geography of rural development -II
Gg: 301(B)	VI	DSE 2D	Practical Geography – II (Techniques of Spatial Analysis, Surveying and Excursion / Village / Project Report
(Value/skill based course)		SEC 2 D	Research Methodology-II

Equivalence of Previous syllabus along with new syllabus:

Pager	Old Course	New Course
G3	Gg-310 Regional Geography of India OR Gg-310 Human Geography	Geography of Disaster Management-I OR Geography of Tourism- I
G3		Geography of Disaster Management-II OR Geography of Tourism- II
S3	Gg-320 Agricultural Geography OR Gg-320 Population and Settlement Geography	Geography of India –I OR Geography of rural development -I
S3		Geography of India –II OR Geography of rural development -II
S4	Gg-301 Techniques of Spatial Analysis	Practical Geography – I (Techniques of Spatial Analysis)
S4		Practical Geography – II (Techniques of Spatial Analysis, Surveying and Excursion / Village / Project Report

Semester V
Geography of Tourism- I CC1E (No. of Credits: 03)

Objectives:

- 1) To understand the history of Tourism
- 2) To introduce the students to the basic concepts in Tourism Geography.
- 3) To understand the types of Tourism
- 4) To gain knowledge different aspects of Tourism Geography.

Sr. No.	Topic	Sub Topic & Learning Point	Hours
1	Introduction	a) Definition and Nature <ol style="list-style-type: none"> i. Definition of Tourists and Tourism. ii. Nature of Tourism iii. Importance of Tourism.. b) Scope and Extent <ol style="list-style-type: none"> i. Tourism and Travel as basic needs of mankind. ii. Tourism and Development. iii. Tourism as product c) Role of Geography in Tourism	12
2	Factors affecting Tourism Development	a) Physical <ol style="list-style-type: none"> i. Relief ii. Climate iii. Forest b) Socio-Cultural <ol style="list-style-type: none"> i. Religious ii. Historical iii. Sports c) Political - i) Polices ii) Safety of Tourists iii) Accessibility	12
3	Concept and Classification of Tourism	a) Classification of tourism based on <ol style="list-style-type: none"> i. Nationality ii. Travel Time iii. Purpose b) Concept of Tourism - I <ol style="list-style-type: none"> i. Agro-Tourism ii. Eco- Tourism iii. Wildlife Tourism c) Concept of Tourism - II <ol style="list-style-type: none"> i) Wellness Tourism ii) Health/medical Tourism iii) Sports Tourism 	12
4	Role of Transportation and communication in Tourism Development	a) Mode of Transportation <ol style="list-style-type: none"> i) Road and Rail ii) Water. iii) Air b) Communication <ol style="list-style-type: none"> i. Role of Guide in tourism development ii. Internet/Telephone/Mobile/TV iii. Electronic and Printing Media c) Travel and Tourism Agencies	12

Reference Books

1. Geography of Tourism: Robinson H. (1996)
2. Tourism Development, Principles and Practices: Bhatia A.K., Sterling Publisher Ltd., New Delhi
3. Geography of Tourism and Recreation: S. N. Singh (1985)
4. Tourism Today: A Geographical Analysis: Douglas Pearce (1987)
5. Tourism: Economic Physical and Social Impact: Mathieson A. and Wall C, Logman, U.K.
6. India: A Tourist Paradise: Manoj Das.
7. Tourism Today: An Indian Perspectives: Maneet Kumar
8. Geography of Travel and Tourism: Hudman L.E.
9. Successful Tourism Management: Seth P.N. (1985) Sterling Publisher Ltd., New Delhi.
10. Tourism Analysis: Smith S.L.J.
11. Tourism in India: Gupta V.K.
12. Dynamics of Tourism: Kaul R. N., Sterline Publisher Ltd.
13. Geography of Tourism: S.B. Shinde, Phadke Prakashan, Kolhapur 2

Semester VI
Geography of Tourism- II CC1F (No. of Credits: 03)

Objectives:

1. To understand the history of Tourism
2. To introduce the students to the basic concepts in Tourism Geography.
3. To understand the types of Tourism
4. To gain knowledge different aspects of Tourism Geography.

Sr. No.	Topic	Sub Topic & Learning Point	Hours
1.	Role of Accommodation in Tourism	a) Accommodation Types <ol style="list-style-type: none"> i. Hotels, Motels, inn, Dharmashalas. ii. Govt. Accommodation, Tourist homes. iii. Private accommodations and unrecognized accommodations. b) Factors affecting choice of Accommodation c) Role of Accommodation in Tourism Development.	12
2.	Impact of Tourism	a) Economic impact <ol style="list-style-type: none"> i. Effect on foreign exchange. ii. Employment generation. iii. Infrastructure development. b) Physical and Environmental impacts <ol style="list-style-type: none"> i. Land Degradation. ii. Loss plants and animals life. iii. Air and water pollution. c) Social cultural impacts <ol style="list-style-type: none"> i. Crime and Gambling activities. ii. Language. iii. Traditional arts 	12
3.	Planning and Polices of tourism development	a) World Tourism Organization (WTO) b) India Tourism Development Corporation (ITDC) c) Maharashtra Tourism Development Corporation (MTDC)	12
4.	Case studies of Major Tourist Centers in India	a) Hill Station- Manali and Mahabaleshwar b) Historical- Tajmahal and Raigadh fort c) National Parks- Kaziranga, Melghat	12

Reference Book

1. A Geography of Tourism: Robinson H. (1996)
2. Tourism Development, Principles and Practices: Bhatia A.K., Sterling Publisher Ltd., New Delhi
3. Geography of Tourism and Recreation: S. N. Singh (1985)
4. Tourism Today: A Geographical Analysis: Douglas Pearce (1987)
5. Tourism: Economic Physical and Social Impact: Mathiseson A. and Wall C, Logman, U.K.
6. India: A Tourist Paradise: Manoj Das.

7. Tourism Today: An Indian Perspectives: Maneet Kumar
8. Geography of Travel and Tourism: Hudman L.E.
9. Successful Tourism Management: Seth P.N. (1985) Sterling Publisher Ltd., New Delhi.
10. Tourism Analysis: Smith S.L.J.
11. Tourism in India: Gupta V.K.
12. Dynamics of Tourism: Kaul R. N., Sterline Publisher Ltd.
13. Geography of Tourism: S.B. Shinde, Phadke Prakashan, Kolhapur 2

Semester V
Geography of India -I DSE 1 C (No. of Credits: 03)

Objective:

1. To acquaint the students with geography of our Nation.
2. To make the student aware of the magnitude of problems and Prospects at National level.
3. To help the students to understand the inter relationship between the subject and the society.
4. To help the students to understand the recent trends in regional studied

Sr. No	Unit	Subunit	Periods
1	Introduction	a) Location and Extent b) Historical Background c) International boundary of India and related issues d) States and Union territories	12
2	Physiography	a) The Northern Mountains b) The North Indian Plains c) The Peninsular Plateau d) The Costal low lands and The Islands	12
3	Drainage	a) Himalayan Rivers: The Indus , The Ganga , The Brahmaputra b) East Flowing Rivers- Mahanadi, Godavari, Krishna, Kaveri. c) West Flowing Rivers- Narmada, Tapi, Mahi d) West Flowing Rivers in western ghat	12
4	Climate Soils and Natural Vegetation	a) Various Seasons and Weather Associated with them b) Types of Soils and its Distribution c) Soil Degradation and Conservation d) Types of Natural Vegetation and its Distribution	12

Semester V
Geography of India -II DSE1 D (No. of Credits: 03)

Objective:

1. To acquaint the students with geography of our Nation.
2. To make the student aware of the magnitude of problems and Prospects at National level.
3. To help the students to understand the inter relationship between the subject and the society.
4. To help the students to understand the recent trends in regional studied

Sr. No	Unit	Subunit	Periods
1	Cultural Setting	a) Religion of India b) Languages of India c) Major tribes, tribal areas and their problems	12
2	Transport	a) Role of Transportation in regional development of India: b) Land ways, Airways and Waterways c) Developments in communication technology	12
3	Resources	a) Iron ore, Manganese b) Coal, Petroleum, c) Hydro, Thermal	12
4	Agriculture	a) Significance of agriculture in Indian Economy. b) Agro Based Industry c) Agriculture Revolution in India	12

Reference Books

1. Aher A.B , Chaodhari A. P & Chaodhari Archna. Regional Geography of India Prashant Publication Jalgaon 2015
2. Deshpande C.D: India-A Regional Interpretation Northern Book Centre, New Delhi.1992.
3. Farmer, B.H.: An Introduction to South Asia. Methuen, London, 1983.
4. Govt. of India: India - Reference Annual, 2001 Pub. Div, New Delhi, 2001.
5. Govt. of India: National Atlas of India, NATMO Publication, Calcutta..
6. Govt. of India: The Gazetteer of India. Vol I & III Publication Division, New Delhi, 1965.
7. Learmonth, A.T.A. et.al(ed.) : Man and Land of South Asia Concept, New Delhi.
8. Mitra, A.: Levels of Regional Development India Census of India, Vol I, Part I-A (i) and(ii) New Delhi, 1967.
9. Routray, J.K.: Geography of Regional Disparity Asian Institute of Technology, Bangkok, 1993.
10. Shafi, M: Geography of South Asia, McMillan & Co., Calcutta, 2000.

11. Singh, R.L.(ed.): India: A Regional Geography. National Geographical Society. India, Varanasi, 1971.
12. Spate, O.H.K. and Learmonth, A.T.A.; India and Pakistan - Land, People and Economy Methuen & Co., London, 1967.
13. P. G. Saptarshi, J. C. More, V. R. Ugale & A. H. Musmade :A Geographical Region of India : Diamond Publication (2009) (Marathi)
14. Patil S. G., Suryawanshi R. S., Pacharne S., Choudhar A. H. : Economic Geography, Atharav Prakashan, Pune. (2014) (Marathi).
15. Musmade Arjun. H., More J. C., 2015, Geography of India , Diamond, Pune.

Semester V
Practical Geography- I (Techniques of Spatial Analysis) DSE- 2 C
(No. of Credits: 04)

Workload: Six Periods per week per batch consisting of 12 Students; however the last batch needs to have more than six students.

(Examination for the course will be conducted at the end of the semester)

Objective:

1. To introduce the basic concepts and techniques of Geographical Analysis.
2. To introduce the students with SOI Toposheets and acquire the Knowledge of Toposheet interpretation.
3. To introduce the students with Weather Maps and acquire the Knowledge of its interpretation.
4. To introduce the students with Aerial Photographs and Satellite Images and acquire knowledge to interpret it .
5. To acquaint students with the spatial and structural characteristics of Practical Geography.
6. To explain the elementary and essential principles on field of practical work.

Note:

1. Students must check the practicals regularly and journal should be certified by practical in-charge and Head of the Department before examination.
2. Use of Map stencils, Log tables, Calculator, Computer, Statistical Tables is allowed at the time of examination.
3. Students without a certified journal should not be allowed for the practical examination.
4. Each of the practical batches needs a separate question paper.
5. Internal and External examiner should set jointly the question paper for each batch.

Sr. No.	Topic	Sub Topic & learning Points	No. of Lectures
1.	Introduction of S.O.I. Toposheet & Relief Representation	a. Introduction of Survey of India Toposheets: Marginal Information, Conventional signs and symbols and Colours in S.O.I. Toposheets. b. Types of toposheets / Indexing of toposheets c. Methods of Relief Representation i) Qualitative:- Hachures, Hill shading, Layer Tint. ii) Quantitative:- Contours, Form lines, Bench Marks, Spot Heights, Triangulation Mark, Relative Height (r)	15

2.	Interpretation of S.O.I. Toposheets and Data generation	<p>a. Reading of SOI toposheets from Plain, plateau and Mountainous region. (Minimum one Toposheet per region)</p> <p>b. One day field Excursion for orientation of toposheets, observation and Identification of Geographical Features and Preparation of a Brief Report</p>	15
3.	Introduction & Interpretation Weather Maps	<p>a. Introduction to Weather Maps</p> <p>b. Symbols in Daily Weather Report used by Indian Meteorological Department (IMD)</p> <p>c. Isobaric Pattern</p> <p>d. Reading of Weather Map from i) Summer ii) Monsoon iii) Winter Season (Minimum one weather map from each season)</p>	15
4.	Introduction & Application of GIS & Remote Sensing Techniques	<p>a. Definition and Components of GIS</p> <p>b. GIS Data Types (spatial and non-spatial), Raster and Vector data.</p> <p>c. Introduction of Aerial Photographs & Satellite Images.</p> <p>d. Use of Computer open source Software for GIS & RS techniques in Geography.</p>	15

Reference Books:

1. Ahirrao, D. Y. and Karanjkehele, E.K., 2002. Pratyakshik Bhugol, Sudarshan Publication, Nashik.
2. Buoygoot, J. 1964., An Introduction to Map work and Practical Geography, University Tutorial, London.
3. Burrough, P. A., and McDonnell, R. A., 2000. Principles of Geographical Information System, Oxford University Press.
4. Curran, P. 1989., Principles of Remote Sensing, Logman, London.
5. Dickinson, G. C., 1979, Maps and Air Photographs, Arnold Publisher, New Delhi.
6. Dr. P. G. Saptrashi and Dr. S. R. Jog., 1991, Statistical Methods (Marathi)
7. Ebdon, D., 1977. Statistics in Geography: A Practical Approach, Basil Blackwell, Oxford.
8. Kumbhar, A., 2000. Pratyakshik Bhugol, Sumeru Publications, Mumbai.
9. Lillesand, T. M. and Kiefer, R. W., 2002. Remote Sensing and Image Interpretation, John Wiley and Sons, New Delhi.
10. Lutgens, F. K. and Tarbuck, E.J., 2007. The Atmosphere. Prentice hall, Englewood Cliffs, New Jersey, USA.

11. Monkhouse, F. J. and Wilkinson, H. R. 1971. Maps and Diagrams. Methuen and Co. Ltd. London, UK.
12. Ramamurthy, K., 2006. Map Interpretation, Rex Printers, Madras.
13. Siddhartha, K., 2006. Geography Through Maps, Kisalaya Publication, Pvt. Ltd, New Delhi.
14. Singh L. R. and Singh R., 1973. Map Work and Practical Geography, Central Book Depot, Allahabad.
15. Singh R. L. and Dutt, P.K., 1968. Elements of Practical Geography, Students Friends, Allahabad.
16. Singh R. L., 2005. Elements of Practical Geography. Kalyani Publishers, New Delhi.
17. Singh, G., 2005. Map Work and Practical Geography, Vikas Publishing House Pvt. Ltd., New Delhi.
18. Strahler, A. A. and Strahler, A. N., 2002. Physical Geography. Science and Systems of the Human Environment, John Wiley & Sons, INC.
19. Strahler, A. H. and Strahler, A. N., 1992. Modern Physical Geography. John. Wiley & Sons, INC.

Semester VI

Practical Geography- II (Techniques of Spatial Analysis, Surveying and Excursion /Village/ Project Report) DSE- 2 D

(No. of Credits: 04)

Workload: Six Periods per week per batch consisting of 12 Students; however the last batch needs to have more than six students.

(Examination for the course will be conducted at the end of the semester)

Sr. No.	Topic	Sub Topic & learning Points	No. of Lectures
1.	Geographical Data & its Basic Analysis	a. Introduction and Types of Geographical Data: i) Spatial and Temporal data ii) Discrete and Continuous series iii) Grouped and Ungrouped data b. Basic Analysis : i) Tally marks and frequency table ii) Frequency distribution (histogram & polygon) iii) Cumulative Frequency & Ogive curve	15

2.	Calculation of Central Tendency, & Dispersion	<p>a. Meaning and description of central tendencies- Mean, Mode, Median</p> <p>b. Calculation of Mean, Mode, Median for ungrouped and grouped data (two examples each)</p> <p>c. Measures of Dispersion: Mean Deviation & Standard Deviation.</p>	15
3.	Testing and Application of Hypothesis	<p>a. Meaning, Definition of Hypothesis & Types of Hypothesis i) Null & Alternative hypothesis ii) Level of significance iii) Degree of freedom</p> <p>b. Concept of Correlation and regression</p> <p>c. Concept of bivariate correlation & Regression</p> <p>d. Meaning of coefficient of correlation</p> <p>e. Parametric & Non parametric tests: i) Chi-square test</p> <p>f. Calculation of Spearman Rank order (Min. two examples for each test)</p>	15
4.	Field Excursion / Village Survey / Project Report	<p>a. One Short tour of two days duration and preparation of tour report OR</p> <p>b. One long Tour of more than Five days duration anywhere in the country and preparation of tour report OR</p> <p>c. Village / City / Area Survey and preparation of report. OR</p> <p>d. Project Report based on Population Survey, Agricultural Survey, Settlement Survey, Resource Survey, Health Survey, Environmental Issues and Industrial Visit. (Project Report must be content of – Introduction – Aims and Objectives – Methodology - Review of Literature - Data collection –Data Analysis – Interpretation – Finding and Suggestions - Bibliography)</p>	15

Reference Books:

1. Acevedo, M. F., 2012. Data Analysis and Statistics for Geography, Environmental Science and Engineering, CRC Press.
2. Ahirrao, D. Y. and Karanjkele, E.K., 2002. Pratyakshik Bhugol, Sudarshan Publication, Nashik.
3. Creswell J., 1994. Research Design: Qualitative and Quantitative Approaches, Sage Publications.
4. Dikshit, R. D., 2003. The Art and Science of Geography: Integrated Readings. Prentice-Hall of India, New Delhi.
5. Hammond, R. and McCullagh, P. S., 1977. Quantitative Techniques in Geography: An

Introduction, Clarendon Press, Oxford.

6. Harris, R., Jarvis, C. 2011. Statistics for Geography and Environmental Science, Prentice Hall.
7. Jog. S. R. and Saptarshi, P. G., 1980. Sankhikhi Bhugol, Narendra Publication, Pune.
8. Karlekar, S. N. and Kale, M., 2006. Statistical Analysis of Geographical Data, Diamond Publication, Pune.
9. Kumbhar, A., 2000. Pratyakshik Bhugol, Sumeru Publications, Mumbai.
10. Mc Grew Jr., J. C., Lembo Jr., A. J., Monroe, C. B. 2014. An Introduction to Statistical Problem solving in Geography, 3rd ed, Waveland Press.
11. Pal. S. K., 1998. Statistical Methods for Geoscientists: Techniques and Applications, Concept Pub.co.
12. Robinson, A., 1998. "Thinking Straight and Writing That Way", in Writing Empirical Research Reports: A basic guide for students of the Social & Behavioral Sciences, eds. By F. Pryczak & R. Bruce Pryczak, Publishing, Los Angeles.
13. Rogerson, P. A., 2015. Statistical Methods for Geography: A Student's Guide, 4th ed, Sage.
14. Sarkar, A. 2015. Practical Geography: A Systematic Approach, 3rd ed, Orient Blackswan.
15. Singh R. L. and Dutt, P.K., 1968. Elements of Practical Geography, Students Friends, Allahabad.
16. Singh R. L., 2005. Elements of Practical Geography. Kalyani Pubishers, New Delhi.
17. Stoddard, R. H., 1982. Field Techniques and Research Methods in Geography, Kendall/Hunt.
18. Wokcatt, H. 1995. The Art of Fieldwork, Alta Mira Press, Walnut Creek, CA.

Semester V
SEC 2 C
 Value/Skill based Course
Research Methodology - I
 CREDIT - 2

Objectives:

1. To develop the understanding of the basic concept of research
2. To develop the understanding of the basic framework of sampling and data collection
3. To develop the understanding of various sampling methods and techniques

Topic No.	Topic	Sub-Topic	Periods
1	Introduction to Research Methodology	i. Meaning and objectives of research ii. Characteristics of Research iii. Types of Research iv. Various steps in Research Process	10
2	Research Design	i. Introduction of Research Design ii. Purpose of Research Design iii. Characteristics of Good Research Design	10
3	Research Problem	i. Definitions of the Research Problem ii. Identification of a Research Problem iii. Technique involved in defining a problem	10

References :

1. Montello Daniel R. and Sutton Paul C. (2006) – Introduction to scientific research Methods if Geography. By Saga Publication
2. Kothari , C. R. (2004) – Research Methodology -Methods and techniques, New Age.
3. Mishra, H.N. and Sing, V.P. (1998)- research Methodology in Geography, Rawat Publication
4. Clifford, N. Fresh S, Valentine, G. (2010) - Key Methods in Geography , Saga Publication
5. Gregory , K. J. (2000) – The changing Nature of Physical Geography, Arnold, London
6. Gomez basil and Jones, III John Paul (editor) (2010) – Research Methods in geography : A Critical, Wiley – Blackwell
7. Harvey, David (1971) – Explanation in Geography, Edward Arnold , London
8. Chorley, R. J. and P. Hagg-tt(ed) (1967) – Models in Geography , Methuen

Semester VI
SEC 2 D
 Value/Skill based Course

Research Methodology – II

CREDIT - 2

Objectives: 1. To identify various sources of information for data collection.

2. Understanding of the conducting survey on various issues and develop the Report writing skill of students

Topic No.	Topic	Sub- Topic	Perods
1	Methods of Data Collection	A) Primary Data Questionnaire Method i.) Questionnaire – definition ii.) Characteristics of a good e iii.) Merits and demerits B) Secondary Data i) Government Sources ii) Syndicated Sources iii) Other Types of Sources	10
2	Types of Research Report	i. Dissertation and Thesis, ii) Research paper, review article iii) Characteristics of Good Research Report Writing	10
3	Techniques of Research Report Writing	i) Structure and organization of research reports: Title, abstract, key words, introduction ii) Methodology, results, discussion, conclusion, references, footnotes, iii) Concepts of Case Study	10

References

1. Gaum, Carl G., Graves, Harold F., and Hoffman, Lyne, S.S., (1950): Report Writing, 3rd ed., New York: Prentice-Hall.
2. Kothari, C.R. (2004): Research Methodology: Methods and Techniques, New Age International (P) Ltd., New Delhi – 110002.
3. Kothari, C.R., (1984): Quantitative Techniques, 2nd ed., New Delhi: Vikas Publishing House Pvt. Ltd.
4. Mishra Shanti Bhushan and Shashi A. (2011): Handbook of Research Methodology, Educreation Publishing, New Delhi – 110075.
5. Pandey, P. and Pandey, M.M. (2015): Research Methodology: Tools and Techniques, Bridge Center, Romania, European Union.
6. Tandon, B.C., (1979): Research Methodology in Social Sciences. Allahabad, Chaitanya Publishing House.
7. Ullman, Neil R. (1978): Elementary Statistics, New York: John Wiley & Sons, Inc.
8. Yamane, T., Statistics (1973): An Introductory Analysis, 3rd ed., New York: Harper and Row.