

Course Code: P24MLS20A

Course Name- 4.5(A): ELECTIVE–IV INFORMETRICS AND SCIENTOMETRICS

Credit Distribution			Total Credits	Internal Marks	Semester Marks	Total Marks
L	T	P	L+T+P	C1	C2	C3
4	-	-	4	25	75	100

Objectives:

- Enable the students learn the concept, theories, laws and parameters of bibliometrics.
- Enable the students develop a knowledge about the citation analysis and operation research
- Enable the students in the measurement of research performance of literature output in a specific field or subject, institutions or group of scientists in a particular domain or a nation.
- Enable the students to use the bibliometric techniques to rank academic institutions on the basis of their research publications during a period of time.

A. Course Outcome (CO)

After completion of the course, students will become familiar with the basic concepts in Library & Information Science.

COs	Course Outcome	Level	Level
CO 1	Explain the various Scientometric indicators and laws.	Understand	K2
CO 2	Illustrate the the use of various software's and application of metrics.	Apply	K3
CO 3	Examine the different bibliometric/scientometrics indicators.	Analyze	K4
CO 4	Formulate the methods to be adopted in the qualitative measurement of published literature.	Create	K5
CO 5	Assesses the ability of the students on their practical awareness of bibliometric software.	Skill	K6

B. Syllabus

Unit-I

Librarmetry, Bibliometrics and Scientometrics: Concept, definition, evolution and applications in Libraries.

Unit-II

Theory and Laws-Zipf's law, Lotka's Law, Bradford's Law. Price Theory

Unit-III

Quantitative and Qualitative techniques: Types, Multi dimensional scaling, Clusteranalysis, Correspondence analysis, Co-word analysis, media and audience analysis.

Unit-IV

Citation Theory and Analysis; Definition, Theory of citing, different forms of citations, Bibliographic Coupling, Age of citation – citation counts , Self –citation – Citation Index _ Impact Factor, SNIP, SJR, Cite Score– different types of indicator index

Unit-V

Emerging Trends: Webometrics, Altmetrics, Analysis Tools (Hitscite and Bibexcel, PAJEK, VOS

Unit-VI CURRENT CONTOURS (For Continuous Internal Assessment Only):

Webometric tools, Info graphics, ALEXA

Selected Readings:

1. De Bellis, Nicola (2009). Bibliometrics and citation analysis: from the Science citation index to cyber metrics. Scarecrow Press. p. 417.ISBN0-8108-6713-3.
2. Egghe,Leo(2005).Power laws in the information production process : Lotkas an Informetrics . Academic Press. ISBN:978-0120887538
3. Egghe, Leo; Rousseau, Ronald (1990). Introduction to Informetrics: Quantitative Methods in Library, Documentation, and Information Science.Elsevier.ISBN978-0-444-88493-0.
4. Glänzel, W. (2003). Bibliometrics as a research field: A course on theory and application of bibliometric indicators.1.
5. Hamdaqa, M.; A Hamou-Lhadj (2009). Citation Analysis: An Approach for Facilitating the Understanding and the Analysis of Regulatory Compliance Documents. Las Vegas, NV:IEEE.pp.278–283.Doi:10.1109/ITNG.2009.161. ISBN 978-1-4244-3770-2.
6. Ingwersen, Peter(2012). Scientometric indicators and webometrics and the poly representation principle information retrieval. Ess Ess publications, New Delhi .ISBN:9788170006572.
7. Leydesdorff,L.A.(2001).The challenge of scientometrics :The development, measurement, and self-organization of scientific communications (2nd ed.). Boca Raton,FL: Universal Publishers.
8. Noyons,E.C.M.(1999).Bibliometric mapping as a science policy and research management tool. Leiden: DSWO Press, University of Leiden.
9. PeterVinkler (2010). The evaluation of research by scientometric indicators. Chandos Publishing. ISBN 978-1843345725.
10. Rousseau, Ronald; Egghe, Leoand Guns, Raf (2018).Becoming Metric-Wise: A Bibliometric Guide for Researchers. Chandos Publishing. ISBN:978-0081024744
11. Tiwari, Ashwini(2006). Bibliometrics, Informetrics and Scientometrics: Opening New Vistas of Information Science. RBSA Pub.ISBN:9788176113243.
12. Wilson, Concepción S. (1999). "Informetrics". Annual Review of Information Science and Technology(Medford, NJ: Information Today)34:107–247
13. Wolfram, D. (2003). Applied Informetrics for Information Retrieval Research. Libraries Unlimited.

C. Mapping of COs with POs & PSOs

Mapping with Programme Outcomes										
COs	Programme Outcomes					Programme Specific Outcomes				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	3	2	3	3	3	3	3	2
CO2	3	3	3	2	3	3	3	3	3	2
CO3	3	3	3	2	3	3	3	3	3	3
CO4	3	3	3	2	3	3	3	3	3	3
CO5	3	3	3	2	3	3	3	3	3	2