| Course Name | WEB INTELLIGENCE | Course Code | ITEC-446 | | |
|---|---|---|---|---|---|
| Credit Hours | 3 | Contact Hours | Lec | Lab | Total |
| | | | 2 | 2 | 4 |
| Offered as | ☐ University Requirement ☐ College Requirement ☒ Program Requirement ☐ Core ☒ Elective<br>☒ ITEC ☐ COMP ☐ CNET | | | | |
| Level | 8 | Prerequisite | ITEC342 | | |

**Course Description:**

This course aims to achieve a multi-disciplinary balance between research advances in the fields of collective intelligence, data science, human-centric computing, knowledge management, and network science. It is committed to addressing research that deepens the understanding of computational, logical, cognitive, physical as well as business and social foundations of the future Web, and enables the development and application of intelligent technologies.

**Course Objectives: On completion of the course, the student will be able to:**

- **Explain** foundational concepts and emerging trends in Web Intelligence.
- **Analyze** various models of information retrieval, semantic web architecture, search engine technologies, and web mining techniques.
- **Apply** data mining tools to design and implement solutions in the areas of web mining and information retrieval.
- **Explore** the structure of the web through Web Structure Mining methodologies.
- **Evaluate** the Hyperlink-Induced Topic Search (HITS) algorithm and its role in ranking web content.
- **Investigate** the applications and impact of social network analysis in the context of Web Intelligence.

| Assessment Methods | Midterm Exam | 15% | Assignment | 10 | Mini-Project | 15% |
|---|---|---|---|---|---|---|
| | | | Lab Exam | 20% | Final Exam | 40% |

**Text Book:**

- Priti Srinivas and Sajja Rajendra Akerkar, P.( 2012), CRC Press Taylor & Francis, ISBN-13: 978-1-4398-7164-5

**Reference Books:**

- Akerkar, R. & Lingras, P. (2008). Building an Intelligent Web: Theory and Practice. Jones and Bartlett Publishers, Sudbury, Massachusetts. ISBN-13: 978-0-7637-4137-2
- Web Intelligence (WI): A New Paradigm for Developing the Wisdom Web and Social Network Intelligence. Zhong, Ning (et al.) ISBN 978-3-662-05320-1
- Witten, Ian H. & Frank, E. (2005). Data Mining: Practical Machine Learning Tools and Techniques. 2nd Edition, Morgan Kaufman. ISBN 0120884070, 9780120884070