**DS731P Web Analytics Lab – Course Structure**

The Web Analytics Lab is designed to provide hands-on experience in applying theoretical concepts using Python and Flask to build and analyze web applications. The course emphasizes practical understanding, coding proficiency, and documentation discipline.

**Weekly Lab Format**

Each lab session is structured in the following manner:

1. **Theory Class (Pre-Lab Discussion):**
2. A dedicated session to discuss the underlying theory and logic of the lab experiment.
3. The instructor will walk through the core ideas and objectives of the program.
4. Students will be assigned the lab program to understand and prepare in advance.
5. **Lab Session (Hands-On Execution):**
6. **Students must write the complete program in their observation notebook *without referring* to any material during the lab in the first 30-40 minutes.**
7. Once the code is validated as logically correct, students will proceed to execute the program.
8. Students must document the output (screenshots, results) directly in their observation notebook.
9. **Digital Record Maintenance:**
10. Students are required to maintain a digital lab record using tools like Word, LaTeX, or any structured format.
11. The digital record must include:
12. Problem statement
13. Code with proper formatting and comments
14. Screenshots of successful execution/output
15. At the end of the semester, students must take a printout of the complete digital record and submit it for final evaluation.

**Evaluation Scheme (Per Lab)**

* **Observation Notebook Writing** – 10 Marks   
   (Based on handwritten program written during the lab session)
* **Program Execution & Output Verification** – 10 Marks   
   (Based on correct code execution and documented output)
* **Digital Record Maintenance** – 10 Marks   
   (Based on the quality and completeness of digital documentation)

Each lab carries a total of **30 marks**, and the scores will be averaged across all sessions for the final lab evaluation.   
   
**List of Lab experiments for WEB ANALYTICS Course – DS731P**   
   
**Unit 1:**   
   
**Exp 0:** Installation of Python Flask for developing web analytics applications and running a basic micro-website to verify the setup.

**Exp 1:** Implement a simple demonstration of creating, retrieving, and deleting:   
 1) Cookies   
 2) Sessions

**Exp 2:** Implement a micro-website with basic functionalities and measure the following two critical web metrics:   
 1) Conversion Rate   
 2) Time on Site

....