

| GANPAT UNIVERSITY | | | | | | | | | |
|--|---|---------|-----------------|----|-------------------------------------|-------------------------------------|----|-----------|-------|
| FACULTY OF ENGINEERING & TECHNOLOGY | | | | | | | | | |
| Programme | Bachelor of Technology | | | | Branch/Spec. | Computer Science & Engineering (CS) | | | |
| Semester | V | | | | Version | 1.0.0.0 | | | |
| Effective from Academic Year | | 2022-23 | | | Effective for the batch Admitted in | | | June 2021 | |
| Subject code | 2CSE507 | | Subject Name | | IDENTITY & ACCESS MANAGEMENT | | | | |
| Teaching scheme | | | | | Examination scheme (Marks) | | | | |
| (Per week) | Lecture(DT) | | Practical(Lab.) | | Total | | CE | SEE | Total |
| | L | TU | P | TW | | | | | |
| Credit | 3 | 0 | 2 | 0 | 5 | Theory | 40 | 60 | 100 |
| Hours | 3 | 0 | 4 | 0 | 7 | Practical | 60 | 40 | 100 |
| Pre-requisites: | | | | | | | | | |
| TCP / IP Fundamentals, Linux Fundamentals, Cryptography, Computer Network | | | | | | | | | |
| Learning Outcome: | | | | | | | | | |
| After Successful completion of the course, students will be able to: | | | | | | | | | |
| <ul style="list-style-type: none"> Understand the importance of Identity and Access Management in an organization Analyse various auditing policies Apply various access control techniques through user groups Develop capacity to prepare various access control mechanism | | | | | | | | | |
| Theory syllabus | | | | | | | | | |
| Unit | Content | | | | | | | | Hrs |
| 1 | Introduction to IAM: Introduction to IAM, Enterprise or Organizational Identities, Electronics and non-electronics Identities, Review of Identity and Access Management: Theory & Practice, Role Based Access Management, Modeling Enterprise Identity and Access Management Systems | | | | | | | | 8 |
| 2 | User interface: Navigating the user interface, Using the command line interface (CLI), Access management | | | | | | | | 8 |
| 3 | Directories: Introduction To Ldap, Ldap Concepts & Architecture, Ldap Replication | | | | | | | | 7 |
| 4 | Single Sign-On (SSO) Concepts and Methods: Single Sign-On Techniques, Access Control, Password Management, Introduction to Single Sign On Methods | | | | | | | | 8 |
| 5 | Introduction to Federation: Federation Overview, Federation Protocols, Governance Risk and Compliance | | | | | | | | 7 |
| 6 | Identity Management and Provisioning: Multi Factor authentication (Mfa), Origin Of Mfa, Introduction to Auditing & Reporting, Identity Management And User Provisioning, Introduction To Identity Manager, Identity Manager Structure & Components, , Identity & Access Management Governance | | | | | | | | 7 |
| Suggested Practical List | | | | | | | | | |
| Practical contents will be based on concepts of user and group creation, role access and management and creation of security policy | | | | | | | | | |
| Text Books | | | | | | | | | |
| 1 | Identity & Access Management: A Systems Engineering Approach By Omondi Orondo | | | | | | | | |
| Reference link | | | | | | | | | |

| 1 | Identity Management: A Primer,Graham Williamson, David Yip | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Course Outcomes: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COs | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO1 | Understand the importance of Identity and Access Management in an organization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2 | Analyse various auditing policies | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO3 | Apply various access control techniques through user groups | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO4 | Develop capacity to prepare various access control mechanism | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mapping of CO and PO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>COs</th> <th>P1</th> <th>P2</th> <th>P3</th> <th>P4</th> <th>P5</th> <th>P6</th> <th>P7</th> <th>P8</th> <th>P9</th> <th>P10</th> <th>P11</th> <th>P12</th> </tr> </thead> <tbody> <tr> <td>CO1</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>CO2</td> <td>3</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>1</td> <td>2</td> <td>1</td> <td></td> </tr> <tr> <td>CO3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>2</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>CO4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>3</td> <td>2</td> <td>1</td> <td>3</td> <td>3</td> <td>2</td> <td></td> </tr> </tbody> </table> | | COs | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 | P11 | P12 | CO1 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | CO2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | | CO3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | | CO4 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 3 | 3 | 2 | |
| COs | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 | P11 | P12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO1 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO4 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 3 | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |