References

**Book and study material**:

* Java Persistence with Hibernate (By CHRISTIAN BAUER AND GAVIN KING) : [http://svrjsag.ggn.nagarro.com:8080/svn/JSAG/Courses/HibernateJPA/trunk/study material/](http://svrjsag.ggn.nagarro.com:8080/svn/JSAG/Courses/HibernateJPA/trunk/study%20material/)
* Auditing Url: <http://docs.jboss.org/envers/docs/index.html>

**Online material:**

* http://download.oracle.com/javaee/6/tutorial/doc/bnbpy.html

Course Pathway –30 Hrs.

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| **#** | **Topics** | **Hrs.** | **Description** | **Book Chapter Mapping** |
| 1 | Basics of ORM and need of Standardization | 3 | Basic of ORM and need of Standardization in persistence framework and JPA’s Engine requirements. | Chapter 1 |
| 2 | Components and basic configuration | 3 | Basic Components and Configuration required for Hibernate in standalone application with/without JPA. | Chapter 2 |
| 3 | Mapping entities and implementing OOPS components | 3 | Mapping entities with XML as well as annotations and using different strategies for Inheritance. | Chapter 4 & Chapter 5 |
| 4 | Maintaining associations | 2 | Significance of various configurations (Inverse attribute; Cascading options etc.) | Chapter 6 & Chapter 7 |
| 5 | Communicating with Object and their states. | 3 | Different states of object.  Usage of different session/Em APIs; their differences and limitations. | Chapter 9 |
| 6 | Transaction Management | 4 | Transaction Management : Isolation levels and other attributes | Chapter 10 |
| 7 | Querying Options | 3 | Querying Options: HQL/JPA QL/Native SQL/Criteria. | Chapter 14 & chapter 15 |
| 8 | Filters | 1 | Using Filters for entities as well as associations. | Chapter 12(section 12.3) |
| 9 | Fetching strategies | 2 | Optimizing fetching by using subselect, batch-size strategies. Covers n+1 selects problem. | Chap 13(sec 13.1;13.2) |
| 10 | Using JPA in Web application | 3 | Using Hibernate in web application in layered architecture(DAO pattern) | Chap 16 |
| 11 | Auditing | 3 | Auditing with Hibernate( Configuration/Conventions) | Reference documentation of Hibernate envers (http://docs.jboss.org/envers/docs/index.html) |