



Bharat Shikshan Sanstha's
Shri Chhatrapati Shivaji College, Omerga

Tq. Omerga Dist. Osmanabad - 413606 (MS), India

(Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad) | NAAC Reaccredited 'B' Grade



Certificate course in Industrial Safety

(Effective from the academic year 2017-18)

TC-CC01

ABOUT THE COURSE:

Safety is one of the key dimensions of Industrial asset management. Safety by prevention through design is in the core for maintaining industrial processes safe. The objective of this course is to impart knowledge on different aspects of industrial safety, focusing on tools, techniques and methodologies needed for prevention of occurrences of unsafe operations, processes and accidents under different industrial settings. Upon completion of the course, the students will be aware with concepts of industrial systems safety, dimensions of systems safety, safety design and analysis mathematics, design for industrial systems safety and control for safety, and integrating safety with other operational goals such as quality and reliability.

BOARD of Studies

- | | |
|---|--------------------------|
| 1) Dr. P. S. Mane, Associate Professor | - Chairman |
| 2) Dr. J. S. Diggikar, Associate Professor | - Member |
| 3) Dr. S. N. Aswale, IQAC Coordinator | - Member |
| 4) Dr. J. S. Mulla, BoS Member BAMU | - Nominated Member |
| 5) Dr. S. K. Patle, BoS Member BAMU | - Nominated Member |
| 6) Mr. R.M. Ingle, Production
Sr. Executive, MGCC Divn, Reliance Petroleum | - Invited Subject Expert |



Important For Certification/Credit Transfer:

Monthly Assignments and Discussion Forum can be accessed.

Note: Content is Free!

All content including discussion forum and assignments, is free

Final Exam (in-person, invigilated, currently conducted in the college) is mandatory for Certification and has INR Rs. 100 as exam fee.

Intended Students: All commerce & science Students at UG level

INDUSTRY SUPPORT: 1.Manufacturing companies in MIDC Omerga & R&D organizations.

Coordinating Departments:

1. Department of Chemistry & Industrial Chemistry.
2. Department of Commerce

About the Faculty:

Academic Faculty-

1. Dr. P.S.Mane, Associate Professor, Department of Chemistry & Industrial Chemistry.
2. Dr. J.S.Diggikar, Associate Professor, Department of Chemistry & Industrial Chemistry

Industrial Faculty-

1. Mr. R.M. Ingle, Production Sr. Executive, MGCC Divn, Reliance Petroleum, Nagathone Dt. Raigad (Contact no. 08208301040)
2. Mr.V.S.Kulkarni, Industrial Safety Officer, Orchid Pharma, MIDC, Aurangabad. (Contact no. 9764007104)
3. Mr. Babasaheb Patil, Associate Chief Manager, Health &, Goderaje & Boyes, Mumbai

Name of Supervisor

1. Dr. V. S. Ingle, Head & Vice principal, Dept. of Chemistry.
2. Dr. S. N. Aswale, Head & Vice principal, Dept. of Commerce.



COURSE LAYOUT:

Week 1	Introduction, Definition & terms used in context of safety, Accident-Nor reportable & reportable accidents. (3 periods/week)
Week 2	Hazard, Risk, Acceptance of risk, Responsibilities, Perception of Danger, Job knowledge. (3 periods/week)
Week 3	Physical factors for Accidents, Accident ration, Safety Training. (3 periods/week)
Week 4	Role of Supervisor in achieving a high standard of safety. Safety committee, safety competition-safety contests, Safety drives, Safety exhibition & poster. (3 periods/week)(Assignment/Tutorial-1)
Week 5	The chemistry of fire, fire triangle, classification of fire. (3 periods/week)
Week 6	Stages of fire, Causes of industrial fire-Electrical equipment, Smoking. (3 periods/week)
Week 7	Mechanical fault, welding & gas cutting, sparks, explosives dusts, static spark, Runaway chemical reaction, fire detection –Human observation, fire alarm system. (3 periods/week)
Week 8	Fire Extinguishers-Fixed firefighting system, Portable fire Extinguishers-1) Soda acid type, 2) Dry chemical powder type, 3) Carbon dioxide type 4) Foam type Extinguisher(3 periods/week) (Assignment/Tutorial-2)
Week 9	Personal Protective equipment-Hand protection, Foot protection, Head Protection, Eye protection, Face protection, Skin & Body protection. (3 periods/week)
Week 10	Protection against Fall, Noise protection, Respiratory protection-Care & Precaution, External air supply type & self contained breathing apparatus, Selection of personal protective equipment. (3 periods/week) (Assignment/Tutorial-1) and Final Test.

SUGGESTED READING MATERIALS:

1. Introduction to Industrial safety- K.T.Kulkarni (2002)
2. Concept & Practices in Industrial safety (2007)
3. Handbook of Fire Technology-Gupta R.S. Orient Longman Publication (1993)
4. Hazards in chemical units –Pandya C.L. Oxford ISH-1991.
5. Reference books:
6. Probabilistic Risk Assessment for Engineering and Scientists,



7. Komamoto and Henley, IEEE Press, 1995.
8. Industrial Accident Prevention, Heinrich et al., McGraw Hill, 1980.
9. Techniques for safety management - A systems approach, Petersen D, ASSE 1998.

CERTIFICATION EXAM:

- The exam is compulsory & there is optional for a exam fee.
- Date and Time of Exam: **October, 2017 (Sunday):**
- Time of Exams: **Morning session 10.00am to 12 noon**
- Result: Within one week.

CERTIFICATE:

Final score will be calculated as : 25% assignment score + 75% final exam score. 25% assignment score is calculated as average of 3 assignments per course.

Certificate will be given to those who register and write the exam and score greater than or equal to 40% final score. Certificate will have your name, class, Roll no. photograph and the score in the final exam. It will have the logos of SCSCO and It will be uploaded on website under e-certificate at <http://www.scSCO.org.in>.

Dr. Sanjay Aswale
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IQAC Co-ordinator
SCS College, Omerga

Principal
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