



Mahavir Education Trust's
SHAH & ANCHOR KUTCHHI ENGINEERING COLLEGE
Chembur, Mumbai - 400 088
UG Program in Information Technology

ACADEMIC YEAR 2020-2021

Program Outcomes (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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Program Specific Outcomes (PSOs)

By the end of the educational experience our students will be able to:

1. The Information Technology graduates are able to analyse, design, develop, test and apply management principles, mathematical foundations in the development of IT based solutions for real world and open-ended problems.
2. The Information Technology graduates are able to perform various roles in creating innovative career paths: to be an entrepreneur, a successful professional, pursue higher studies with realization of moral values & ethics.

Mapping of PSOs to POs:

PSO Number	PO Number
PSO1	PO1, PO2, PO3, PO4, PO5, PO7, PO11
PSO2	PO6, PO8, PO9, PO10, PO12

Ms DhanashreeToradmalle
Program Co-ordinator
Information Technology Program



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Course Code	8. ITL402	Course Name	Unix Lab
Academic Year	2020-21	Semester	IV
Class	SE	Course incharge	Ms.Manya Gidwani(/MG)

Course Outcomes (CO)

CO No.	CO Statement (At the end of the course, students will be able to ...)	BL
8.ITL402.1	Understand the architecture and functioning of Unix	L1, L2
8.ITL402.2	Identify the Unix general purpose commands	L4
8.ITL402.3	Apply Unix commands for system administrative tasks such as file system management and user management.	L3
8.ITL402.4	Execute Unix commands for system administrative tasks such as process management and memory management	L4
8.ITL402.5	Implement basic shell scripts for different applications.	L3
8.ITL402.6	Implement advanced scripts using awk & perl languages and grep, sed, etc. commands for performing various tasks.	L3

List of Experiments/Tutorials

Sr. No.	Title	LO
1.	To Install UNIX Operating System	8.ITL402.1
2.	To execute General Purpose Utility Commands	8.ITL402.2
3.	To study working with vi editor.	8.ITL402.2
4.	To study UNIX File System and file system management commands	8.ITL402.3
5	To execute user management commands	8.ITL402.3
6	To study process management and memory management commands	8.ITL402.4
7.	To study shell variables and operators.	8.ITL402.5
8	Write a shell script: (i) Write a shell script to perform arithmetic operations. (ii) Write a shell script to calculate simple interest. (iii) Write a shell script to determine largest among three integer numbers.	8.ITL402.5



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	(iv) Write a shell script to determine a given year is leap year or not. (v) Write a shell script to print multiplication table of given number using while statement. (vi) v Write a shell script to search whether element is present is in the list or not.	
9.	(i) Write a shell script to compare two strings. (ii) Write a shell script to read and check if the directory / file exists or not, if not make the directory / file. (iii) Write a shell script to implement menu-driven calculator using case statement. (iv) Write a shell script to print following pattern: <pre style="margin-left: 40px;">* * * * * *</pre> (v) Write a shell script to perform operations on directory like: display name of current directory; display list of directory contents; create another directory, write contents on that and copy it to a suitable location in your home directory; etc.	8.ITL402.5
10.	Execute the following scripts using grep / sed commands: (i) Write a script using grep command to find the number of words character, words and lines in a file. (ii) (ii) Write ascriptusing egrep command to display list of specific type of files in the directory. (iii) (iii) Write a script using sed command to replace all occurrences of particular word in given a file. (iv) Write a script using sedcommand to print duplicated lines in input..	8.ITL402.6
11	Execute the following scripts using awk / perl languages: (i) Write an awk script to print all even numbers in a given range. (ii) Write an awk script to develop a Fibonacci series (take user input for number of terms). (iii) Write a perl script to sort elements of an array. (iv) Write a perl script to check a number is prime or not.	8.ITL402.6

Course Incharge

Manya

Ms.Manya Gidwani(MG)