RAJENDRA MANE POLYTECHNIC, AMBAV(DEVRUKH)

NEWS LETTER

CIVIL ENGINEERING DEPARTMENT

Volume 04 January 2018

CHAIRMAN SIR MESSAGE

"Education is the movement from darkness to light" .The principle objective of the PSPS Foundation is "To carry on activities for the benefits and development of residents of rural India by application of all suitable means available with focus on issues like health, literacy, non-formal education, etc."

HON. SHRI. RAVINDRA MANE

PRINCIPAL MESSAGE

MR. N. B BHOPALE

I am very happy to note that the Department of Civil Engineering of Rajendra mane Polytechnic (Ambav- Devrukh) is releasing its Newsletter enumerating the various activities and achievements of their faculty and students. We can call civil engineer as a creative artist since they builds beautiful structures, as we dream, using basic materials. We have to analyse many case studies of structure failures as they remain as a new dimension of knowledge to learn and to avoid any such failures in the future.

Hence as Civil Engineering students should learn the subject in detail without any doubts and execute works with total care to march towards success in your profession. I have pleasure to see department is striving hard to make a mark in this Institution by way of its academic growth and consultancy work. I congratulate all the students who have put their efforts in bringing this first newsletter issue and also appreciate HOD and all faculty members for motivating their students towards this fulfillment. I wish each one of them in the Department success in all their endeavors.

All your derams can come true if you have the courage to pursue them

-Walt Disney

HEAD OF DEPARTMENT MESSAGE

MR. N. B BHOPALE

The Civil Engineering Department was established with a prime objective to proliferate knowledge. We aim to promote Civil Engineering by providing the much-needed practical exposure to the students through its regular activities like academic curriculum, technical seminars, research symposium, talks on ongoing research practices throughout the globe and many other related topics from distinguished practitioners.

Collaboration between the department and industry is important for the advancement of engineering teaching and research. With this aim, to give our students some practical insight into Civil Engineering, we organize several visits throughout the year to ongoing construction sites thus giving them a chance to interact with key personnel of the industry.

ABOUT THE DEPARTMENT

The department of Civil Engineering of Rajendra Mane Polytechnic, Ambav (Devrukh) was established in the year 2010. The achievements of the students have been prolific in academic, co-curricular and extra-curricular activities.

The department is lead by Prof. N. B. Bhopale and has a well-qualified staff consisting of 07 lecturers (50% of faculties are pursuing post graduation in civil engineering) and 03 lab. Assistants. The faculty members are engaged actively in enhancing industrially beneficial activities.

VISION

"To develop highly competent civil engineering technocrats."

MISSION

1. To excel in imparting extensive knowledge in Civil Engineering prescribed by MSBTE Diploma curriculum.
2. To prepare the students with knowledge and necessary technical skills required for higher education, Job and to be successful entrepreneurs.
3. To develop ethics and values among the students to create socially and environmentally conscious technocrats.
4. To develop all round personalities of the students for imparting lifelong learning.

DEPARTMENTAL GOAL

"Imparting quality education to the students and to produce dedicated professional Civil engineer with a spirit of national character and international standards and to make the Department a Centre of Excellence in industrial research and development"

MEMBER

TEACHING STAFF

Mr. N. B. BHOPALE

H.O.D, B.E (Civil), AMIE, Experience; 14 years

Mr. P. P. SAWANT

B.E (Civil) , Experience; 7 years

Ms. M. J. JOSHI

B.E (Civil) , Experience; 7 years

Mr. R.S.BABAR

B.E (Civil) , Experience; 1 years

Mr. B. J. PATIL

B.E (Civil) , Experience; 7 years

Ms. D. A. SALVI

B.E (Civil) , Experience; 2.5 years

Mr. G. V. JADHAV

B.E (Civil) , Experience; 1.5 year

NON TEACHING STAFF

MS. S. S. SANDIM

D.C.E (Civil) , Experience; 2 years

Mr. G. A. NATE

Experience; 2 years

Civil Engineering Student Association

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MR. JAGADISH PATHARE

VICE-PRESIDENT

MR.SHUBHAM CHAVAN

SECRETARY

MR.SURAJ ANBHAVANE

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MR.PRATIK SALVI

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MS. PANDIT KUMUDINI

MS. MORE NEHA

MR. KONDKARI HASIB

MR. KEDARI SANKET

Take time to deliberate; but when the time for action arrives, stop thinking and go on.‖ -Napoleon Bonaparte

DEPARTMENTAL LABORATORIES

MECHANICS OF STRUCTURE

The main target of the study is to clarify the process of load distribution and deformation and time dependent change of strength and serviceability of structures.

CONCRETE TECHNOLOGY

The laboratory allows the students test to assess the various fresh and hardened concrete properties that many affect the performance of concrete member.

GEOTECHNICAL ENGINEERING

Integral part of soil mechanics and foundation engineering a proper evaluation of soil samples and analysis of test results.

Quality is more important than quantity. One home run is better than two doubles. -Steve Jobs

SURVEYING

Surveying is the branch of civil engineering is used to represent the general features od land in their proper relative position of land. From these measurements the drawings are prepared which may be in the form of map

PUBLIC HEALTH ENGINEERING

Importance of public health engineering , need to protect water supplies , flow diagram of water supply scheme , function of units , importance of water supply project, layout of water supply project

Department undertakes consultancy and testing activities as follows.

- Testing of different construction materials such as Steel, Concrete, Soil, Aggregate, Pipes etc.
- Design of concrete Mix.
- Planning and design of different Civil Engineering Structures Such as Buildings, Retaining walls, Water tanks, Bridge etc.
- Third party technical audits of all Civil Engineering Structures.
- Water Quality Analysis
- Sewage and effluent testing

EXPERT LECTURES

Expert Lecture on ready mix concrete.

INDUSTRIAL VISIT

TY CIVIL

Industrial visit on sheel dam

Industrial visit on water treatment plant

INDUSTRIAL VISIT

SY CIVIL

Industrial visit on substructure and superstructure

Lab Up gradation in successive academic years

Sr. No.	Name of laboratory	Amount
1	Building construction	112320.00
2	Concrete technology	478273.25
3	Geotechnical Engineering	408300.00
4	Surveying	989740.00
5	Public health engineering	245572.13

MOU SIGNED BY DEPT. FROM LAST 3 YEARS,

Sr.no	Academic year	Name of program
1	2016-17	Soft skill
2	2015-16	Auto cad
3	2014-15	Personality development

—Everyone loves justice in the affairs of another.‖ -Italian Proverb

Achievement of Students :-

Name of the Student	Class	Name of the Competition	Venue of Competition	Rank Achieved
Ms,Siddhi Sawant Mr.Suleman Shaikh	T.Y	PIONEER 2K17	RMP	Second
Mr.Sanket Nalawade Mr.Jagdish Pathare	T.Y	PIONEER 2K17	RMP	Third

NANOTECHNOLOGY IN CIVIL ENGINEERING

-By Patil B.J.

Abstract

Nanotechnology is one of the most active research areas that encompass a number of disciplines, including civil engineering and construction materials. It seems to hold the key that allows construction and building materials to replicate the features of natural systems improved until perfection for millions of years. Traditionally, nanotechnology has been concerned with developments in most of the fields like microbiology, medicine, electronic, chemical, and materials sciences. However, the potential for application of many of the developments in the nanotechnology field in the area of construction engineering has been growing. The objective of this study is to review the role of nanotechnology in civil engineering applications.

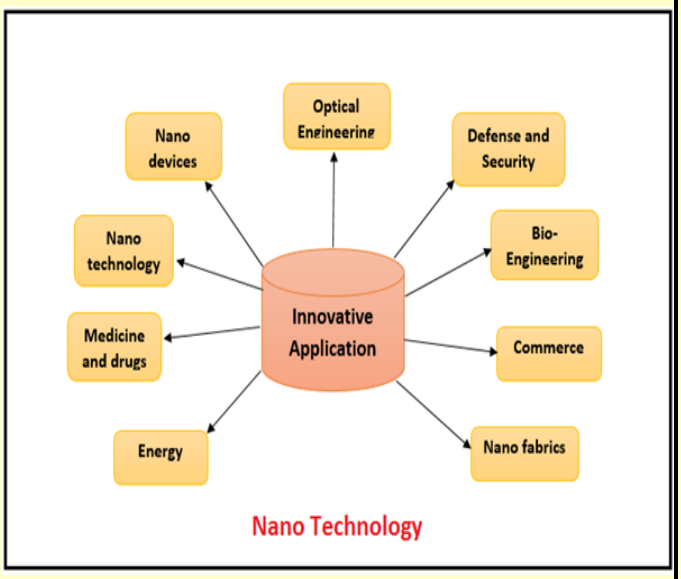
Introduction

A more accurate definition of nanotechnology was presented in 1981 by Drexler (Drexler 1981), such as the production with dimensions and precision between 0.1 and 100 nm. In medium terms, nanotechnology involves the study at microscopic scale (1 nm = 1 × 10 -9 m). As a comparison, one must realize that a strand of human hair has 80,000 nm thickness and that the DNA double helix has 2 nm diameter. Between 1997 and 2003, the investment in nanotechnology increased at 40%, reaching up to 35,000 million Euro (Andersen et al., 2007). Some estimates predict that products and services related to nanotechnology could reach 1,000,000 million Euro per year beyond 2015 (NSF 2001). According to the report of RILEM TC 197-NCM, "Nanotechnology in construction materials" (Zhu et al., 2004), is the first document that synthesis in a clear manner the potential of nanotechnology in terms of the development of construction and building materials, namely:

1. The use of nano-particles, carbon nano-tubes, and nano-fibers to increase the strength and durability of cementitious composites, as well as for pollution reduction.
2. Production of cheap corrosion free steel.
3. Production of thermal insulation materials with performance of 10 times the current commercial options.
4. Production of coats and thin films with self-cleansing ability and self-colour change to minimize energy consumption.

Application of nanotechnology in constructions

- **Nano-cement**
- **Nano-composites**
- **Nano-coatings for Concrete**
- **Nano-steel**
- **Nano-glass**
- **Nano-particles for Fire Protection**
- **Clay/polymer nano-composites**



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Academic Monitoring Remarks

Academic Year	Remark
2014-2015	Very Good
2015-2016	Very Good
2016-2017	Very Good

Academic Achievement

Academic Year	Result
2014-2015	82.05%
2015-2016	71.42%
2016-2017	82.45%

EXTRA ACTIVITIES

ENGINEER'S DAY CELEBRATION

-Remember to enjoy being in this world, being able to do what you are doing. - Stephen Schwartz

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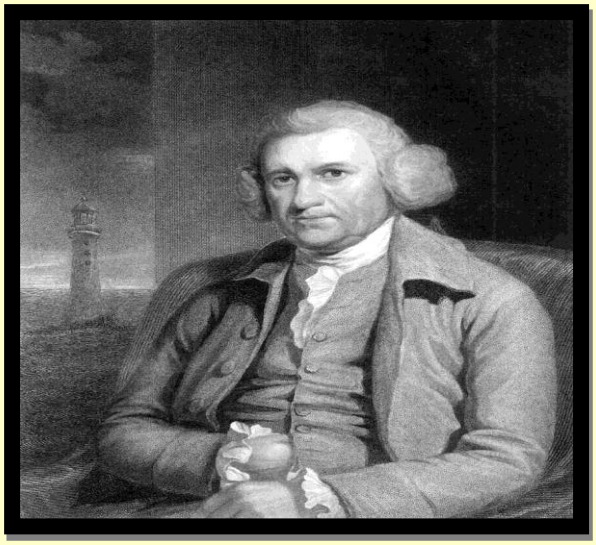
Legend of civil engineering



Portrait of John Smeaton, with the Eddystone Lighthouse in the background

Born	8 June 1724 Austhorpe, Leeds, England
Died	28 October 1792 (aged 68) Austhorpe, Leeds, England
Occupation	Civil engineer
Awards	Copley Medal (1759)

CIVIL ENGINEERING HISTORY

• In the beginning, Civil Engineering included all engineers that did not practice military engineering; said to have begun in 18th century France.

• First "Civil Engineer" was an Englishman, John Smeaton in 1761.

• Civil engineers have saved more lives than all the doctors in history — development of clean water and sanitation systems.

• Henry H. White, first KY Civil Engineering Graduate from Bacon (Georgetown) College in 1840.

• Fall of 1886, "State College" (UK) established civil engineering degree.

• John Wesley Gunn of Lexington received first Civil Engineering degree from A & M College (UK) in 1890.

"All your dreAms cAn come true if you hAve the courAge to pursue them" – Walt Disney

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