## About the University

**Visvesvaraya Technological University** (VTU) is one of the largest Technological University in India with 16 years of Tradition of Excellence in Engineering and Technical Education, Research and Innovations. VTU is having 202 affiliated colleges, 1 constituent college and 17 Autonomous colleges with undergraduate courses in 35 disciplines, PG program in 94 disciplines Ph.D & M.Sc (Engg.) with research programs in 592 departments, over 4 lakhs engineering students study in various affiliated to the University. The University has 13 Quality Improvement Programme (QIP) centers in various affiliated colleges and 16 extension centers for offering PG programs. VTU as an educational institution offering various technical courses is playing a vital role in creating job opportunities and economic development of the country. The VTU has its operations in four regional centers situated all over Karnataka. The centers are located at Belagavi, Bengaluru, Mysore and Kalburgi offering Masters degrees in Technology, Management, IT and also doctoral programs in the respective streams. The university is involved in extensive Research in Science, Technology and Management with both funded and non-funded projects.

## About the college:

**Bangalore Institute of Technology**came into existence during 1979 under the auspicious of Rajya Vokkaligara Sanga, Bangaluru. The institute is provided with the necessary modern facilities, has highly qualified and experienced faculties. The college is affiliated to Visvesvaraya Technological University and accredited by national board of accreditation, New Delhi. The institute offers 9 under graduate, 10 post graduate programs and research centers for carrying out Ph.D. degree with an overall student strength of 4000. The institute has tie up with other organizations like IISc, NAL, ISRO, Infosys, Wipro, TCS etc., for carrying out inter disciplinary research and collaborative programs.

## About the Department:

The department of Civil Engineering was established to train and develop Civil Engineering Professionals who will be sensitive and serve for the betterment of the society. It is one of the first departments established in the institution during 1979, and has present intake of 180 students. The department is doing its best with the support of competent faculty and well equipped laboratories to develop quality civil engineering professionals.

The department is also offering M.Tech. Program in Structural Engineering with an intake of 18 and having Research Center recognized by Visvesvaraya Technological University which offers M.Sc. Engineering (by Research) and Ph.D. Programs

## Topics to be covered:

**Laterally Unrestrained Beams:** Lateral Buckling of Beams, Factors affecting lateral stability, IS800 code provisions, Design Approach. Lateral buckling strength ofCantilever beams, continuous beams, beams with continuous anddiscrete lateral restraints, Mono- symmetric and non-uniformbeams – Design Examples. Concepts of - Shear Center, Warping, Uniform and Non-Uniform torsion

**Beam- Columns in Frames:** Behavior of Short and Long Beam - Columns, Effects ofSlenderness Ratio and Axial Force on Modes of Failure, Biaxialbending, Strength of Beam Columns, Sway and Non-Sway Frames,Strength and Stability of rigid jointed frames, Effective Length of Columns-, Methods in IS 800 – Examples

**Steel Beams with Web Openings:** Shape of the web openings, practical guide lines, and Forcedistribution and failure patterns, Analysis of beams with perforatedthin and thick webs, Design of laterally restrained castellatedbeams for given sectional properties, Vierendeel girders (design forgiven analysis results)

**Fire resistance** Fire resistance level, Period of Structural Adequacy, Properties ofsteel with temperature, Limiting Steel temperature, Protected andunprotected members, Methods of fire protection, Fire resistance ratings- Numerical Examples

**Cold formed steel sections:** Techniques and properties, Advantages, Typical profiles, Stiffenedand unstiffened elements, Local buckling effects, effective sectionproperties, IS 801& 811 code provisions- numerical examples, beam design, column design

**CHIEF PATRON**

**Dr. Karisiddappa**

Hon'ble Vice Chancellor,
VTU, Belagavi.

**PATRONS**

**Prof. K Mallaiah**
G C Chairman-BIT
**Dr. A G Nataraj**
Principal, BIT
**Dr. H.N. Jagannatha Reddy**
Registrar, VTU, Belagavi.
**Dr. Satish Annigeri**
Registrar (Evaluation), VTU, Belagavi.

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**Dr. P. M Ravindra,**
PG Co-ordinator,Civil Engineering, BIT,
**Prof. Jeevan N**, Asst. Professor
**Prof.K.V.MaheshChandra**,Asst. Professor
**Prof. Gangadhara S**, Asst.Professor,
**Prof. C.R. Pradeep**, Asst. Professor

One Day Workshop on
ADVANCED DESIGN OF STEEL STRUCTURES

**For Registration:** Please send the details to: aswathmu@yahoo.com

**1: Name:**
**2: Designation:**
**3: Department:**
**4: Organization:**
**5: Address for communication:**
**6: Mobile No:**
**7: Email ID:**

**Registration Fee:Rs.500/- Payable to "The Principal, BIT, Bangalore"**

**Who can participate?**

Faculties of engineering colleges

Participants are requested to bring the following books and codes:
**N. Subramanian, "Design of Steel Structures"**
**S. K. Duggal, Limit state design of steel structures**
**IS: 1641, 1642, 1643**
**IS: 800: 2007 IS: 801 and IS: 811**

## Resource Persons

**Prof. C N.Yadunandan**
**Dr. M. C. Nataraja**

**One Day Workshop**
on
**ADVANCED DESIGN OF STEEL STRUCTURES**

Tuesday, 04th April, 2017

**Organized by**

**Visvesvaraya Technological University, Belagavi**
**Department of Civil Engineering,**
**Bangalore Institute of Technology**

**Venue:**

**MBA Seminar Hall**, 7thFloor,
Bangalore Institute of Technology,
V.V. Puram, Bengaluru-04.

**FACULTY DEVELOPMENT PROGRAM**