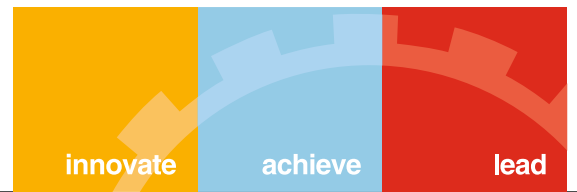




**BITS Pilani**  
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# Work Integrated Learning Programmes



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# BITS Pilani



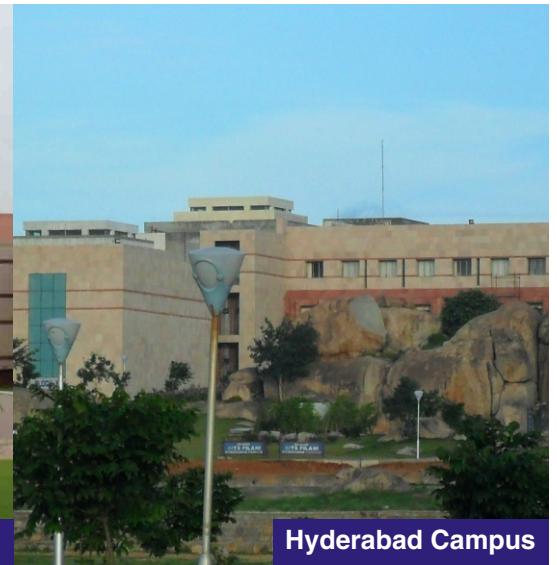
Pilani Campus



Dubai Campus



Goa Campus



Hyderabad Campus

## Introduction

**Birla Institute of Technology & Science (BITS) Pilani**, is an all India institution declared as a deemed to be university established in 1964 under Section 3 of UGC Act 1956. Accredited by NAAC at the highest 'A' Grade with a CGPA of 3.71 on a 4 point scale, the institute has been

consistently ranked as the best private engineering & technology institute by leading magazines and newspapers.  
For more details visit <http://www.bits-pilani.ac.in/>

# Work Integrated Learning Programmes – Overview



BITS Pilani has been offering **Work Integrated Learning Programmes (WILP)** as a means of continuing education for employed professionals, for more than three decades now. These are degree programmes designed to integrate the academic content with the requirements of the workplace, and are conducted with the same level of rigor as the programs offered on campus.

For more details visit:

<http://www.bits-pilani.ac.in/university/wilp/wilpoverview>

## Salient Features

- Instructor-led Virtual Classroom sessions
- Online learning resources through a unified Learning Management System
- Access to Digital Library
- Assignments/ Online Assessments
- Written Examinations conducted at several centres
- Dissertation/ Project Work drawn from work environment of the student





## Degrees Offered

Degree	Duration	Eligibility Criteria*
<b>B. Tech.</b>	<b>7 Semesters</b> , with 6 semesters of Coursework followed by Project Work in the final semester	Technical Diploma / B.Sc or equivalent in relevant disciplines, with minimum two years work experience
<b>M. Sc.</b>	<b>5 semesters</b> , with 4 semesters of Coursework followed by Project Work in the final semester	B.Sc./ BCA or equivalent in relevant disciplines, with minimum one year work experience.
<b>M. Tech.</b>	<b>4 Semesters</b> , with 3 semesters of Coursework followed by Dissertation in the final semester	Integrated First Degree of BITS or equivalent, such as B.E./ B.S./ M. Sc/ MCA / AMIE in relevant disciplines with minimum one year work experience
<b>M.Tech. (Integrated)</b>	<b>8 Semesters</b> , with 7 semesters of Coursework followed by Dissertation in the final semester	B. Sc./ BCA or equivalent in relevant disciplines with minimum one year work experience
<b>MBA</b>	<b>4 Semesters</b> , with 3 semesters of Coursework followed by Dissertation in the final semester	Integrated First Degree of BITS or equivalent, such as B.E./ B.S./ M. Sc/ MCA/ AMIE in relevant disciplines with minimum one year work experience
<b>M. Phil.</b>	<b>4 Semesters</b> , with 3 semesters of Coursework followed by Dissertation in the final semester	MBBS/ Integrated First Degree of BITS or equivalent in relevant disciplines with minimum one year work experience

\*Details of additional eligibility criteria for specific programmes and fee structure can be found in the BITS WILP website.

# Work Integrated Learning Programme

Designed for providing an opportunity for employed professionals working in a diverse spectrum of Engineering, Management and Information Technology Industries, to enhance their academic qualification while gaining

significant professional experience at their respective employing organisation, these programmes are open for candidates working in any organisation within the relevant domains and fulfilling the specified eligibility criteria.

## List of currently operative Work Integrated Learning Programmes

	Programmes offered	Designed for employed professionals in
<b>Integrated First Degree</b>	• <b>B. Tech. Engineering Technology</b>	Engineering industries
	• <b>B. Tech. Information Systems</b>	Information Technology Industries
<b>Higher Degree</b>	• <b>M. Sc. Information Systems</b>	Information Technology Industries
	• <b>M. Tech. Manufacturing Management</b>	Engineering/ Manufacturing Industries
	• <b>M. Tech. Software Systems</b>	Information Technology Industries
	• <b>M. Tech. Quality Management</b>	Quality planning, assessment, control and allied services in any organisation
	• <b>MBA Consultancy Management</b>	Business / Technical Consulting and allied services in any organisation
	• <b>MBA Manufacturing Management</b>	Engineering/ Manufacturing Industries
	• <b>MBA Quality Management</b>	Quality planning, assessment, control and allied services in any organisation
	• <b>M. Phil Hospital &amp; Health Systems Management</b> (in collaboration with Christian Medical College, Vellore; and Bombay Hospital, Mumbai)	Hospitals and allied Healthcare organisations



# Work Integrated Learning Programmes – Corporate Partnerships

Designed to cater to the HRD needs of corporate partners, these programmes are offered with a degree of customisation of the curriculum to suit the Learning and Development needs of the collaborating organisation. For these collaborative programmes, normally,

regular instructor-led contact sessions are held at the company premises. The Institute looks for a viable number of candidates sponsored by an organisation, for designing and conducting such a specific collaborative programme.

## Programmes offered under partnership with specific organisations

Degree	Programme
<b>B.Tech.</b>	<ul style="list-style-type: none"><li>• Engineering Design</li><li>• Information Systems</li><li>• Manufacturing Technology</li><li>• Power Engineering</li><li>• Process Engineering</li></ul>
<b>M.Tech.</b>	<ul style="list-style-type: none"><li>• Design Engineering</li><li>• Embedded Systems</li><li>• Manufacturing Management</li><li>• Software Engineering</li><li>• Automotive Engineering</li><li>• Environmental Engineering</li><li>• Microelectronics</li><li>• Pharmaceutical Operations &amp; Management</li></ul>



# Fees Structure

## Fees Structure applicable for candidates seeking new admission during the academic year 2015-2016

The fees schedule applicable for all programmes is as follows:

<b>Admission Fee</b>	<b>Each Semester Fee</b>
<b>Rs. 15,000/-</b>	<b>Rs. 38,800/-</b>

A candidate who has been offered admission will have to pay Rs. 53,800/- (Admission fee and Semester fee for the Starting Semester of the programme) immediately on receiving the Admit Offer Letter. Any candidate who desires to discontinue from the programme after confirmation of admission & registration for the courses specified in the admit offer letter will forfeit the total amount of fees paid.





# Programme Overview

## A glimpse of all programmes offered under Work Integrated Learning Programmes

### B.Tech. Engineering Technology

#### Programme Objectives:

The undergraduate program prepares the students in understanding the principles of engineering and technology in a set of comprehensive disciplines that includes mechanical, electrical, electronics and instrumentation. The labs associated with the core courses further strengthen the application of the theoretical concepts. The foundation courses in mathematics and statistics enable comprehension of advanced concepts in engineering and technology. The pedagogy orients the students in practicing the concepts learnt in their work environment further enhancing their knowledge. The support courses along with the core subjects facilitate inclusive development of the student technically, managerially and individually to handle multiple skills objectively. The intangible values include inculcating reading habit, sharing best practices, collective problem solving, enlarged perspective and time-bound learning.

#### Programme Outcomes:

On successful completion of the program, the student will be able to,

- Comprehend the fundamental principles in the domain of mechanical, electrical, electronics and instrumentation engineering
- Explain the technology behind the popular mechanical, electrical, electronics and instrumentation systems
- Pursue small and medium range projects working in multi-disciplinary teams
- Exhibit execution capabilities employing problem solving tools, quantitative techniques and mental models
- Evaluate alternatives from a technical and financial perspective

**Eligibility:** Employed professionals holding a Technical Diploma or B.Sc. degree with adequate preparation in Mathematics, and having adequate, relevant work experience.

**Normal duration:** 7 semesters.

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## B.Tech. Information Systems

### Programme Objectives:

- This program intends to develop professionals who can contribute to building & managing information systems
- It is intended to provide a strong foundation in computing & software development
- It educates students about application of information systems in business and the technologies used such as data mining, data storage technologies, multi-media computing, embedded systems, portable devices, etc.

### Programme Outcomes:

- Students will gain knowledge in fundamentals of computer such as computer organisation, programming & operating systems
- Students will also gain knowledge in different aspects of software development such as data structures, database, networking, object oriented analysis & design and testing methods
- Students will know how information systems are used in business & some of the challenges involved
- They will also know how to apply technologies such as data mining, storage technology, portable devices and embedded systems in real life situations

**Eligibility:** Employed professionals holding a Technical Diploma or B.Sc. degree with adequate preparation in Mathematics, and having adequate, relevant work experience.

**Normal duration:** 7 semesters.

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## Integrated M.Tech. Software Systems

### Programme Objectives:

- This program is intended to build expertise in design of software systems in different domains like embedded systems, networked/distributed systems, data analytics, etc.
- The program structure allows students to learn and leverage the ways in which software interacts with different hardware environments or computing platforms.
- The program structure also allows students to obtain expertise in specialized domains via elective pools.

### Programme Outcomes:

- Students will gain knowledge in fundamentals of computer such as computer organisation, programming & operating systems
- Students will also gain knowledge in different aspects of software development such as database, networking, architecture, object oriented analysis & design and testing methods
- Students will gain knowledge about the working of different types of software systems and the challenges involved in building them
- Students will be able to build software systems using a wide variety of open source and/or proprietary tools in real deployment scenarios.
- Students will learn how to integrate expertise from different areas such as human computer interaction, architecture, networking, data management, etc., to build software systems
- Students will be able to think beyond traditional systems and will be able to conceive and build innovative software solutions

**Eligibility:** The students admitted to the Integrated M.Tech. Software Systems programme must hold a B.Sc. / BCA degree or its equivalent in relevant disciplines with adequate background in Mathematics, and be employed professionals with minimum one year work experience in relevant domains.

**Normal Duration:** 8 semesters

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## M.Sc. Information Systems

### Programme Objectives:

- This program intends to develop professionals who can contribute to building of information systems
- It is intended to provide a good understanding of software development aspects such as database, networking, etc.
- It is intended to provide a good understanding of application of information systems in business

### Programme Outcomes:

- Students will gain knowledge in fundamentals of computer such as computer organisation, programming & operating systems
- Students will also gain knowledge in different aspects of software development such as data structures, database, networking, object oriented analysis
- Students will know how information systems are used in business & some of the challenges involved

**Eligibility:** Employed professionals holding a B.Sc. or BCA degree with adequate preparation in Mathematics, and having adequate, relevant work experience.

**Normal duration:** 5 semesters.

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## M.Tech. Manufacturing Management

### Programme Objectives:

The key objectives of the program are to equip the student to:

- engage in continuous professional development in response to technological and systems challenges in manufacturing
- engage in systematic product design process to manage the product data through product lifecycle management
- improve the quality and efficiency of the manufacturing system through advanced skills in manufacturing engineering
- apply modern methods in manufacturing planning and scheduling to build a competitive advantage for the company
- implement methods, techniques and best practices for sustainable manufacturing
- in a variety of modern maintenance techniques to be able to apply them for achieving a breakdown free production process
- enhance his decision making skills to select and implement effective manufacturing strategy in the company
- assume a position of leadership and responsibility in the organisation and effectively manage change

### Programme Outcomes:

The students after completion of the program should be able to:

- design and conduct experiments as well as analyse and interpret data
- identify and formulate the contemporary engineering problems and apply knowledge to solve them
- accept and successfully fulfil leadership responsibilities when required by the company
- to conduct an objective assessment of the change in various manufacturing related metrics and accordingly manage the operations
- function in cross-functional teams
- coordinate with product development teams to achieve design for manufacturability
- use skill, tools and techniques necessary for manufacturing engineering practice
- demonstrate initiative and originality in solving industrial technology management problems and act autonomously in planning and managing
- apply sustainable manufacturing methods to obtain waste minimization and acceptable products
- to estimate and manage manufacturing plant's financial risks
- to apply leadership and team building skills and the ability to coordinate the relevant programs to apply suitable maintenance methods for achieving breakdown free performance of manufacturing systems
- to apply suitable maintenance methods for achieving breakdown free performance of manufacturing systems

**Eligibility:** The students admitted to the four-semester M.Tech. in Manufacturing Management must hold an Integrated First Degree of BITS or its equivalent such as B.E. / B.Tech. / M.Sc. in relevant disciplines, and be employed professionals with minimum one year work experience in relevant domains.

**Normal Duration:** 4 Semesters

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## M.Tech. Quality Management

### Programme Objectives:

The key objectives of the program are to equip the student to:

- in-depth and relevant quality knowledge to bridge the gap between engineering and quality
- engage in continuous professional development in response to technological and systems challenges in quality management
- engage the students on contemporary issues pertaining to the management of quality in service and manufacturing industry
- engage in systematic concurrent engineering process to manage the product quality throughout the product lifecycle
- knowledge to implement quality process plans that are fully aligned with the company's strategic business plan and quality policy
- a systemic understanding of manufacturing and service operations to be able to design and implement quality management systems
- adapting the quality culture into organisation for social transformation by optimizing available resources
- identify quality trends that could indicate changes to product design and production engineering that are needed
- assume a position of leadership and responsibility in the organisation and effectively manage the quality systems

### Programme Outcomes:

The students after completion of the program should be able to:

- set up quality focused manufacturing practices for company's competitive advantage
- apply statistical quality control techniques to identify the root cause of quality problems and maintain control over processes
- identify and quantify the quality from customer centric perspective and ensure that it is met
- engage with operations over the complete product and project life cycle to ensure quality
- be well versed with quality terminology for effective participation in quality audits and certifications (like ISO, TUV)
- to apply the necessary steps for quality function deployment and carry out failure mode and effects analysis
- build and sustain total quality organisation through the complete supply/value chain
- apply reliability engineering principles for maintainability and to ensure availability and optimal utilization of resources
- ability to critically think for efficient decision making and implementing the quality standards

**Eligibility:** The students admitted to the four-semester M.Tech. in Manufacturing Management must hold an Integrated First Degree of BITS or its equivalent such as B.E. / B.Tech. / M.Sc. in relevant disciplines, and be employed professionals with minimum one year work experience in relevant domains.

**Normal Duration:** 4 Semesters

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## M.Tech. Software Systems

### Programme Objectives:

- This program is intended to build expertise in design of software systems in different domains like embedded systems, networked/distributed systems, data analytics, etc.
- The program structure allows students to learn and leverage the ways in which software interacts with different hardware environments or computing platforms.
- The program structure also allows students to obtain expertise in specialized domains via elective pools.

### Programme Outcomes:

- Students will gain knowledge about the working of different types of software systems and the challenges involved in building them
- Students will be able to build software systems using a wide variety of open source and/or proprietary tools in real deployment scenarios.
- Students will learn how to integrate expertise from different areas such as human computer interaction, architecture, networking, data management, etc., to build software systems
- Students will be able to think beyond traditional systems and will be able to conceive and build innovative software solutions

**Eligibility:** Employed professionals holding an Integrated First Degree of BITS or its equivalent in relevant disciplines, with minimum one year work experience in relevant domains.

**Normal duration:** 4 semesters

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## MBA in Consultancy Management

### Programme Objectives:

The objective of the MBA in Consultancy Management is to equip participants with the skills necessary for successfully managing consultancy projects. It will provide the participants with a good understanding of consultancy practice and the underlying tools and techniques for business process analysis, project management and strategic change management. The objective is to train the participants to become critical thinkers who can successfully analyze, manage and run consultancy projects.

### Programme Outcomes:

Upon completion of this programme, the participants will be able to effectively apply the following principles and concepts:

- Strategic Planning and Change Management
- Project management tools
- Business Process analysis
- Understanding of consultancy practice and related terminology
- recent trends in management consulting
- Analysis of real-world situations through the use of case studies and simulations
- How consultancy practice can improve the management of organisations
- Techniques of achieving operational efficiency
- Approaches of consultancy practice to solve problems in a dynamic environment

**Eligibility:** Employed professionals working in Consulting and allied business organisations, holding an Integrated First Degree of BITS or its equivalent such as B.E. / M.Sc. in relevant disciplines, with minimum one year work experience in relevant domains. Candidates holding other qualifications such as M.Com. / ACA / ACS may also be considered on a case by case basis.

**Normal Duration:** 4 Semesters

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## MBA in Manufacturing Management

### Programme Objectives:

This program is designed for executives in production and manufacturing operations. As manufacturing today operates in a highly competitive and global environment, this course equips the production manager with the much needed operational skills, strategies and management know-how to effectively bring people, resources and technology together to create a sustainable competitive advantage. The program will enable the participants to appreciate the linkages between managerial concepts/ principles and manufacturing tools/ techniques and enable them to take on a leadership roles in a manufacturing organisation.

### Programme Outcomes:

Upon completion of this programme, the participants will be able to effectively apply the following principles and concepts:

- inventory management
- production process planning and control
- quality systems
- logistics
- Technology management
- management and optimization of the supply chain

**Eligibility:** Employed professionals working in Manufacturing and allied business organisations, holding an Integrated First Degree of BITS or its equivalent such as B.E. / M.Sc. in relevant disciplines, with minimum one year work experience.

**Normal Duration:** 4 Semesters

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## MBA in Quality Management

### Programme Objectives:

The program aims to engage the participant on contemporary issues pertaining to the management of quality in services and manufacturing, in international and domestic markets, as well as in the private and public sectors. The focus is on imbibing a culture of managing for quality across the supply chain.

### Programme Outcomes:

Upon completion of the course, the participants will be able to effectively apply the following principles and concepts:

- Attaining Competitiveness through Quality
- Quality Philosophies & Frameworks
- Concepts of statistical quality control
- Quality through Customer Focus
- Quality Terminology as per ISO 9000/9001
- Quality audit methodology
- Benefits of Third Party Certification, Choice of Certification Body, Route to Certification
- Aspects of quality and the role of customers in defining quality
- Steps in Quality Function Deployment and Failure Mode Error Analysis
- The importance of quality management systems
- Building and Sustaining Total Quality Organisations

**Eligibility:** Employed professionals working in Quality and allied business domains, holding an Integrated First Degree of BITS or its equivalent such as B.E. / M.Sc. in relevant disciplines, with minimum one year work experience.

**Normal Duration:** 4 Semesters

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## M. Phil. Hospital & Health Systems Management

### Programme Objectives

Graduates of the **M.Phil. Hospital & Health Systems Management** from BITS will

- Understand the application of technology within a healthcare system context
- Develop a systems perspective of the healthcare business
- Develop a functional understanding of the foundational business disciplines in healthcare systems
- Develop good communication skills
- Develop critical thinking skills
- Develop an ethical, global, perspective

### Learning Outcomes

The graduates of the **M.Phil. Hospital & Health Systems Management** at BITS will be able to:

- Apply quantitative and analytical tools to the solution of business and operational problems in hospitals and healthcare systems.
- Describe the roles of multiple stakeholders in healthcare business systems
- Prepare a professional quality document and make an oral presentation
- Conduct independent research to understand and solve operational problems in healthcare business
- Analyze healthcare business issues by combining knowledge from multiple functional areas
- Analyze business issues in healthcare management in a variety of settings and organizations
- Discuss the global and ethical implications of important healthcare and business issues

**Eligibility:** Employed professionals in the healthcare industry, having an M.B.B.S. degree or any Integrated First Degree of BITS or its equivalent, with at least one year post-qualification work experience and sponsored by their employers.

**Duration:** 4 Semesters

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Organisations interested in WILP (Corporate Partnerships) may write to:

**Dean**

**Work Integrated Learning Programmes Division**

**Birla Institute of Technology & Science, Pilani**

Vidya Vihar Campus, Pilani - 333031 (Rajasthan)

Ph: 01596-515216 | email: [collaborations@wilp.bits-pilani.ac.in](mailto:collaborations@wilp.bits-pilani.ac.in)

For more Information, please contact:

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