



Department of Computer Science and Business System



VISION

Emerge as an industry focused centre for promoting innovation, entrepreneurship, research and best practices of computer science together with managerial skills to serve the society and industry

MISSION

1. Impart globally connected cutting-edge technologies and business skills
2. Enhance industrial experience, promote entrepreneurship and research through industry institute interaction
3. Implement best practices to enrich knowledge and skill sets
4. Produce competent professionals with societal and environmental concern

PROGRAM EDUCATIONAL OBJECTIVES [PEOs]

Graduates of Computer Science and Business System Program will

1. Explore and excel in emerging domains of computer science and business system
2. Acquire leadership qualities, capacity to work in diverse teams and be an effective business communicator
3. Develop professional skills that equip employability and higher education in the contemporary areas of Computer Science and Business Systems
4. Empower Research Skills by designing and developing solutions in the field of IT and facilitate to take up higher studies



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(Autonomous Institute, Affiliated to VTU)
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PROGRAM OUTCOMES

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 modelling 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)

Engineering Graduates will be able to

PSO1: Develop efficient computer based systems to solve real life problems

PSO2: Apply the concepts of Enterprise Resource Planning, Quality, Financial, Supply and Logistic Management in Engineering and Technology

PSO3: Implement tools and technologies of industry 4.0 to design and develop industry relevant projects



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Introduction

The Bachelor of Engineering degree program in Computer Science and Business System will provide the technical background and understanding to apply IT solutions in a business context, and use them to develop opportunities for growth.

The Computer Science and Business System degree aims to produce professionals with the capabilities to face the most up to date organizational and information systems' and technological challenges.

In the recent years, new computing platforms and paradigms have emerged, such as the growing number of mobile devices (smartphones and tablets) and cloud computing and virtualization that created new organizational challenges. On the other side, the social networks growth and the collection and analysis of huge volumes of data (Big Data) also represent additional challenges for modern organizations.

Throughout their path across the Computer Science and Business System degree, students will learn curricular units about general management, marketing, finance and accounting in a perfect coexistence with subjects such as operating systems, computer architecture, programming, information systems and networks.

The integration between such curricular units help to shape the Computer Science and Business System graduates' profile, creating an important differentiation from others, contributing to its success and reflecting on the degree's high employability rates.



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Program Contents, Scope and Highlights

The Malnad College of Engineering is having an MOU with **Tata Consultancy Services (TCS)** and is intended to have a specific collaborative effort between TCS & institute under the Academic Interface Programme driven by TCS. The TCS will work towards developing and designing and/or providing industry specific application oriented courses (“TCS Designed Course(s)”) are offered by the institute as full curriculum specialization streams.

The students of this domain will have an edge over others in getting internship/project and placement in TCS. The industry experts from TCS engage few contents on the advanced topics and weekend special guest lectures are engaged by the experts from TCS.

The programme is designed to create professionals who are able to understand the situation of an organization (how it works, its strategy and positioning, what its information needs, among others) and perceive how the use of information systems and technologies can contribute to these organizations achieving their objectives and to be more efficient (aligning their strategy with those same systems).

The integrated and multivalent formation in the fields of management and information technologies opens excellent career opportunities in the following areas:

- Information Systems management (Planning, Validating and Maintaining IS/IT services in companies at different levels: strategic, management and operational, Managing development and user support)
- Security and risk analyst of information systems
- Specification, design and development of Information and Decision Support systems at different levels, strategic, management and operational (e.g. financial information systems, Web applications, object-oriented visual programming, e-learning, Business Intelligence, Balanced Scorecard analysis, Intelligent Systems, etc.)
- Business management in the digital era (business area and global level); consulting for business processes analysis, creation of companies with a high degree of digitization)
- Expert consultant in the survey and redefinition of business processes (e.g. e-business systems, business process management, etc.).
- Graduate with skills are in high demand by some of the world's largest corporations, such as Apple, Google, Oracle, Telstra and Microsoft.
- Participate in applied projects and real-life case studies.
- Benefit from guest lectures by industry experts.