Justification for Distinctiveness

At the very outset, our aspiration to attain status as deemed to be a university is to contribute significantly to the sustenance and perpetuation of our rich heritage treasure-trove of ancestral knowledge and traditional skills by utilizing the 21st century engineering and management skills for a sustainable and prosperous future of Bharath on the path to attain *Viswaguru* status.

This proposition outlines our commitment to integrate our regular educational curriculums in engineering, management, arts etc with scientific evaluation of Indian traditional skills and knowledge and assimilation of it into comprehensive multi disciplinary programs in engineering, management and liberal arts etc as envisaged by the NEP 2020. Apart from these comprehensive integrated programs, the university envisages to utilize this amalgamated traditional and modern knowledge to provide free education and workshops to the artisans and various skilled professionals to make a better livelihood.

For achieving this objective, UNESCO's four pillars of education, as outlined in the Delors Report, emphasize the importance of '*learning to know, learning to do, learning to live together, and learning to be*' were found to be the perfect platform on which modern and traditional could be symbiotically brought together for making a better world. Integrating these pillars into the establishment of a university can contribute to its distinctiveness in several ways. After extensive discussions and deliberations, we envisaged that the way forward was to start a university embracing a core philosophy with firm footing in UNESCO's four pillars of education in Indian spiritual context:

- ✓ Learning to know – *Prajnanam Brahma*: Acquiring the True Knowledge
- ✓ Learning to do – *Yoga Karmasu Kaushalam*: Acquiring Skills
- ✓ Learning to live together – *Vasudhaika Kutumbam*: considering world as one family
- ✓ Learning to be – *Ayamatma Brahma*: Learning to be with the self

Learning to Know – *Prajnanam Brahma*

This type of learning is radically different from 'acquiring itemized codified information or factual knowledge', as often stressed in conventional curriculum and in 'rote learning'. Rather it implies 'the mastering of the instruments of knowledge themselves'. 'Acquiring knowledge in a never-ending process and can be enriched by all forms of experience'. 'Learning to know' includes the development of the faculties of memory, imagination, reasoning, problem-solving, and the ability to think in a coherent and critical way. It is 'a process of discovery', which takes time and involves going more deeply into the information/knowledge delivered through subject teaching. 'Learning to know' calls upon the power of concentration, memory and thought, so that it enables children to benefit from ongoing educational opportunities continuously arising (formally and non-formally) throughout life. Therefore 'learning to know' is regarded as both a means and an end in learning itself and in life. As a means, it enables individual learners to understand the very least enough about nature, about humankind and its history, about his/her environment, and about society at large. As an end, it enables the learner to experience the pleasure of knowing, discovering, and understanding as a process.

Learning to Do - *Yoga Karmasu Kaushalam*

Yoga is excellence in work. Learning to do simply means the application of what learners have learned or known into practices; it is closely linked to vocational-technical education and work skills training. However, it goes beyond narrowly defined skills development for 'doing' specific things or practical tasks in traditional or industrial economies. The emerging knowledge-based economy is making human work increasingly immaterial. 'Learning to do' calls for new types of skills, more behavioral than intellectual. Material and technology are becoming secondary to human qualities and interpersonal relationships. Learning to do, thus implies a shift from skill to competence, or a mix of higher-order skills specific to everyone. 'The ascendancy of knowledge and information as factors of production systems is making the idea of occupational skills obsolete and is bringing personal competency to the fore'. Thus 'learning to do' means, among other things, ability to communicate effectively with others; aptitude toward team work; social skills in building meaningful interpersonal relations; adaptability to change in the world of work and in social life; competency in transforming

knowledge into innovations and job-creation; and a readiness to take risks and resolve or manage conflicts.

Learning to Live Together – *Vasudhaika Kutumbam*

"The world is one family": In the context of increasing globalization, it implies an education taking two complementary paths: on one level, discovery of others and on another, experience of shared purposes throughout life. Specifically it implies the development of such qualities as: knowledge and understanding of self and others; appreciation of the diversity of the human race and an awareness of the similarities between, and the interdependence of, all humans; empathy and cooperative social behavior in caring and sharing; respect of other people and their cultures and value systems; capability of encountering others and resolving conflicts through dialogue; and competency in working towards common objectives to realize *VasudhaikaKutumbam*.

Learning to Be - *Ayamatma Brahma*

It was based on the principle that 'the aim of development is the complete fulfillment of man (*AtmaGyaan/ Brahmajnana* in our spiritual parlor), in all the richness of his personality, the complexity of his forms of expression and his various commitments – as individual, member of a family and of a community, citizen and producer, inventor of techniques and creative dreamer'. Learning to be may therefore be interpreted in one way as learning to be human, through acquisition of knowledge, skills, and values conducive to personality development in its intellectual, moral, cultural and physical dimensions. This implies a curriculum aiming at cultivating qualities of imagination and creativity; acquiring universally shared human values; developing aspects of a person's potential: memory, reasoning, aesthetic sense, physical capacity, and communication/social skills; developing critical thinking and exercising independent judgment; and developing personal commitment and responsibility. In essence, the four pillars of the proposed university would be True Academics with emphasis on Skills imbibing Social Responsibility and spiritual inclination.

While VVIT has proven its **Academic Excellence** through its students' and faculty performance, it has established good **Infrastructure and Facilities** with State-of-the-art and well-equipped laboratories. The motto at VVIT is "Miles to go…"and we were always ready

to go that extra mile to contribute to the society. Students, apart from their academic excellence (Quality of the academic program at VVIT and the competence of the students will be elaborated elsewhere), students were encouraged to upgrade their skills to suit the industry and country's needs and various avenues to hone their skills at the college were developed. The first Google Code labs in India established at VVIT, serves as a platform for students to generate innovative ideas. Google USA conducted a workshop for engineering faculties in Andhra Pradesh to support this initiative. Additionally, the Andhra Pradesh State Skill Development Corporation partnered with Siemens to establish a Centre of Excellence with more than 15 labs, aimed at providing skill training to engineering and polytechnic students in nearby districts. VVIT was selected as one of the two private engineering colleges in Andhra Pradesh to lead skill training in approximately 100 engineering colleges in neighboring districts.Many more such unique skill initiatives are already part of DNA of VVIT.

Though the guidelines of the affiliating university did not give us considerable freedom to launch as many **Innovative Programs** that are unique, we have included interdisciplinary courses, industry-oriented programs, or courses with a global perspective with the help of **Industry Collaboration** through several MoUs aimed at developing the skills of our students. In its path toward distinctness, the university proposes a school of management with a distinct nature. 'Appa' School of Business is a tribute to traditional values and family businesses, named after the chairman's father and synonymous with 'father' in various languages. The school aims to preserve traditional businesses like Mangalagiri handlooms and Kondapalli toys by integrating them with modern technologies. By making these businesses 'NextGen ready,' the school prepares future leaders to navigate the challenges of modern competition while preserving regional heritage and sustaining local livelihoods. The integration of the latest technologies is crucial to ensure the survival and growth of traditional businesses facing competition from more efficient modern manufacturing methods. Listed below are some ideas that will create distinctness to the proposed university.

1. In the context of **Mangalagiri handlooms**, digital technology may be employed to establish online platforms directly linking weavers with consumers, thereby circumventing intermediaries and ensuring equitable pricing for both parties. Similarly,

the utilization of AI-based design software has the potential to aid artisans in crafting novel designs while preserving traditional elements, thereby enhancing the appeal of their products to younger demographics.

2. For **Tenali Brass artisans**, advancements in metallurgical technologies and novel techniques in casting and molding could afford greater precision and intricacy in their work, concurrently diminishing physical labor requirements. Such advancements could elevate productivity and facilitate the creation of more elaborate and innovative designs with broader market appeal.
3. **Durgi Stone sculptures** stand to benefit from technologies such as 3D scanning and printing, enabling artists to replicate their works in diverse sizes and materials, thereby diversifying their product offerings. Additionally, these technological advancements can be employed for restoration purposes, thereby safeguarding cultural heritage for subsequent generations.
4. In the realm of **Kondapalli toys**, the implementation of online marketing and sales platforms holds the potential to open up new domestic and international markets. Furthermore, the deployment of digital storytelling can serve to educate consumers about the historical and cultural significance of these toys, augmenting the value of the products and fostering a sense of connection between artisans and patrons.

Furthermore, the integration of cutting-edge technology is not confined solely to the improvement of production and sales processes; it extends to the enhancement of training and educational endeavors. Through the incorporation of augmented reality (AR) and virtual reality (VR), the younger generations can undergo instruction in these traditional crafts in a more immersive and interactive manner. Preserving family-owned businesses and their legacies is vital for local economies, cultural heritage, and community development. 'Appa' School of Business aims to play a crucial role in securing the continuity of traditions and fostering the growth of these businesses. This initiative has the potential to positively impact traditional businesses and the communities they serve by blending generational wisdom with modern tools and strategies, ensuring a sustainable and prosperous future.

A novel approach is devised to integrate classical engineering education with noetic sciences to create a robust, future-focused curriculum with firm foundation in the golden past of India.

It merges traditional scientific principles with exploratory, subjective insights to create a well-rounded learning environment that prepares students for both the known and the unknown. A pioneering approach is proposed, involving the amalgamation of classical engineering education with noetic sciences to formulate a comprehensive and forward-looking curriculum deeply rooted in India's historical scientific achievements. This pedagogical framework synthesizes traditional scientific precepts with exploratory, subjective insights, fostering a holistic learning milieu geared towards equipping students for both known and unknown challenges.

The establishment of the Centre for Noetic Sciences aspires to bridge the schism between entrenched beliefs and contemporary scientific paradigms. This entails delving into research areas encompassing consciousness, spirituality, and human potential—realms often relegated to the subjective or intangible—through rigorous scientific methodologies. Our faculty have received Best Researcher, Best Paper Presenter, etc. awards at university and international conferences. The increasing number of SCI papers is an indicator of improving **Research and Publications**. Five departments of VVIT offer their research guidance services to Ph D scholars admitted to other universities and the distinctiveness to the proposed university would be attributed by the proposed centres emphasizing research in Noetic Sciences, Traditional Knowledge and Telugu language(one patent was already received for ‘a hybrid approach to Sanskrit to Telugu translation’).

Noetic sciences, by venturing into domains traditionally overlooked by physical sciences, scrutinize the nature and capacities of consciousness, spanning perceptions, beliefs, attention, intention, and intuition. This unconventional approach potentially disrupts the established objective-subjective dichotomy inherent in scientific inquiry.In this light, the university proposes a distinct undergraduate program. In this envisioned undergraduate program, the classical engineering curriculum serves as the foundational 'hard science' scaffold. Students immerse themselves in the core tenets of their chosen engineering discipline—be it mechanical, electrical, civil, or another—acquiring the adeptness to tackle intricate problems, devise systems, and comprehend the technological underpinnings of our global infrastructure. Interwoven into this traditional curriculum is the exploration of Noetic research. This entails the incorporation of courses in cognitive science, philosophy of mind, psychology, and even

quantum physics contextualized within the realm of consciousness, alongside their technical subjects. This multidisciplinary approach furnishes students with an appreciation for the subjective, experiential facets of human existence often marginalized in conventional scientific curricula, enabling them to scrutinize our rich Vedic traditional knowledge through a rejuvenated scientific lens. The integrated program aims to cultivate engineers with not only technical competence but also a comprehensive understanding of India's spiritual heritage through modern engineering technology. The goal is to train these engineers to approach problems and solutions from diverse perspectives, fostering an innovative and holistic approach to engineering. The curriculum serves as a tribute to India's neglected scientific heritage by blending traditional beliefs with modern scientific thought. This synthesis pays homage to past wisdom while charting new paths for the future, providing students with a unique educational experience that encourages innovation and exploration, combining ancestral wisdom with engineering expertise.

A Center for Telugu Language Appreciation at the university level in India could play a crucial role in promoting and preserving the Telugu language and culture. By default, Language Preservation by documenting and preserving Telugu language in its various forms, including dialects and historical variations. The Centre will endeavor to develop and maintain a comprehensive archive of Telugu literature, both classical and contemporary. Alongside developing Research and Scholarship that encourages research on Telugu language, literature, linguistics, and related subjects and publishing research papers, journals, and books that contribute to the understanding and appreciation of the Telugu language, the Centre will embark on Cultural Promotion by organizing cultural events, festivals, and seminars to promote Telugu arts, music, dance, and theater in collaboration with artists, performers, and cultural organizations to showcase the richness of Telugu culture. This will help in engagement with local Telugu-speaking communities to understand their linguistic needs and concerns. Language courses at different proficiency levels will be offered to students interested in learning Telugu. The Centre will also actively implement Digital Initiatives by creating online resources, including digital libraries, e-books, and multimedia content, to make Telugu literature and language accessible globally. Efforts will be made to develop language-learning apps and platforms to facilitate easy and interactive learning. This will help

to Promote the use of Telugu in digital platforms, including software development, content creation, and social media. This paves the way for Collaboration and Networking where collaborations with other universities, research institutions, and cultural organizations to strengthen the study of Telugu language and culture can be established. The Global Touch to the Centre is complete with the provision of Translation Services that make Telugu literature and academic works accessible to a wider audience. Also, support the translation of works from other languages into Telugu to enrich the language's literary landscape.

Siemens Centre of Excellence, a collaborative initiative between Siemens, a global technology company, and various educational institutions or government skill development centers has set up 14 state of the art laboratories in VVIT. These centers are designed to offer industry-relevant training and education in areas such as automation, digitalization, and industrial technology. Siemens Industry Software India Pvt. Ltd. (SISW), a wholly owned subsidiary of Siemens Product Lifecycle Management Software Inc., recently signed an agreement with the State of Andhra Pradesh Skill Development Corporation for the establishment of six Centers of Excellence (COEs) and thirty Technical Institutes across the state. The agreement was signed jointly by Siemens ISW and their partner, DesignTech Systems Ltd. on 30th June 2015.

The six COEs address diverse industry segments like Automotive, Industrial machinery, Industrial automation, Aerospace & defense, and Shipbuilding. The collaboration will train students on relevant industry processes and help create industry-ready trained personnel. This industry-readiness and relevance of skills will attract better career opportunities for students and will eventually foster further industrial development in the state of Andhra Pradesh. The COEs are unique in their ability as they will be able to stitch together the virtual world of engineering and manufacturing simulation with the physical world of product development and manufacturing.

Equipped with the latest PLM software solutions from Siemens PLM Software, such as NXTM software for digital product engineering, Teamcenter® software for digital lifecycle management and Tecnomatix® software for digital manufacturing, and state-of-the-art industrial automation equipment from Siemens Industry these COEs will have the latest computer numerical controllers (CNC), programmable logic controllers (PLC), computer

integrated manufacturing units (CIM) comprising of CNC milling and turning machines, automated guided vehicles (AGV), industrial robots, automatic storage and retrieval systems, vision inspection systems for quality control, CIM controllers and software and rapid prototyping machines. All the software is integrated using the Siemens Total Integrated Automation (TIA) portal, and each of the COEs will have seven fully equipped laboratories staffed with instructors trained and certified by SISW.

In addition to the 6 COEs, to cater to the dual need of percolating industry knowledge throughout the technical skill supply chain as well as catering to various levels of job requirements that exist in this ecosystem, a unique hub & spoke model is developed where the COEs cater to the white-collar requirements and t-SDIs focus on the grey & blue-collar spectrum. These 30 technical-Skill Development Institutes training centers are focused on skilling students in vocational trades – Automotive, Electrician, Electronics, Manufacturing & Fabrication, and Agro & Farm machineries, at Polytechnic/ ITI level. These centers are built with industry partnership with companies like Mahindra First Choice for Automotive, Schneider for Electrical, HCL for Electronics, LMW for Manufacturing, ESAB for Welding and John Deere for Agriculture.

Andhra Pradesh State Skill Development Corporation (APSSDC) in association with M/s. Dassault Systemes, France, has established a 3D Experience lab in the premises of Vasireddy Venkatadri Institute of Technology in the academic year 2018 with a capacity of 36 systems of computers with high configuration (i7 processor, 1TB hard disk and 16GB RAM). The 3D experience lab facilitates licensed software from M/s. Dassault Systemes, France, to train the students and faculty members of Mechanical, Civil and Electrical Engineering Departments, which operates from a server of 64GB RAM, arranged in the lab. The licenses are connected through the internet server only. The objectives of this skill centre is to enhance the employability skill for engineering graduates in research & development technology implementation by imparting skills in engineering design in 3D experience platform throughout the four year academic program. This helps students to implement innovative thoughts on 3D experience platform for product development. In turn, this improves students' confidence levels by working in domains such as Aerospace, Automotive and Offshore engineering and also improves opportunities & placement, sustainability upon recruitment.

Google Codelabs by Google was the first ever codelab set up by Google in India and VVIT was the proud host to the labs. The Google funded lab was the space that ignited many enthusiastic ideas in the students. Google USA organized a statewide workshop for the engineering faculties to drive this Google endeavor throughout the state of Andhra Pradesh. Google Code Labs aim to provide developers with practical, hands-on experience rather than just theoretical knowledge. Users could follow step-by-step instructions to build real projects and applications. The platform educates developers about Google's tools, services, and best practices. It covered a wide range of topics, including web development, mobile app development, machine learning, cloud computing, and more. These labs focus on integrating and using Google's APIs and services. This allowed developers to explore and implement features such as maps, authentication, machine learning, and cloud storage in their applications. Google Code Labs encouraged community participation and collaboration. Developers could share their experiences, ask questions, and provide feedback on the labs, fostering a sense of community learning. The labs were regularly updated to keep pace with the evolving landscape of Google technologies. This helped developers stay current with the latest tools and features. Some of the areas of interest associated with these labs are as follows:

With the flexibility as an autonomous institution, students are given opportunity to pursue certification and internships from limited foreign universities and this can be really expanded into a **Global Recognition** by engaging with more international institutions on attaining the status of a university, thus contributing to its distinctness.To provide students and professionals with practical experience, the institute can facilitate internship and exchange programs with universities and businesses in the target countries. This hands-on exposure can significantly enhance cross-border collaboration and allow participants to gain first-hand knowledge of the business environment in these markets.

The focus is to mould students as leaders with distinctness. In short, *the university wishes to 'create' leaders in their respective fields who are not only highly focused, commercially aligned and 'risk-takers' but are also, 'sensitive to their environment' and 'Community-driven' aware of their rich heritage and additionally have a global orientation.*

Furthermore, the distinctness comes from the ability and confidence to organize trade

missions, seminars, and networking events that bring together key stakeholders, including local and traditional skilled artisans, businesses, government officials, and academic experts. These events serve as platforms for forging valuable connections, sharing knowledge, and exploring collaborative opportunities that can benefit both Andhra Pradesh and its international partners. By offering these educational, research, and networking initiatives, the institute can contribute significantly to Andhra Pradesh's position as a gateway to major world markets. It can help businesses in the region navigate the complexities of international trade, foster cultural understanding, and create a conducive environment for mutually beneficial collaborations with Japan, South Korea, South-East Asia, and beyond. In doing so, the institute can play a crucial role in driving economic growth and global connectivity for Andhra Pradesh.

We sincerely believe that treading such a **distinct** path would also be a celebration of India's scientific heritage hitherto neglected. By integrating traditional beliefs with modern scientific thought, it pays homage to the wisdom of the past while also forging new paths into the future. We also believe that on the right path, success is a given and hence many more will follow to build enough momentum to lead India into its destined haloed status.