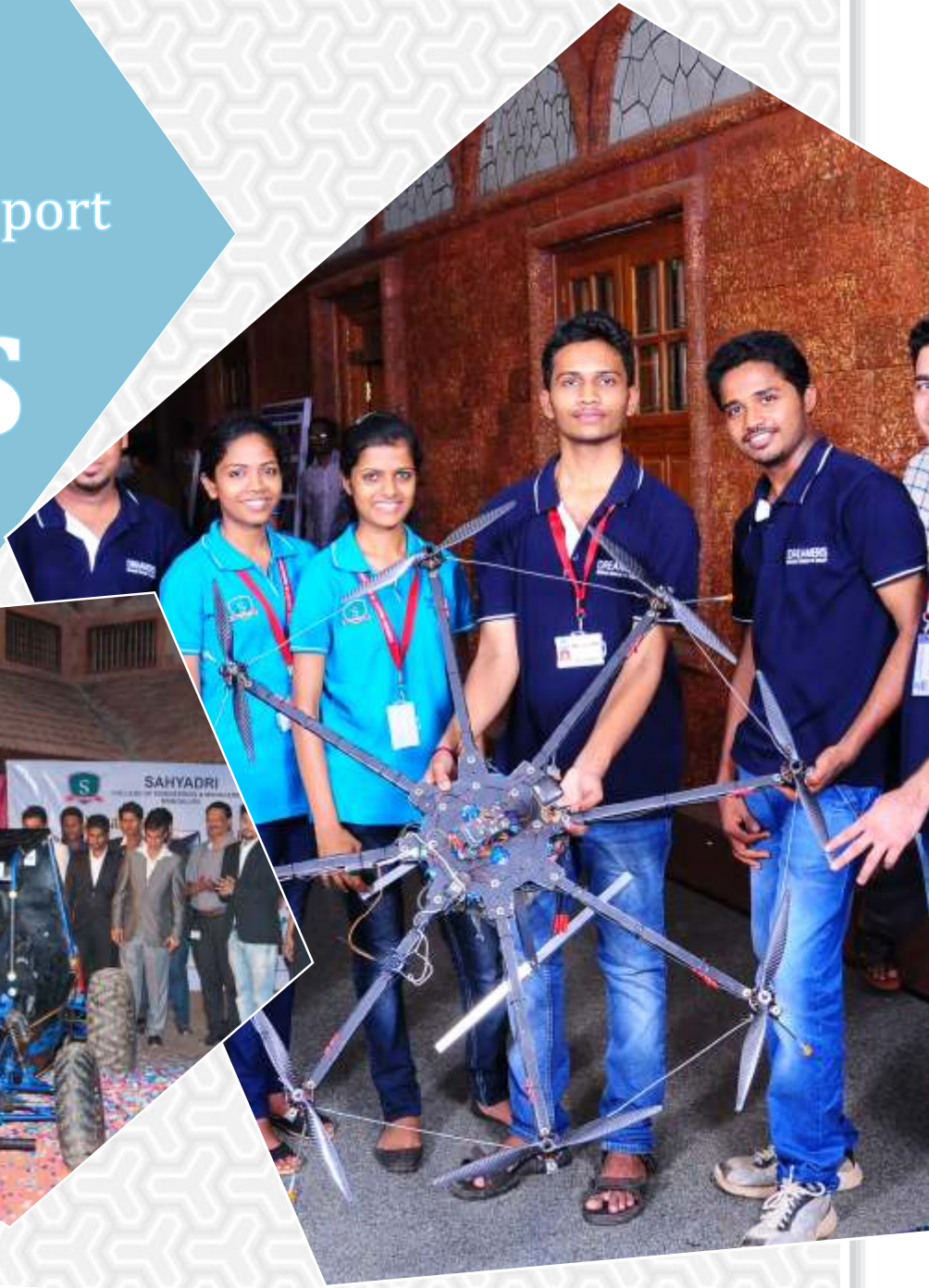


Sahyadri
Project Support
Scheme
SPSS



SAHYADRI
COLLEGE OF ENGINEERING & MANAGEMENT
MANGALURU

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SPSS Calendar of Events 2015-2016

This is a tentative calendar of SPSS important dates in an academic year 2015-2016. Please check your registered email regularly for any SPSS announcements.

Odd Semester

September	1	Announcement - SPSS 1 hour briefing
	5	Project proposal online module open
	30	Project proposal online module close - deadline for project proposal submission
October	15	Results department wise - 1st list of filtered projects
	20	SPSS declare results of selected SPSS projects
	25	First Installment - 40% money

Even Semester

November	7	First report online module open
	12	First report online module close
	17	2nd Installment - 40% money
February	8	Completion report online module open
	10	Completion report online module close
	17	3rd installment - 20% money
March	10	Video recording of projects - start
	15	Video recording of projects - end
	19	Project videos uploaded to Sahyadri innovations channel
April	9	Demonstration of SPSS projects in Techvision - 2016 Fest



Preamble

Motivated by the desire to build a strong base for practical problem solving and hands on skills amongst the students, the Chairman of Sahyadri College of Engineering & Management, Dr. Manjunath Bhandary initiated the Sahyadri Project Support Scheme (SPSS). Through this scheme, the department of Projects and Funding provides financial and academic support for engineering student projects.

The SPSS scheme is the novel paradigm and first of its kind amongst technological universities in India created by Sahyadri College of Engineering & Management. While most of the engineering projects in the engineering colleges and universities are generally conducted as academic final year projects or club projects, SPSS is quite different wherein students execute non-academic engineering projects for the sake of engineering and not obtaining academic scores.



“SPSS Project scheme is an initiative to create interaction amongst the students and improve their analytical thinking abilities to apply engineering concepts in real world.”

Dr .Manjunath Bhandary
Chairman,
Bhandary Foundation



“Project based learning only will make you real practicing engineers”

Dr. U. M. Bhushi
Principal

1.

About SPSS

Prelude

The new trend towards engineering education is project based learning that has a significant edge over traditional paper based learning when it comes to application of engineering concepts. Research has proven that students gain significant knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge (Reference: http://bie.org/about/what_pbl).

Sahyadri College of Engineering & Management aspire to be a trend-setter in engineering education and hence adopted the Project based learning through Sahyadri Project Support Scheme (SPSS) alongside with the usual academic curriculum.

1.1 What is SPSS?

- Motivated by the desire to build a strong base for practical problem solving in the students as well as to build their R&D potential, the Department of Project and Funding was launched.
- Sahyadri project support scheme (SPSS) is the flagship programme co-ordinated by the department of project & funding. It helps to convert enormous reservoir of talent and creativity in the students to projects and products.
- Through this scheme, the Department of Projects and Funding provides financial and academic support for student projects.
- This scheme is a major innovation and first of its kind in technical education in the country and has a major impact in improving the quality of technical education.

The objectives of SAHYADRI PROJECT SUPPORT SCHEME- SPSS are:

- The objective of SPSS is to create and update the general creativities of the students of the various branches of the college and to bring out the innovation talent in them.
- To encourage project oriented learning of the students in the field of science and technology in order to promote innovation in projects.
- To promote taking up research in newly emerging and frontier areas of science and technology including multi-disciplinary fields.
- To attract fresh talents in the college towards research and project activities.

1.2 How it will benefit you?

- SPSS provides the application level (practical) knowledge to the students which are not provided by traditional academic teaching.
- SPSS provides funding and guidance to the non-academic projects.
- The current job market is extremely competitive. With a lot of Engineers graduating every year, the jobs for freshers is very scarce. If a fresh engineering graduate has to stand out in the competition, he/she should have some project experience in his/her CV. SPSS provides the platform for the same.
- SPSS boosts confidence levels in the students in their career especially during their placements/ higher studies.
- Students can generate patents and publish paper there by building their CV.
- Empowers analytical thinking, synthesizing and communication skills, there by holistic development take place in the personality of the students.
- Students will gain expertise in how to apply for research grants such as KSCST , VGST-TRIP and IE student grants.

1.3 Highlights of SPSS 2014-2015

1.3.1 Shristi competition winners

Student's hard work and dedication made us win 6 prizes at Srishti 2015 a national level project competition which was organized at New Horizon College of Engineering, Bangalore from May 1st to May 3rd 2015.

Totally 52 students (16 projects groups & 4 paper presentation groups) and 3 faculty members represented Sahyadri at Srishti 2015 competition.

Winners - Event 2

(AVISHKAR - A competition of theme based projects addressing issues of social concern)

First prize

Project title: Edge detector and alternative solution of bricks

Team members: Y Sagar, D Karthikeyan, PratikshaBhat, MadhuAdiga (1st semester - G section - CSE)

Cash prize: Rs 10,000/-

Consolation prize

Project title: A Low cost water filter unit for rural north Karnataka district

Team members: Cavin Vijay Mascarenhas, ChinmayaBharan M R, Deekshith M, Kaushik M (4th semester Civil)

Cash prize: Rs 1,000/-

Winners - Event 1

(An Entrepreneur's Dream

- competition of projects by final year Engineering students

First prize

Project title: Fuzzy logic based assessment of periodic variation of water quality of Nethravati River

Team Members: Shelton Rainer Pinto, Abith, Tukarama, Ahmy Maria Pios (8th semester Civil)

Cash Prize: Rs 10,000/-

Third prize

Project title: Design of weir

Team members: RenithaD'Souza, Shri Kalpa, AshithaGatty, Vithun (8th semester Civil)

Cash prize: Rs 6,000/-

Fourth prize

Project title: A Revolutionary approaching the voting process for state

Team members: Anoop N Shenoy, Subhod I, Nithesh K, Sona Krishnan (8th semester CSE)

Cash prize: Rs 2,000/-

Winners - Event 3

(The Unseen beneath the structure - paper presentation competition)

Third prize

Paper title: A survey on revolutionary approach for voting system in states of India

Team members: Anoop N (8th semester CSE) Aathira Raj (4th semester CSE)

Cash prize: Rs 1,000/-

1.3.2 Techvision 2015 Winners

It is an annual tech fest conducted for exhibiting the student's project. See Chapter 7 of this brochure for more details.

Year	Place	Project Title	Group Members Name
B.E/ 2nd year	III	Earth quake resistant structures	Mithun, Jyotish, Rangeel, Shashwatha, Likitha
B.E/ 3rd year	Consolation	Floating house	Jnanesh, Shyam, Rajath, Rakshith, Ijaz, Ashvik, Nandesh, Sampath, Mukhesh, Manjunath, Athish, ankith
B.E/ 3rd year	II	Bus alert system	Lavanya K., Punyashree, Pooja Nayak, Anusha Shetty, Amitha, Thahzeera, Gopika,
	III	Recognizing face under real time environment	Sangeetha, Roshin, Shreyanka, Sandhya, Saudamini, Rashmitha, Vinusha
M.Tech/ 1st Year	Consolation	Composite sketch based recognition system	Rakshith Raj, Mahesh, Suhas, Mallika, Sheetal, Vasudev
B.E/ 1st year	I	Automatic water level indicator & controller	Shwetha Kumari, Swetha Thantri P., Varsha Shetty, Deshik, Manish Shetty
	II	Electricity by walking	Puneeth, Nithesh M., Laveen, Thanseef
	III	Gesture control of device using accelerometer	Sharanya, Shubhalaxmi, Suraj
B.E/ 2nd year	I	Design and fabrication of hydramp	Adarsh P., Ankith, Ajaygan, Aster, Arnold, Jolene, Hitha
	II	A comparative study of wear behavior of SiC glass epoxy composites with asbestos material in automotive brake pad applications	Chethan, G., Vinayak, Pradeep, Adarsh, Vigneshwar, Shashidhara, Shantaram, Wilson, Sahabuddin, Mallikarjun
	III	Machinability of randomly oriented glass fiber reinforced epoxy plastic (RO-GFRP) composite laminates	Rohan S., Bharath M., Harsha B., Shishir M., Prathik L., Vaishak R., Safiyulla
B.E/ 3rd year	I	SAE Baja ATV Vehicle	Gautham, Jerin, Bhavik, Madhukeshwar
	II	Design and fabrication of foundry sand reconditioner	Dhanush, Prithviraj, Macklin, Mahin, Anoop, Clayton
	III	Design and development of areca nut tree climber with cutter and atomizer	Tharanath, Dharmaraj, Shavin, Sankranth, Anil, Sudheer, Sushanth, Darshak, Nusrath
M.Tech/ 1st Year	I	Effects of heat treatment on wear behavior of duplex stainless steel (DSS)	Denis Pinto, Joel, Alister, Prajwal
	II	Design and analysis of composite coil spring	Reuben, Deekshith, Pradeep, Mahesh
B.E/ 2nd year	Consolation	ID card detection and image processing	Likitha M. G., Medini Bhat, Vrunda Kamath, Gouse Khan
B.E/ 3rd year	Consolation	Recognizing faces surgically altered	Rashmi Rai, Sushmitha Shetty, Swagath, Sona, Deeksha, Shilpa, Ramya, Trishal
B.E/ 2nd year	II	All-terrain vehicle	Gerald K Antony, P T Greeshma, J Divyashree, Athulshivadas, Midhun K
B.E/ 3rd year	II	DSP+ARM based low resolution & illumination invariant technique to recognize human faces	Ashwini G, Keerthan, A Nagesha, Kushala, K Sushmitha
M.Tech/ 1st Year	Consolation	Image quality assessment for fake biometric detection	Amritha P S, Ashwitha, Deeksha, Deeksha S, Divya Rani, Shanya, Shashi Rekha

2.

SPSS Projects - Expectations from Students

1. Students should have a strong commitment to their project work.
2. Students should have
 - (i) good academic record of 65% and above
 - (ii) No active backlog to undertake an SPSS projects.
3. Students can work on SPSS project only before 9 am and after 5pm and Saturday after 1 pm.
4. Students must think about do-able projects, it should be completed within 10 months.
5. Students should have innovation in their thinking and must be competitive in their nature.
6. Team work is necessary and contribution of each individual on SPSS project must be equal.
7. Student must regularly check their e-mail registered in the SPSS form.

3.

Sahyadri Innovations Channel - Youtube and Twitter

- Starting this year, the SPSS committee has come up with the “Sahyadri Innovations” YouTube channel to showcase interesting projects made by students. This was mainly created to promote student ideas in public domain.
- All SPSS Students are required to make videos of SPSS projects after the completion of their project work.
- Students can provide their innovative ideas in twitter and hashtag #sahyadriinnovations to link below.
- Students can also upload their photos in instagram and hashtag #sahyadriinnovations

Sahyadri Innovations Channel

YouTube link: <http://tinyurl.com/oemz59e>

Instagram: #sahyadriinnovation

Twitter: https://twitter.com/Sahyadri_i

Blogger: <http://sahyadriinnovations.blogspot.com/>

Student Editors/ Media volunteers: If you intend to be a media person or an editor to Sahyadri Innovations channel, please contact Dr. Rathishchandra R. Gatti in person.



4.

SPSS Projects Funding 2015-2016

4.1 SPSS Projects Sanctioned Amount

The information of the sanctioned projects to the SPSS is as shown in the table below.

		Mech	CV	EC	CSE	IS	Approx. Student Strength	No. of Students	Total No. of Projects
	Year 1			120			750	6	120
	Year 2	30	30	20	20	20	600	6	120
	Year 3	30	30	30	30	30	600	4	150
B.E	ID*			5			450	8-10	5
M.Tech	Year 1	2	2	1	1	1	24	2	7
MCA	Year 1			2			24	3-5	1
									403

* ID – Inter Department –These are multidisciplinary projects initiated by students from two or more different departments and evaluated by selected faculty of those departments.

* Department can change the strength of the team

4.2 How SPSS Funds are Released

Funds are released according to the funding scheme as shown in the figure. For more details refer section 3

BE

	Year 1	Year 2	Year 3	Year 4	M.Tech	MCA
Total money sanctioned	3000	5000	7000	20000	10000	10000
First Installment	1000	2000	2000	8000	4000	4000
Second Installment	1000	2000*	3000	8000	4000	4000
Third Installment	1000	1000*	2000	4000	2000	2000

*Only 50% of the projects in 2nd yr & 3rd yr will be given (2000+1000) & (3000+2000) respectively. The above funding pattern is general. The concerned department can change the funding pattern to suit their project portfolio



5.

SPSS Process

	Project Phase	Particulars	Documents Needed
1.	SPSS project proposal	SPSS student group fill the SPSS project proposal. The project proposal is formulated according to the project themes. (see project theme sheet attached)	SPSS project proposal
2.	SPSS review 1	The SPSS review committee will review all the applications against review 1 criteria and approve/disapprove the project.	Review1 criteria form
3.	First installment release	1st installment is released to accepted SPSS projects to start. An email is sent to the selected project group students.	Letter of project acceptance and 1st installment
<p>Students will work on the project scope, project schedule, project idea, and literature review and project budget. They are free to buy things from the first installment which they are confident of getting reimbursed from 2nd and 3rd installment. Accounting of the purchases made is mandatory. For more details consult the SPSS team. Refer: SPSS Initial project presentation template and SPSS Initial report template in Section 6- SPSS Forms.</p>			
3	SPSS project initial report	SPSS student group will present their project (PPT) + SPSS project initial report to the review committee.	SPSS project initial report presentation template, SPSS initial report template
4	SPSS review 2	The SPSS review committee will review all the applications against review 2 criteria form and approve/disapprove the project.	Review 2 criteria form
5	Second installment release	2nd installment is released to these SPSS students to start the project. An email is sent to the selected project group students.	Letter of 2nd installment
6	SPSS Project final report	Students will now work towards the completion of their project. They will publish at least one conference paper before project report 3. Publication draft to be uploaded with SPSS project report 2. They will also present their project to the review committee. They can use the SPSS project completion template for presentation.	SPSS project final report presentation template, SPSS final report template
7	SPSS Project review 3	The SPSS review committee will review all the applications against review 3 criteria form and approve/disapprove the project.	Review 3 Criteria Form
8	Third installment release	3rd installment is released to these SPSS students after the project is completed and presented in techvision 2016 (part of eximus fest 2016). An email is sent to the selected project group students. In the email they are also requested to collect the participation certificates.	Letter of 3rd Installment Certificate of Participation
9	Sahyadri Innovations channel video recording	Project guide and project team members of SPSS projects will present their project	
10	Techvision participation	SPSS student groups will demonstrate their project ,project poster in TechVision 2016	Certificate of Participation

6.

SPSS Rules and Guidelines

6.1 SPSS Student Eligibility Rules

1. SPSS project is mandatory for all students. Students should have (i) Good academic record of 65% and above, (ii) No active backlog to undertake an SPSS projects.
2. Students can work on SPSS project only before 08.45 am and after 05.00 pm and Saturday after 01.00 pm.
3. Students should agree that they will not be absent for their classes or go late to the classes in the pretext of SPSS activities. Attendance in the pretext of SPSS will not be signed by any faculty.
4. Students should return the projects and the supporting materials purchased to the SPSS office after displaying their projects in TechVision.

6.2 SPSS Funding Rules

1. The project team should NOT change the topic of the project after the project has been sponsored by SPSS and should not deviate from the objectives of the sanctioned proposal. In the event of any such changes, sponsoring will be treated as cancelled and the team should return the sanctioned amount to the college.
2. Project funding (amount and release date) is given strictly according to the funding installment schedule.
3. The SPSS project fund is the seed money for the students to get started with the project. In addition to the seed money, students are free to invest their own money to the project or can approach sponsors, companies, investors only after filling the sponsorship approval form approved by the principal.
4. Students should undertake only those projects with the project costs not exceeding the total of seed money and their own investment.
5. Students should not approach the management or faculty for additional funding.
6. Students should withdraw cash from the cheque issued at the earliest but not later than 2 months before the cheque loses its validity.
7. The SPSS fund is meant only for the purchase of project items and does not include costs such as publishing fees for papers, training fees etc.
8. Proper accounting of vouchers, bills, cash receipts have to be strictly followed.

6.3 SPSS Intellectual Property Rules

1. Any intellectual property (patent, designed patent, invention and publication) developed by SPSS will be shared by all the students.
2. Project guide/faculty cannot be the owner of intellectual property rights (IPR) generated in SPSS.
3. Students have to sign the intellectual property legal agreement.
4. All the students should be a part of publication no single author publication is entertained.
5. Any intellectual property developed by student group in SPSS, the inventers will be only students no external faculty, non-faculty are entertained.
6. Any intellectual property developed by student group in SPSS applicant/assigning will be intimated to intellectual property right (IPR) committee of SCEM.
7. If intellectual property right (IPR) committee accepts the students proposals for patents, students have to refer the "IPR-rule and guidance" attached.

6.4 SPSS Faculty Rules

1. SPSS funding are availed for only student initiated projects and being guided by the faculty.
2. Faculty have the provision to own any intellectual property (patents, designed patent, invention and publications) emanating from the SPSS projects they have guided provided they contribute their own income amounting to at least 20% of the project money.
3. Every faculty must undertake guidance for at least one SPSS project.
4. There will be weekly meeting organized for SPPS coordinators, scheduled on Monday from 5:00 to 6:00 pm.

7.

SPSS Core Committee

1.	SPSS Head	Prof. Rathshchandra R. Gatti
2.	SPSS projects Co-ordinator	Ms. Ashutha K.
3.	DT labz Representative 1	Mr. Gautham Nayak
4.	DT labz Representative 2	Mr. Sachin Ganesh
5.	Mech - Department Co-ordinator 1	Mr. Suhas
6.	Mech - Department Co-ordinator 2	Mr. Vaishak
7.	CV - Department Co-ordinator 1	Dr. Gautham P. Jeppu
8.	CV - Department Co-ordinator 2	Ms. Bhavya
9.	EC - Department Co-ordinator 1	Mr. Sharathchandra N. R.
10.	EC- Department Co-ordinator 2	Mr. Sachin C. N. Shetty
11.	CSE - Department Co-ordinator 1	Mr. Madesh
12.	CSE - Department Co-ordinator 2	Mr. Sunil B. M.
13.	IS - Department Co-ordinator 1	Mr. Prakyath Rai
14.	IS - Department Co-ordinator 2	Mr. Ritesh Pakkala
15.	MCA - Department Co-ordinator	Mr. Bharat Bhushan

There will be a separate SPSS review committee for reviewing of the project proposals and project reports. This committee is kept confidential from the students.



8.

SPSS Forms

All the forms mentioned below can be accessed online simply by visiting <https://sahyadri.edu.in/Projects/Forms.html>

8.1 SPSS Project Proposal

It is a Google form where students have to submit online their first proposal.
<https://goo.gl/URRkIA>

8.2 SPSS Initial Report

Students have to submit the initial report for their proposed project in a Google form.
The Google form link is provided below.
<https://goo.gl/7Kz5UG>

8.3 SPSS Review Paper

After grant has been provided students have to submit the literature review of their paper, in a Google form. The Google form link is provided below.
<https://goo.gl/CBUe34>

8.4 SPSS Completion Report

Once the project is completed, the students have to submit their SPSS completion report as per the prescribed format available in the link below
https://sahyadri.edu.in/Projects/spss_funding.html

8.5 Student Undertaking Form

- Refer SPSS rules section 4 for more details
- The students applying for IPR have to submit the form.
- Once the form is filled please download and sign it by all students and supervisors and submit in person to SPSS department.
- Authorship must be shared.



9.

About Techvision

9.1 Techvision 2015

Tech Vision 2015, a two-day intra-collegiate project competition held at Sahyadri campus. The main objective of this event is to inspire the young minds of the engineering students by providing them a platform to demonstrate their skills and knowledge through projects. More than 50 Lakh rupees has been spent on sahyadri project support

scheme (SPSS) wherein the grants in terms of 5000,10000,25000 and 50000 INR are being provided to each of the qualified student projects.

More than 200 projects including SPSS and Non-SPSS projects, VTU final year projects of B.E./M.Tech/MCA students were displayed. More than 500 students

participated in the event demonstrating their engineering talent. Diverse technologies were displayed such as ATVs,3Dp rinters,3D aerobic planes, Sail planes, Quadra copters, Octo-copters, Multiengine test rig, Wind energy pump, earth quake resistant building ,Low cost water filter to name a few.

9.2 Techvision 2016

Tech vision 2016 is an intra-collegiate project completion which will provide the platform for the students to exhibit their SPSS projects. Tech vision 2016 is tentatively expected to be held on April 10, 2016 in Sahyadri campus. The expectation of the project from SPSS is 150 projects. Exciting prizes are given to the winners.



10. Sahyadri DREAMERS R&D Pvt Ltd

Sahyadri DREAMERS R&D Pvt Ltd (referred as DT lab henceforth) is a lab that provides all the tools required to turn one's idea into a prototype. Every student gets ideas worth solving a problem of individuals, but they lack in guidance, support and necessary tools. DT lab provides all of these including mentoring and guidance in realizing their ideas.

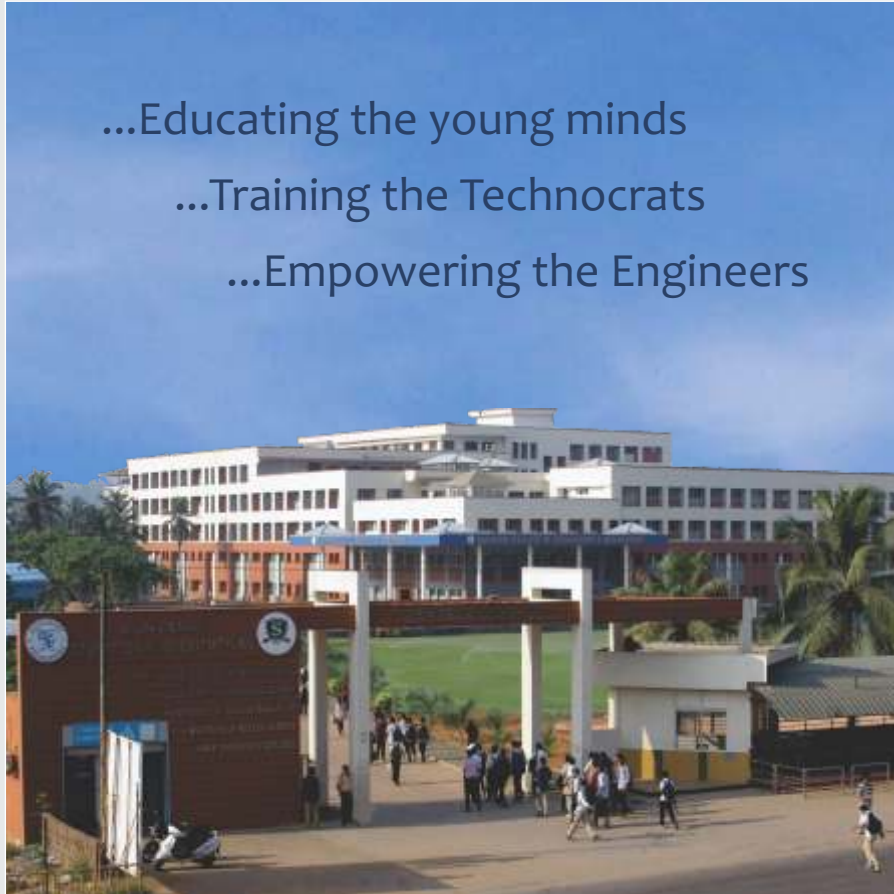
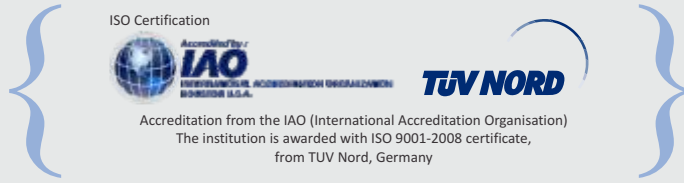
DT lab also hosts workshops, conducts seminars, broadcasts webinars for students' convenience. Students can make use of it to create marvels. Further emphasis is given to start startups, and product development within the lab.



Benefits

- I. Project oriented training: The main objective is to create the project interest among the students. Each class taken shall involve the "hands on building" as well as thorough learning of the build processes. In this process the students shall be motivated to take up the opportunities provided by Sahyadri in terms of SPSS, thereby involving themselves in various research activities.
- II. Research oriented training: Students shall then be trained to have a research based approach to a problem statement, enhancing their technical skill, logical reasoning and practical approach.
- III. Research/product oriented training: The training shall involve converting valuable projects into products through the help of various organizations.
- IV. Product/ enterprise oriented training: This involves training the individuals to go through the various phases of project development, patenting, marketing and thus forming an enterprise.





Sahyadri Campus, Adyar, Mangalore - 575007, Karnataka, India.

Tel.: + 91 824 2277222 Email: sahyadri@sahyadri.edu.in website: sahyadri.edu.in

Contact for any queries regarding SPSS

spss@sahyadri.edu.in

+ 91 824 2277222/ Extension 135

Dr. Rathishchandra R. Gatti - Email: rathishchandra.mech@sahyadri.edu.in - Phone: +91 94818 47572

Ms. Ashutha K. - Email: ashutha.research@sahyadri.edu.in - Phone: +91 98863 23184