





Avinashilingam Institute for Home Science and Higher Education for Women, Deemed to be University, Estd. u/s 3 of UGC Act 1956, Category A by MHRD Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC,

Coimbatore – 641 043, Tamil Nadu India.

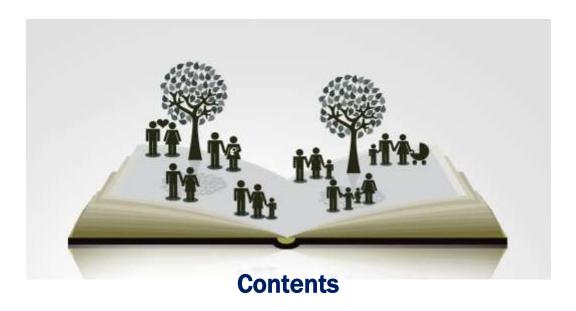
## **Consultancy Potential Manual**

November 2022

**Consultancy Potential Manual November 2022** 

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## **Research and Development Cell**



| S.No | Consultancy details of School                                  |    |  |  |  |
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|      | Commerce and Management  |    |  |  |  |
|      | Education  |    |  |  |  |
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## Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)

Re-accredited with A++ Grade CGPA 3.65/4 Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

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MESSAGE

Ph.D. M.D. D.Sc. FAMS, FNASc, FIMSA, FABMS, FFTM (Glasgow, UK)

Chancellor

| The same |    |    |     |  |  |  |      |  |
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The International vision of the Higher Education System is holistic development of the university system inculcating the 21<sup>st</sup> Century potentials to all the students its purview. The Government of India has evolved the holistic, multidisciplinary and futuristic National Educational Policy-2020 with the goal of achieving the above international vision. One of the essential components of the NEP-2020 is transform the students from the level of "Employment seekers" to "Employment generators" and to see that the Higher Education ecosystem becomes conducive to nurture the talent infusion. The major requirement to create this capability is to enhance the research and consultancy potentials of the faculty members and the researchers of the HEIs, especially the 1000+ universities in our country.

The best way of achieving national/international visibility of innovation and R&D strengths of the universities is to showcase their R&D capabilities and Consultancy potentials to all the stakeholders and the industry sector personnel. A comprehensive document containing the details of these potentials of Avinashilingam Institute for Home Science and Higher Education for Women has been prepared by the Directorate of Research and Development of this Deemed University. In addition to the potentials documentation, DORD has also given the user charges, if any, and the user-friend mechanism for the end-users of these Consultancy potentials. I am sure it would also be available on the website of this university for easy accessibility. I wish that these facilities are fully utilized by both internal and external R&D seekers and translate their research outputs for the betterment of the society at large, satisfying one component of the Sustainable Development Goals!

My best wishes and immense appreciation for all those responsible for the preparation of this Consultancy Potentials Manual.

(S.P.Thyagarajan)

(3.F. Hiyagarajan

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## **Consultancy Potential Manual**

#### **Prelude**

The Consultancy Potential Manual of Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore has been prepared with the prime objective of providing specialist expertise and knowledge of the faculty to beneficiaries from Government/Non-Government agencies, industry personnel, start-ups and incubatees to further them in their projects. It is intended for the reference of researchers desiring consultancy services thereby promoting interinstitutional research and exchange programmes at national and international level through consultancy and MoU's. This manual provides a comprehensive list of consultancy services offered by the faculty researchers of the Institution.

Consultancy encompasses all advisory, technical and research project implementation activities provided by faculty members and research scholars to the clients. Consultancy services and projects include providing expert advice, solving problems, testing and experimenting laboratory based work, market researches and survey.

State-of-art advanced instrumentation facilities hosted in the Advanced Research Laboratory and Prof. C.N.R.Rao Laboratory of the Institute, such as the GC MS spectrometer, Infrared Spectrometer, Body Mass Composition analyzer, Scanning Electron Microscope, Texture analyzer and Flow Cytometer, have enabled research scholars from other Institutes far and wide to utilize these instruments for their research through outsourcing.

Individual faculty members of any department involved in consultancy are the consultants. The industry or private party or any other outside agency seeking consultancy is the client/beneficiary.

The consultancy venture of the Institution ensures the provision of services to the prospective clients by making better use of and maximizing existing resources and also supports organizational sustainability. Through these consultancy services, resource mobilizations vide an in-built revenue sharing formula between the client and the Institution as stipulated in the consultancy policy of the Institution is envisaged.

### **Consultancy Policy of the Institute**

#### 1. Preface

Considering the vision and mission of Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, one of the major research policies includes consultancy assignment apart from active research and teaching. The Institute strives to promote and enhance the external profile and the societal impact of the Institute includes the expertise and research inclination of the faculty members. This creates mutually beneficial opportunities for collaborative research and consultancy services. The consultancy projects and services enrich and broaden the professional experience and knowledge of the teaching faculties. Consultancy services in an academic environment functions as a tool for contributing to the national economic growth.

#### 2. Definition of Consultancy Services and Projects

This includes an assignment or job for providing expert advice; problem solving, targeted training, testing and laboratory based experimental work, market research and survey. The faculty member of the Institute or the department involved in consultancy are referred as consultants and the industry or private party or any other outside agency seeking consultancy is referred as the beneficiary.

#### 3. General Principles of Consultancy

- 1. A consultancy work may be undertaken by the faculty members in their area of expertise.
- 2. The consultancy services should be undertaken only with prior permission of the Institute.
- 3. It should not interfere with the discharge of prime duties of the consultant- the faculty member or the department.
- 4. Consultancy services should not be in conflict with the interest of the Institute.
- 5. In the context of consultancy services, the consultant should not directly or indirectly get associated with any activities which may be unethical or inappropriate.
- 6. The two types of consultancy are Individual Consultancy and Institutional Consultancy. Individual Consultancy is offered by a faculty member in her individual capacity. Institutional Consultancy is offered by a team of faculty members from the same discipline or different discipline of the Institute.

7. In the case of foreign consultancies, the Institute will permit to take up the consultancy based on the nature of the consultancy work. The consultant team has to execute a bond with the Institute.

#### 4. Institutional Policy on Revenue sharing

The consultancy fees for the consultant should be mentioned in the budget proposal submitted by the beneficiary and should be approved by the Registrar.

The distribution ratio of the consultancy fee is 60:40 for individual consultancy services or projects and 50:50 for Institutional consultancy services or projects. The Institute share and the consultant share should be collected as separate demand draft.

- 5. Nature of tasks considered for Consultancy
- a. Establishment of laboratory/pilot plant
- b. Project for setting up a pilot plant/getting a bank loan
- c. Efficacy testing of new products
- d. Offering consultancy work in their site/factory
- e. Private agencies requesting for training of their staff
- f. Annual consultancy on contract for food quality improvement/product development
- g. Field visit for diagnosis and problem solving
- 6. General Procedure
- (i) Consultancy proposal should be received (from the beneficiary) by the consultant (individual faculty member or the department)
- (ii) The proposal should be submitted (Annexure) to the Head of the Institution (HoI) and the Head of the Department (HoD).
- (iii) Hol/HoD will examine the proposal and submit it along with their recommendations to the Registrar.
- (iv) The higher authorities will consider the following aspects before recommending the proposal:

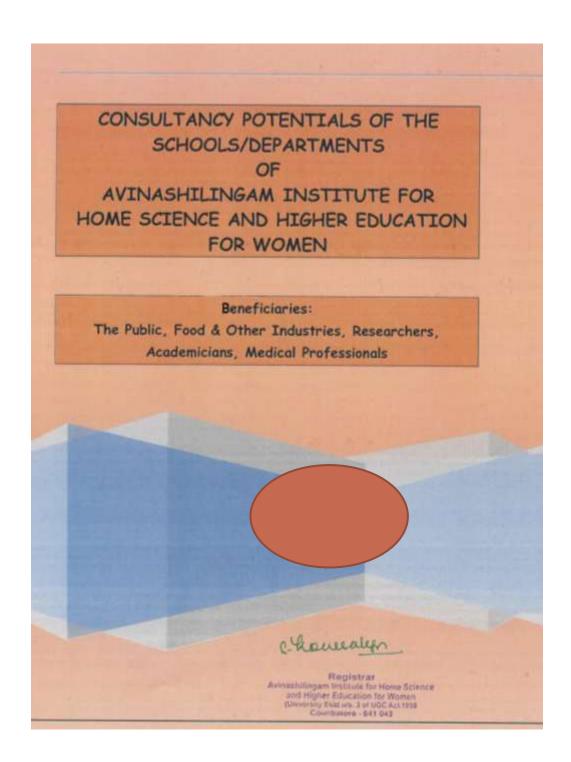
| □ Extent to which the consultancy work will be undertaken by the faculty or the department in addition to their normal duties and work load. |
|--|
| ☐ During the days of Institutional commitments, the consultants should not neglect   |

| $\hfill \square$<br>The consultancy fees should be carefully proposed in the budget submitted by the beneficiary.   |  |  |  |
|---|--|--|--|
| $\hfill\Box$<br>The entire consultancy service or project should be focused on the interest of the Institute in the long run.   |  |  |  |
| $\Box$ All issues related to the progress of the consultancy work, handling of the budget amount and the stipulated time frame should be legally discussed with the competent authorities and should be mentioned in the agreement. |  |  |  |
| (v) The Registrar will issue the approval letter after getting the consent of the competent authoritie  |  |  |  |
| (vi) The consulting commitment should not exceed 30 days in an academic year for the faculty member or the department.  |  |  |  |
| (vii) A Memorandum of Understanding should be signed between the beneficiary and the consultant before undertaking the consultancy assignment.  |  |  |  |
| Disclaimer: Registrar's decision will be final and binding in all matters regarding research.   |  |  |  |
|   |  |  |  |

#### 7. Forms and Formats

## Approval for Consultancy Projects / Services submitted to Avinshilingam Institute for Home Science and Higher Education for Women, Coimbatore- 641043

| Head of the Institution  | Head of the Department                           |
|--|--|
| I recommend the work outlined above being undertance availability has been made and the assignment would be signed   |  |
| Name of the Consultant Designation Signed Dated  |  |
| <ul><li>c) Other resources :</li><li>6. Permission may please be accorded to undertake</li></ul>   | outside Consultancy activities as outlined above |
| b) Equipment and Consumables:  |  |
| <ul><li>iv) Any other:</li><li>d) Net amount(a-b-c):</li><li>5. Value of Avinashilingam Institute resources invo</li><li>a) Time of other staff:</li></ul> | lved , if any                                    |
| iii) Contingency:  |  |
| ii) Travel :   |  |
| c) Total Estimated Expenditure : i) Consumables :  |  |
| b) Service Tax, if any:  |  |
| 4. Consideration money a) Total receivable :   |  |
| 3. Probable duration of Consultancy:   |  |
| 2. Nature of work to be undertaken:  |  |
| 1. Name of the Origination for whom work is to be  | undertaken:                                      |



#### PHYSICIAN ASSISTANT

- 1. Medical camp for industries, schools and community areas
- 2. Screening campaign for various cancer
- 3. Education for women with PCOS and other menstrual issues.
- 4. Exercises for Antenatal and postnatal mothers
- 5. Prevention and management of various illness
- 6.Identification of Blood Group



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#### BIOCHEMISTRY, BIOTECHNOLOGY AND BIOINFORMATICS





We offer consultancy services in studies involving animal cell culture.

We do cytotoxicity testing, checking their anticancer and antidiabetic and anti-arthritic potentials.

We check the method of cell death - apoptosis or necrosis.

We perform cell cycle analysis, measurement of mitochondrial potential and extent of ROS generation.

We do anti microbial studies to check the microbial load of various samples in our microbiology laboratory.

Using our Bioinformatics laboratory drug designing software we do in silico docking, molecular simulation, molecular dynamics studies.

We are testing the phytochemical constituents of the samples using HPLC and HPTLC. 2D gel electrophoresis and genomic and proteomic studies are as done.

With the rich experience of the experienced and qualified faculty members we not only do these experimental studies but also analyse and interpret the results for the assays that are performed by us. We are able to do joint publications through our consultancy services.

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#### DEPARTMENT OF FOOD SERVICE MANAGEMENT AND DIETETICS

Consultancy Projects already done:

- 1. Supplementation of Health Drink
- -to 7-12 year old children to study its effect on cognitive development, memory and growth
- -to 13-15 year old rural girls to establish efficacy on iron status
- 2.Study of Nutritional Status, Stress Levels and their effect on Employee Performance in a Manufacturing Industry(Elgi Equipments)
- 3.Effect of Egg Protein Supplementation on Anthropometric and Biochemical Parameters of Selected Adult Subjects
- 4. Formulation and Development of Egg based Snack recipes for a private firm in Namakkal
- 5.Development of Bittergourd based Recipes and Estimation of their Glycemic Index





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#### DEPARTMENT OF PHYSICAL EDUCATION

An excellent Consultancy Service by the Students in Sports Training to School Students!

Avinashilingam Institute, Department of Physical Education has extended their technical support by rendering the students and Staff to act as officials and technical experts to Graham Staines Matriculation School, Coimbatore in organising the West Zone Inter School Tournaments.

45 of our students and 5 staff rendered support in Setting up Infrastructurefacilities for the school, laying the new 200 mts track, courts& fieldfacilities in the school. Rendered technical supportin organizing the the competition and also trained the Graham SchoolTeam's for Inter Schoolcompetitions. As a consultancy charges, school provided Rs.10,000 to our institute.

The games and sports conducted for School Boys and Girls:

Chess, Carrom, Tennicoit, KhoKho, Football, Volleyball, Kabaddi, Throwball, Handball, Ball Badminton, Hockey and Athletics

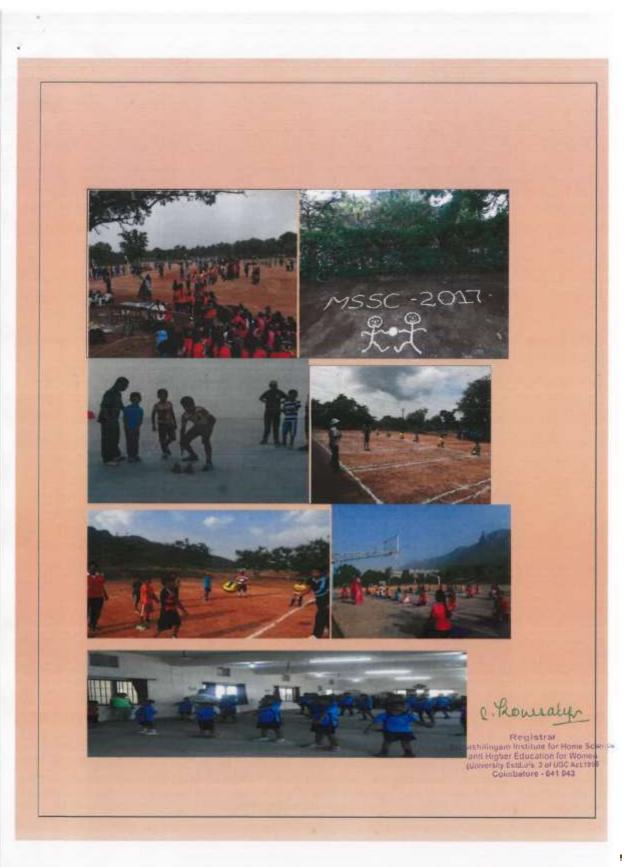
Our students acting as Technical Officials and organising matches





Residential Sports Summer Camps are organised for School Children every year

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#### DEPARTMENT OF FRENCH

#### Consultancy with Satchidananda Jothi Niketan International School Kallar.

- To develop French language and to equip school children with skill in French language
- This Consultancy is proposed for the benefit of students to help them acquire communication skills in French and to get an exposure to Frenchas a foreign language which would serve them to cross boundaries and get international exposure.



Chancellor Anna Avl. and Dr. Kavidasan of ROOTS, Pvt. Ltd, Coimbatore signing the Institutional Consultancy

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#### DEPARTMENT OF HUMAN DEVELOPMENT

The Department of Human Development has been engaged in consultancy services to monitor and educate parents and children for over all development of their child from its inception through Sri. Avinashilingam Creche cum laboratory Nursery School. Major activities and services provided were

- Parent counseling
- > Identifying developmental and behavioural problems of children
- Various national day and festival celebrations
- Children's day and Thanksgiving day



he staff members of Human Development Department are engaged every year in giving special training for Anganwadi workers about developmental domains of children, low cost teaching aid preparation, value based education, stimulation and nutrition aspects.





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#### DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil Engineering caters for the consultancy services on quality control testing facilities on construction materials and water & wastewater. The department has expert faculty in the field of Structural and Environmental Engineering. Faculty members have involved in the construction field as planning, designing and quality engineers. Expert opinion in quality of construction materials, water quality, planning and managing of construction works has done for the past decade for the parent Institution and Governmental organisations like Public Works Department (PWD). We also facilitate in production of paver blocks.

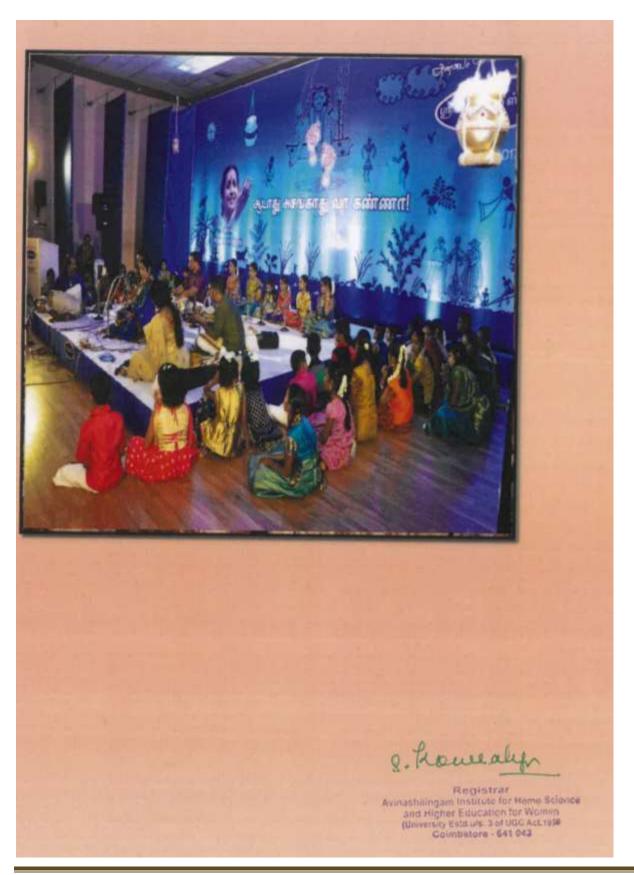


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#### **DEPARTMENT OF MUSIC**

# Chinnanchiru Kuyilgal-A music Class for the children of the public organized as a Consultancy Service

Chinnanchiru Kuyilgal is a Memorandum of Understanding [MoU] between Department of Music, Avinashinligam Institute for Home Science and Higher Education for Women and Sri Krishna Sweets, Coimbatore.

By the screening of selection process, the students from I Standard – IX Standard were selected by the aptitude test. Among the 300 students 55 students were selected by the Staff members and PhD scholars of Music Department.

The aim is to seed the good thoughts and deeds in the mind of the youngsters.

Hence Bhajans, songs on different deities, Pranayaama and Thoppukaranam were taught for the selected students. Singing, doing Pranayaama and Thoppukaranam are all well known processes, which are believed to improve the concentration of the mind and brain and also to activate the parts of the body.

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#### DEPARTMENT OF COMMERCE

## E filing of Income Tax Returns

Electronic filing of income tax returns is carried out by the staff members of Commerce Department with the help of trained students. E-filing gives taxpayers the benefit of getting the status updated on real time. The income tax returns are received and accepted online without hazzles. As it becomes mandatory to file the returns online, it saves the time of both tax return filers as well as the income tax department. The commerce department renders consultancy service to the teaching and nonteaching staff of the institution. They avail this service every year on payment of a nominal fee.

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### DEPARTMENT OF ZOOLOGY

The Department offers the following as consultancy services

1. Culture and Maintenance of Ornamental fishes.



2. Training in Vermicompost production.



3. Microbial Analysis of Soil and Water and Identification of microbes.



4. Demo on Virtual Animal Dissection for school children's.



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#### DEPARTMENT OF TEXTILES AND CLOTHING

The production laboratory is facilitated with miniature machines for fabrication where in even with minimum quantities of raw materials the yarns can be spun and woven or nonwoven fabrics can be prepared. The demand for newer nonconventional fibres and its applications has encouraged industries, institutions, academicians and research scholars towards development of nonwoven fabrics for various applications like agro, geo, build and indu tech. The faculty members in the department have extended their expertise knowledge to develop nonwoven fabrics.

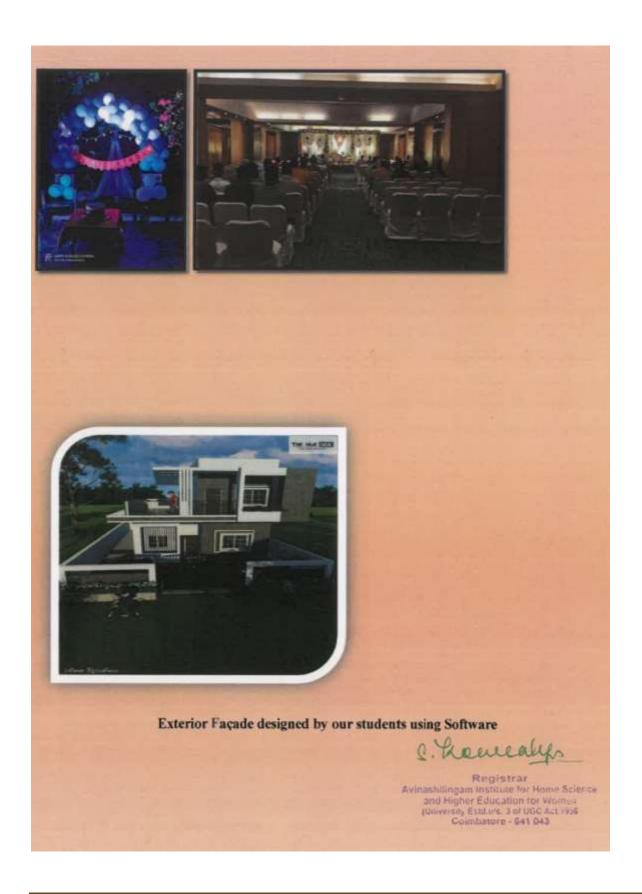




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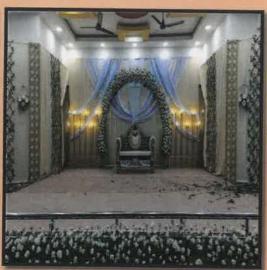
#### DEPARTMENT OF RESOURCE MANAGEMENT

## CONSULTANCY SERVICES CARRIED OUT BY THE STUDENTS

Students work as independent consultants/work with architects and interior designersand design residential and commercial interiors. They design art objects with artistic flair, draft schematic designs of kitchen to realistic modular kitchen, with artistic skill apply mehandi, organise workshops on creative arts, soap making, floral arrangements, motivate households to take up organic farming and terrace garden, aesthetically decorate for special events and occasions for the clients.

#### Students as Event Planners and Decorators





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- Career/ Interest/Vocational Assessments
- > Counselling for appropriate choice.
- Guidance on programs of interest.
- Amalgamation of Individual interests with practical and viable career options.
- Guidance for admission to foreign universities.

C.A.R.E - Centre for Ambitious and Resourceful Endeavors offers its services free of cost to staff and students of Avinashilingam Institute for Home Science and Higher Education for Women. Also all the above said services are offered on a paid basis to outsiders from January 2019 onwards.

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- Occupational Stress Inventory
- Raven's Standard Progressive Matrices
- Self-Esteem Questionnaire
- Sentence Completion Test
- State Trait Anxiety Scale

#### C.A.R.E offers services for:

- · Difficulty concentrating in studies/work
- · Frequent illness without reason
- · Guilt/ Shame
- Inability to make decisions
- Inability to adjust to any new situation
- Intense felling of any emotions
- Negative feedback in class / workpalce
- · Not able to enjoy one's favourite activities
- Subtance abuse
- Traumatic experience
- Relationship Difficulties

#### MAJOR THERAPIES WE OFFER

- Breathing Exercises.
- Cognitive Behavior Therapy.
- Deep Muscle Relaxation
- Imagery
- Positive Therapy.
- Rational Emotive Therapy.
- Relaxation Training.
- Mindfulness Meditation
- Visualization
- Zen Meditation

**EMOTIONAL MANAGEMENT:** Emotions are an integral part of our being. Emotions should not be controlled but managed efficiently.

Emotional Management Training has the objective of:

- Self Awareness
- Awareness of Emotions experienced
- Appropriate Communication of Emotions
- Intensive training on positive actions to manage emotions.
- Apply Reason to Emotion.
- Psychodrama.
- Intensive Anger Management Counselling

CAREER MAPPING: A Question that invades and troubles the minds of most youngsters today is the decision related to their careers. We at C.A.R.E help students come to a decision regarding their career choice.

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### DEPARTMENT OF PSYCHOLOGY

C.A.R.E

(Centre for Ambitious and Resourceful Endeavours)



C.A.R.E - Centre for Ambitious and Resourceful Endeavors is an initiative of staff and students of the Department of Psychology which extends guidance and counseling to faculty and students of the institution. The Centre motivates the student community to feel free to undergo Psychometric assessment that would open their Pandora box of aptitude, abilities and personality characteristics that, in turn would facilitate their decision in choice of career, Higher education and for a Holistic personal development.

The Centre also provides assistance to staff and students to deal with their emotional and personal concerns.

#### VISION

Centre for Ambitious and Resourceful Endeavours has the vision to understand individual behaviour, solve problems arising due to numerous human interactions, travel through the unexplored contours of the human mind, and pave the pathway for a successful and happy life.

#### MISSION

- HOLISTIC DEVELOPMENT
- EMOTIONAL INTELLIGENCE
- PERSONALITY DEVELOPMENT
- STUDENT WELLBEING
- CAREER GUIDANCE

#### WHAT WE OFFER

- · Psychometric Assessment
- Counselling
- Personality Mapping
- Career Mapping
- Workshops

#### PYCHOMETRIC ASSESSMENT

- Aggression Scale
- Assertiveness Inventory
- Brain Dominance Test
- Comprehensive Interest Schedule
- Emotional intelligence scale
- Myer's Brigg Type Indicator
- Neo Five Personality Scale

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#### SCHOOL OF ENGINEERING

## DEPARTMENT OF FOOD PROCESSING AND PRESERVATION TECHNOLOGY

The Department of Food Processing and Preservation Technology focusses on the consultancy services in the following areas

- Process development
- New product Development (NPD) –Extruded Products, Pickles and Spreads.

Solutions were provided to industrial products pertaining to preservation of food products like indigenous and traditional pickles and spreads to Booster International Foods, Nagercoil.

Development of Innovative extruded products to Industries like United India Foods, Dindigul and VedikaEntreprises, Kallakurichi. Supportive services offered to Industries benefitted the department by means of sponsors for various activities like Seminar, Conferences, Workshops etc..

The Department also started a Bakery Production Unit which is taken up by the Staff and Students to produce and distribute hygienically prepared quality baked products in campus with the support of the seed fund of Rs.25,000/- provided by the Institution. This effort also enhanced the entrepreneurial skills and hands on experience among students.



New Product Development: Extruded Pasta



Baked Products from Bakery Production Unit-Campus II

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#### **DEPARTMENT OF PHYSICS**

#### **Potential Areas of Consultancy: Mobile Service Training**

Modern mobile phones are inevitable in today's life. Maintenance and servicing is significantly and equivalently important to be connected with our work, society and other aspects of life. The department of Physics has conducted a series of two day's Workshop on Mobile Phone Servicing with the theme based on training the students towards entrepreneurial endeavors and skill development. The response and feedback are found to be very effective. Based on this background department further plans to start, initially Consultancy services for Mobile Phones for our stake holders initially and then extend the same to society on a large scale. Some glimpses of the workshop are given:



## Development of Nano Scale Coatings on Cotton Fabric for Antimicrobial Activity and for Enhanced Electrical Conductivity

Value addition of fabric is a captive area of research. The research so far made has yielded a nano copper impregnated cotton fabric which would be suitable for variety of purposes namely (i) supercapacitor separators (ii) antimicrobial fabric which can be washed normally upto 60°C with detergent. Hence, the consultancy is given on fabric upgradation for antimicrobial activity







and enhanced el ectrical conductivity

#### Development of all solid state batteries for low to high capacity demands

The expertise gained over the past three decades on battery fabrication and material research concerned with batteries is an asset and prototypes of all solid state batteries are made and tested to yield good outputs. This knowledge would be utilized in solving interfacial issues of solid state batteries, improving the capacity and longevity of the all solid or semi solid batteries.

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#### DEPARTMENT OF FOOD SCIENCE AND NUTRITION

The Department of Food Science and Nutrition offers a wide range of consultancy services to Government, Non Government Organizations, Schools, Colleges and Food Industries on planning menu and evaluation of Nutrition Intervention programmes, Government of Tamil Nadu, Nutritional Assessment among Community, Screening for Nutritional Deficiencies, Analysis of Food Samples, Food Product Development, Consultancy for Lifestyle Disorders, Inspection and Certification for Training Institutes and Academies.









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## **Centralized facilities in the Institution and information link**

- Advanced Research Laboratory
- **♣**Bharat Ratna Prof.CNR Rao Research Centre
- **Centre for Machine learning and Intelligence**
- **Centre for Artificial Intelligence and Robotics**
- **Centre for Manufacturing and Emerging Technologies**
- Innovation and Incubation Centre
- **Entrepreneur Development Cell**
- Institutions Innovation Council
- **Avinashilingam Innovation and Incubation Centre**

## Advanced Research Laboratory

# https://avinuty.ac.in/maincampus/uploads/facilities/library/ARL.pdf

### **Advanced Research Laboratory**

Advanced Research centre was established in the year 2009 to facilitate research of high standards with funds received from DST-CURIE scheme. This Centralised Instrumentation facility called the Advanced Research Laboratory has been set up to house most of the higher end equipments purchased by all the departments in the University. This laboratory is accessible to all the research scholars and staff members of the University and almost all the equipments are used for outsourcing samples that lead to income generation of the facility.

Some of the Sophisticated Instruments available are

- Nano Spray Dryer B-90
- Freeze Dryer/Lyophilizer
- Iso Electric Focussing Unit-[2D Gel Electrophoretic System] with gel dryer and scanner
- ♣ Bioreactor
- ELISA Microplate Reader
- ♣ HPLC
- ♣ Dose IT, Sonics Vibra cell-Atomizer
- Akta prime plus chromatography system with fraction collector
- Flow Cytometer
- Gel Documentation system
- Bio Spec Nano

### **ELISA Microplate Reader**



Designed to detect biological, chemical or physical events of samples in microtiter plates

## AKTA Prime plus chromatography fraction collector



Fraction collectors are in common use with most liquid chromatographs. They are used to collect samples for further purification, subsequent examination by spectroscopic techniques or for biological or organoleptic testing.

#### Dose IT, Sonics Vibra cell-Atomizer



An atomizer nozzle is an aspirator nozzle for producing a fine spray of a liquid based on the Venturi effect used by textiles and clothing students

## High Performance Liquid Chromatography



It is a chromatographic technique used to separate a mixture of compounds in analytical chemistry and biochemistry with the purpose of identifying, quantifying or purifying the individual components of the mixture.

### Iso Electric Focussing Unit-[2D Gel Electrophoretic System] with gel dryer and scanner



Two-dimensional gel electrophoresis (2-D electrophoresis) powerful and widely used method for the analysis of complex protein mixtures extracted from tissues, or other biological samples. This technique separate proteins in two steps, according to two independent properties: the first-dimension is isoelectric focusing (IEF), which separates proteins according to their isoelectric points (pl); the second-dimension is SDSpolyacrylamide gel electrophoresis (SDS-PAGE), which separates proteins according to their molecular weights (MW).

#### BIOREACTOR



Suitable for most fermentation and cell culture applications

#### NANO SPRAY DRYER B-80



gentle method producing powders with a defined particle size out of solutions. dispersions, and emulsions which widely used for pharmaceuticals, food, biotechnology, and other industrial materials synthesis. Produce submicron or even nano particles of 300 nm to 5 sizes with very narrow size distribution

### ACE Alera Clinical Chemistry



To determine levels of albumin, alkaline phosphatase, aspartate transaminase (AST), blood urea nitrogen, bilirubin, calcium, cholesterol, creatinine, glucose, inorganic phosphorus, proteins, and uric acid in blood serum or other body samples.

### **FLOW CYTOMETER**



Flow Cytometry used for the analysis of DNA or RNA content, and for a number of functional studies on cells namely cell cycle analysis, apoptosis etc.,

#### FREEZE DRYER/LYOPHILIZER



It is used for dehydration process typically used to preserve a perishable material or make the material more convenient for transport.

### **Facilities**



### **BioSpec Nano**



The Shimadzu BioSpec-nano is a low-maintenance micro-volume spectrophotometer designed for the modern life science laboratory. It offers superior detection limits, up to 10 times better compared to the competition, making it the perfect instrument for quantitation of DNA, RNA, protein analysis, and photometric measurements. Quantitation can be rapidly and simply carried out with very small samples ranging from 1µL. And, with dedicated functions, such as automated sample mounting and wiping, the BioSpec-nano offers a rapid 3-second analysis time and a 10-second cycle time between samples.

### ♣Bharat Ratna Prof.CNR Rao Research Centre

### https://sites.google.com/avinuty.ac.in/avinashilingamp rofcnrrc

**About the Research Centre** 

Year of inception: 2017

#### **ISO CERTIFIED RESEARCH CENTRE**

The Bharat Ratna Prof. C.N.R. Rao Research Centre houses cutting-edge technologies with high end equipment under a roof that facilitate the trans-disciplinary research. This Research Centre with the state -of- the art equipment is available for use by the research scholars in and outside the Institution. It has been established with the funding of DST under "Consolidation of University Research for Innovation and Excellence in Women Universities" (CURIE).

The Research Centre houses a wide array of highly sophisticated equipment like Field Emission Scanning Electron Microscope (FESEM), X-ray Diffractometer (XRD), Nano Spray Dryer, Atomic Absorption Spectrophotometer (AAS), 3D Optical Profilometer, Fourier Transform Infrared Spectrophotometer (FT-IR), Body



Composition Analyzer, Thermo Gravimetric Analyser (TGA), Texture Analyzer, Plasma Chamber, Spectrophotometer with Color Lab, Turbidity meter, Ultrasonic Homogenizer, UV Biospec, Electrochemical Workstation and Ozonizer. This centre has been set up with a sum of several crores of rupees. The facilities available in this high-technology research centre are also extended to the research scholars and staff members of other educational and research institutions, at a nominal cost, as an outsourcing activity.



#### Contact details: adusamples@avinuty.ac.in



# Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-43 BHARAT RATNA Prof. CNR RAO RESEARCH CENTRE REQUISITION FOR CONSULTANCY/ SAMPLE ANALYSIS

| Name                    | *  |
|-------------------------|--|
| Designation/Class       |  |
| Institution and Address |  |
| Department              |  |
| Email id                | : Mobile Number:   |
| User category           | : Industry/Lab/UG/PG/M.Phil./Project work/Ph.D/Faculty             |
| SAMPLE INFORMATION      |  |
| Number of samples       | : Sample Code  |
| Nature of Sample        | : Solid/Liquid/Metal plate/Glass plate/Polymer film/Textile/others |
| Receipt no              | 1  |
| Date:                   |  |
|                         |  |

List of equipment for sample analysis

| S.NO | PARTICULARS  | No.of   | SAMPLE INFORMATION   |
|------|--|---------|--|
| Savo | TARRELLARS   | samples | SAMPLE INFORMATION   |
|      | FESEM& elemental analysis<br>(with mapping of elements)  |         | As per queue. Payment to be made for<br>FESEM only after email confirmation<br>Expected elements required  |
| 2    | 3D Optical Profiler  |         | DO I SECURE CONTRACTOR IN CONTRACTOR OF THE CONT |
| 3    | Thermo Gravimetric Analyser(TGA)<br>(Powder sample only)   |         | Temperature range & rate:  |
| 4    | FT-IR  |         |  |
| 5    | XRD (Powder sample only) If liquid coat on glass substrate   |         |  |
| 6    | Texture Analyzer   |         |  |
| 7    | Spectrophotometer with Colorlab  |         |  |
| 8    | Nano Spray dryer (200ml)   |         |  |
| 9    | Plasma Chamber   |         |  |
| 10   | Manager Anna and an  |         |  |
| 11   | Body Composition Analyzer  |         |  |
| 12   | Ultrasonic homogenizer   |         |  |
| 13   | Turbidity meter (min 25ml)   |         |  |
| 14   | Ozone Purifier   |         |  |
| 15   | Phytochemical Screening(50ml) or<br>plant extract min 2g   |         | Solubility:  |
| 16   | Anti-Oxidant Assay (10ml)  |         | Solubility:  |
| 17   | Brine Shrimp Assay   |         | Solubility:  |
| 18   | Ball Mill (max 1.2 Kg)   |         | Time:  |
| 19   | Biospec Nano Spectrophotometer (Uv<br>absorbance/Simple Nucleic acid<br>quantitation/Labeled Nucleic acid quantitation<br>/Protein quantitation OD-<br>280) Sample Qty-100µl |         | Solubility:  |
| 20   | Electrochemical Workstation<br>(Linear Polarisation, Impedance, Cyclic<br>voltammetry etc.)  |         |  |
| 21   | Design of Experiments<br>(IF data is above 1,000 charges vary)   |         |  |

<sup>\*\*\*</sup>Kindly acknowledge the facility utilized in publications and intimate to us

Signature of Student

Signature of Guide/HOD

Online Payment details: The Registrar, SB A/C:6059667020(R&C), INDIAN BANK, ADUC BRANCH, IFSC: IDIB000A005

#### Contact details:

### adusamples@avinuty.ac.in

#### ANALYSIS OUTSOURCING CHARGES\*

| S.NO | PARTICULARS   | CHARGES PER SAMPI         |                          | SAMPLE                  |
|------|---|---------------------------|--------------------------|-------------------------|
|      |   | Inside<br>Institu<br>tion | Other<br>Institu<br>tion | Industri<br>s/<br>R&D'S |
| 1.   | FESEM 4 images  | 700                       | 700                      | 3000                    |
| 2.   | 3D Optical Profiler   | 100                       | 200                      | 4000                    |
| 3.   | Thermo Gravimetric Analyser*  | 100                       | 500                      | 2000                    |
| 4.   | FT-IR   | 50                        | 100                      | 250                     |
| 5.   | XRD (Slowscan-Rs.800/Sample)  | 400                       | 400                      | 1000                    |
| 6.   | Texture Analyzer  | 100                       | 100                      | 1000                    |
| 7.   | Spectrophotometer with Colorlab   | 50                        | 50                       | 200                     |
| 8.   | NanoSpray dryer*  | 300                       | 750                      | 3000                    |
| 9.   | Plasma Chamber  | 100                       | 100                      | 1000                    |
| 10.  | Atomic Absorption Spectrometer/sample                                       |                           |                          |                         |
| 11.  | Body Composition Analyzer   | 100                       | 100                      | 500                     |
| 12.  | Ultrasonic homogenizer*   | 50                        | 50                       | 100                     |
| 13.  | Turbidity meter   | 50                        | 50                       | 100                     |
| 14.  | Ozone Purifier  | 50                        | 50                       | 100                     |
| 15.  | Phytochemical Screening (17 metabolites)                                    | 200                       | 200                      | 500                     |
| 16.  | Anti-Oxidant Assay (AA Standard)  | 300                       | 300                      | 500                     |
| 17.  | Toxicity (Brine Shrimp Assay*/Allium cepa)                                  | 500                       | 1000                     | 2000                    |
| 18.  | Ball Mill* for nanosize prep  | 50                        | 50                       | 200                     |
| 19.  | Biospec Nano<br>Spectrophotometer - UV absorbance<br>(Sample Qty- 100µl)    | 50                        | 100                      | 200                     |
| 20.  | Electrochemical Workstation* CV,<br>GCD, and corrosion inhibition studies   | 500                       | 500                      | 1000                    |
| 21.  | Design of Experiments <sup>3</sup><br>(IF data is above 1,000 charges vary) | 200                       | 200                      | 400                     |
| 22   | Ellipsometer  | 100                       | 100                      | 400                     |
| 23   | Contact angle meter   | 100                       | 200                      | 500                     |
| 24   | Dip coater  | 50                        | 100                      | 200                     |
| 25   | USB travelling microscope   | 50                        | 100                      | 200                     |
|      |   |                           |                          |                         |

\*Depending on operation time of equipment

Note:

Atomic Absorption Spectrometer equipment is under maintenance. We will intimate once it is ready

Online Payment details: The Registrar, SB A/C:6059667020 (R&C), INDIAN BANK, ADUC BRANCH, IFSC: IDIB000A005

# **Centre for Machine learning and Intelligence**<a href="https://sites.google.com/avinuty.ac.in/cmli">https://sites.google.com/avinuty.ac.in/cmli</a> Al Services

### Al as a Service

Centre for Machine Learning and Intelligence is providing 'AI as a Service' to all the Researchers of our Institution. The kind of service to be provided will be

- Artificial Intelligence and Machine Learning Frameworks
  - Google Cloud Platform
  - Google AutoML
  - Google Vision API
- Cognitive Computing Interfaces (APIs)
  - Google Cloud Platform APIs
  - Natural Language Processing
  - Development and offering of AI & ML interfaces

Those who wanted to make use of this facility, please fill in this Google form

https://forms.gle/UmHCifz9q5HrtfDH7

#### **AI Cloud Services**

Centre for Machine Learning and Intelligence is providing 'AI Cloud Services' to all the Researchers of our Institution. The kind of service to be provided will be

- Infrastructure as a Service

Н

- Offering CPU
- Memory
- Software resources through virtualization
- Storage as a Service
- \* Unlimited Data storage
  - Storage for Learning materials
  - Storage for Tutorials and training materials
  - Software as a Service
- Software virtualization

- Accessing through VMware / Oracle VMBox
- Data as a Service
- **Data pooling** 
  - Construction of data repository
  - Donation of datasets

Those who wanted to make use of this facility, please fill in this Google form

https://forms.gle/P2cMJ3pqBm4E1CfCA

### **Service Charges:**

- 1. AI Cloud charges inclusive of platform, processor, memory and minimum services
- 2. AI interfaces / APIs within the Institution
- 3. Customization of AI interfaces /APIs within the Institution
- 4. AI interfaces / APIs outside the Institution
- 5. Customization of AI interfaces /APIs outside the Institution
- Rs. 500 per month
- Rs. 500 per interface / API
- Rs. 500 per interface / API
- Rs. 1000 per interface / API
- Rs. 1000 per interface / API

### Centre for Artificial Intelligence and Robotics



### DST-Funded

### Centre for Artificial Intelligence and Robotics

The department of Biomedical Instrumentation Engineering has established a "Centre for Artificial Intelligence and Robotics" with funds sanctioned in 2019-2020, by DST CURIE-AI facility, for setting up AI facility at the Avinashilingam Institute. It is a center formed to enable an interdisciplinary interaction between under graduate and post graduate students, faculties, researchers and the industry to enhance research opportunities, real world problem solving, training and education for the academic clients and also for knowledge sharing. This center is also involved in research, focusing on areas such as Artificial Intelligence, Machine Learning, Deep Learning, Robotics-Control and Command, Automation and their application in the healthcare, agriculture, education, transportation, smart cities and infrastructure domains. To achieve this, a club named Avinashilingam Artificial Intelligence club (A2I) was formed with the following objectives.

#### Objectives

- To impart skills relevant to AI and Robotics
- To conduct intensive hands-on-training programmes associated with industries
- To nurture the creativity of students in Artificial Intelligence through AI club and to help kindle
  fascinating and new ideas to develop innovative AI/Robotics related projects and prototypes leading
  to innovations and patents.

#### Activities of the Research Centre

- Three days Hands-on-training on "Embedded Computing for IoT system" conducted from 19.10.2019 to 21.10.2019
- Artificial Intelligence and Machine Learning using MATLAB conducted from 17.12.2019 to 19.12.2019
- ♣ Two day Workshop on "Robotics using LabVIEW" conducted on 28.1.2020 & 29.1.2020
- The Artificial Intelligence club actively functions throughout the year. An awareness programme is organized to enthuse the new comers to join the AI club. Inaugural programme of AI Club is aimed to bring out the creativity of the new students by the existing members of the club through AI exhibits of mini projects and models. Presentations about humanoids and videos of Siri, Asimo and Sophia are screened to kindle the interest of students. A call for student's project proposal under our Avinashilingam Artificial Intelligence (A2I) Club follows. Teams with a mentor along with few students were sanctioned funds for AI Projects through a stringent evaluation process which includes a project presentation. The time allotted for completion of the shortlisted project proposals is three months, after which a report of the project is submitted by each team. The funds are released following the submission of project report.

### Created AI facility

Research facilities of Centre for Artificial Intelligence and Robotics include the NI Robotic Hardware bundle consisting of the Rover Vehicle Assembly system, Balancing arm Assembly system and Self balancing Robot Assembly system and the Robotics-GPU based NVIDIA Workstation has become a part of the Centre to facilitate teaching, learning and Research. Students and faculty also benefit through hands-on-training programmes.

#### In-house AI Research Projects funded by the Centre

- Development of screen printed Graphene based ECG sensor for Wearable e-textile application
- Neural Network based Oral disease detection using Wi-Fi module
- Bone Arthritis.
- Optimized light weight light emitting concrete blocks
- Non-invasive measurement of Glaucoma disease using Bio-magnetic signal from eye.
- Lung Function monitoring device for Asthma and Jaundice
- Air Quality prediction using AI
- Congestion control in wireless sensor network using AI techniques

### Hands-on-training organized for the students

| S. No. | Date                           | Workshops/Training activities  | Beneficiary Department |
|--------|--------------------------------|--|------------------------|
| 1.     | 09.10.2019<br>to<br>11.10.2019 | Three days hands-on training on Embedded Computing for IoT Systems.                                  | BMIE                   |
| 2.     | 07.11.2019                     | One day Programme on Intelligent Sensing Technology<br>for Non-Destructive Evaluation of Structures. | Civil                  |
| 3.     | 18.12.2019                     | Two day workshop on 'Applications of IoT based food quality monitoring approach using sensor'        | FPPT                   |
| 4.     | 17.12.2019<br>to<br>19.12.2019 | Artificial Intelligence and Machine Learning using MATLAB  | BMIE                   |
| 5.     | 19.12.2019<br>&<br>20.12.2019  | Two day workshop on AI for cloud based IoT.  | ECE                    |
| 6.     | 23.01.2020<br>&<br>24.01.2020  | Machine learning using python  | CSE                    |
| 7.     | 28.01.2020<br>&<br>29.01.2020  | Robotics using LabVIEW   | BMIE                   |





Training by Mr. Mohammed Asif, Nanochip Solutions, Pvt. Ltd., Bangalore
On "Embedded Computing for IoT Systems"





Hands-on session by Mr.D.Rajkumar, Engineer, DesignTech Systems Ltd, Chennai
On "Artificial Intelligence and Machine Learning using MATLAB"





Hands-on session by Mr.T.R. Balaji, Engineer, Optithought, Chennai On "NI Robotics"





Workshop on "Intelligent Sensing Technology for Non-Destructive Evaluation of Structures" by Technical expert, Leading Edge Lab Equipment, Coimbatore



Workshop on "Machine Learning Using Python" by Mr. Vishnu Python Developer, Gateway Software Solutions, Colmbatore

#### Activities of A2I Club

- Awareness programmes for the students
- Awareness programmes for the common people/sector-wise
- Awareness programmes at the adopted villages by the students
- ♣ AI Newsletter by the students
- Inviting project proposals from the students of all Departments and the best proposals will be funded
- ♣ AI competitions Student's participation in the competitions related to AI
- AI Exhibitions Exhibitions will be arranged for the projects developed/concepts explored by the students
- Technical projects
  - · Working models
  - Surveys



Awareness on A2I club among students of campus II

### Centre for Manufacturing and Emerging Technologies

### https://sites.google.com/avinuty.ac.in/cmet/home

### Research Activities

- Printed Electronics
- Treatment of dyeing industry effluent
- Green synthesis of metal oxides
- Quality detection of beverages
- Site suitability analysis for decentralized waste processing unit for Coimbatore city using GIS
- Consort chat bot for Alizheimer patients
- Air quality prediction using AI technologies
- Design and testing of Antennas

## **Facilities Available**

#### Design and testing facility

- 1. Wireless System Design and Testing
- 2. Water and waste water quality testing and modelling
- 3.Bio CAD
- 4.COMPU Tech
- 5 Material synthesis and Characterization

#### Fabrication and synthesis facility

- 1. Food Product Development Facility
- 2.Screen Printing Facility

# Innovation and Incubation Centre <a href="https://avinuty.ac.in/maincampus/AIIC/index.html">https://avinuty.ac.in/maincampus/AIIC/index.html</a>

# AVINASHILINGAM INNOVATION AND INCUBATION CENTRE - FACILITIES



### **Le la companie de la**

https://sites.google.com/avinuty.ac.in/edc/home

Institutions Innovation Council

https://sites.google.com/avinuty.ac.in/iic/home

### **INSTITUTIONAL FACILITIES TO SUPPORT RESEARCH & CONSULTANCY**

### • Advanced Research Lab - Geotagged Photos







Bharat Ratna Prof. C.N.R. Rao Research Center - Geotagged Photos



















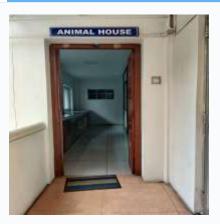


**Textile Production Laboratory - Geotagged Photos** 





### **Animal House/Green House - Geotagged Photos**













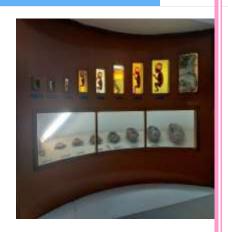




**Museum - Geotagged Photos** 







**Video Production Studio - Geotagged Photos** 

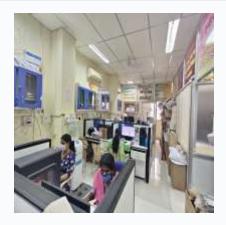






**Business Lab - Geotagged Photos** 





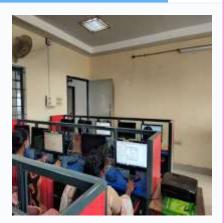




### **Research/Statistical Databases - Geotagged Photos**







### **Schools of the Institution**

School of Home Science

School of Physical Sciences &
Computational Sciences

School of Biosciences

School of Arts & Social Sciences

School of Commerce & Management

School of Allied Health Science

School of Education

School of Engineering



### SCHOOL OF PHYSICAL SCIENCES & COMPUTATIONAL SCIENCES

| 7 A       | Department of Mathematics            |
|-----------|--------------------------------------|
|           | Department of Physics                |
| الله الله | Department of Chemistry              |
|           | Department of Computer Science       |
|           | Department of Information Technology |

### SCHOOL OF BIOSCIENCES

|       | Department of Botany                                       |
|-------|--|
|       | Department of Zoology                                      |
| FOREN | Department of Biochemistry, Biotechnology & Bioinformatics |
| E ac  | Department of Physician Assistant                          |

#### SCHOOL OF ARTS & SOCIAL SCIENCES





### SCHOOL OF COMMERCE & MANAGEMENT

|      | Department of Commerce                |
|------|---------------------------------------|
| MIN  | Department of Business Administration |
| GOAL | Department of Tourism Management      |

### SCHOOL OF ALLIED HEALTH SCIENCE

| PA          | Department of Physician Assistant                     |
|-------------|---|
| OLC:        | Department of Audiology and Speech Language Pathology |
|             | Department of Physiotherapy                           |
| 1 TA        | Department of Optometry                               |
| <b>&gt;</b> | Department of Clinical Embryology                     |
|             | Department of Clinical Psychology                     |

### SCHOOL OF EDUCATION

|          | Department of Education NCTE          |              |
|----------|---------------------------------------|--------------|
| till the | Department of Special Education       |              |
|          | Department of Physical Education NCTE | ge <b>61</b> |

#### **SCHOOL OF ENGINEERING**

Biomedical Instrumentation Engineering

Civil Engineering

Computer Science and Engineering

Electronics and Communication Engineering

Food Processing and Preservation Technology

Printing Technology

Science & Humanities (Supporting department)

# Consultancy and services offered by researchers of various School

### **Home Science**

School of Home Science Consultancy entails professionals with a special impact on Home Science. Broad ranges of knowledge of the academicians are associated with the functional implications of the same field and hold several potentials to give valuable comments on their specialized field.

Consultants of different departments are associated with number of function that includes identification of problems, possible opportunities, analysis of the problem, and recommendation of appropriate measurement, implementation and assessment of recommended options. Potentialities of different department consultancy are listed below:

- 1. Resource Management: Interior design and CAD software designs
- 2. Food Service Management and Dietetics: Diet counselling and millet products
- Food Science and Nutrition: Food label design, calculation of nutritive value of foods, Edible packaging films and cups, Nutrient Analysis for Academic Institutions and Food Industries , Testing of products from Pharmaceutical Industries.
- 4. Textile and Clothing: Apparel Designing ,Non-woven fabrics and finishes
- 5. Human Development: Consultancy for TCS as Item creator and item Reviewer
- 6. Home Science Extension Education: NGO Management, Career Guidance, Facilitating Linkages and Start up Guidance.

The consultants take micro view and offers answers for micro outlook. They also refocus the implementing strategy by doing action research and consider for future opportunities. This helps School of Home Science to be more potential in consultancy.



| S.<br>No | Nature of Consultancy   | Consultant name & Contact details  | Charges (Rs)              |                            | Rs)                          |
|----------|---|--|---------------------------|----------------------------|------------------------------|
|          |   |  | Inside<br>Institu<br>tion | outside<br>Institut<br>ion | Industry                     |
| 1.       | Entrepreneurship Development  | Dr.(Mrs.)R. Jansi Rani<br>jansirani_ext@avinuty.<br>ac.in                      | -                         | 500                        | 1000                         |
| 2.       | Entrepreneurship Development  | Dr. P.Kalaivani  | -                         | 500<br>500                 | 1000<br>1000                 |
| 3.       | <ul><li>1.NGO Management</li><li>2. Career Guidance</li><li>3. Facilitating Linkages</li><li>4. Start up Guidance</li></ul> | Dr. S. Meenakshi<br>meenakshi_extn@avin<br>uty.ac.in                           | -                         | 500<br>500<br>500<br>500   | 1000<br>1000<br>1000<br>1000 |
| 4.       | <ul><li>1.NGO Management</li><li>2. Career Guidance</li><li>3. Facilitating Linkages</li><li>4. Start up Guidance</li></ul> | Dr.(Mrs.) Parboti<br>Prasad Raout<br>parbotiprasadraout_ext<br>n@avinuty.ac.in | -                         | 500<br>500<br>1000<br>1500 | 500<br>1000<br>3000          |
| 5.       | <ul><li>1.NGO Management</li><li>2. Career Guidance</li><li>3. Facilitating Linkages</li><li>4. Start up Guidance</li></ul> | Dr. K. Sumathi<br>Sumathi_extn@avinuty<br>.ac.in                               | -                         | 500<br>500<br>1000         | 1000<br>1000<br>2000         |

| 7.  | 1.NGO Management 2. Career Guidance 3. Facilitating Linkages 4. Start up Guidance  1.NGO Management 2. Career Guidance 3. Facilitating Linkages 4. Start up Guidance                         | Dr. D. Kokila kokila_extn@avinuty.a c.in  Mrs. S. Sathya Priya sathyapriya_extn@avin uty.ac.in | -   | 500<br>500<br>1000<br>500<br>500<br>500<br>500                            | 1000<br>1000<br>2000<br>1000<br>1000<br>1000                    |
|-----|--|--|-----|---|---|
| 8.  | Entrepreneurship Development   | Dr.(Mrs.)R. Jansi Rani jansirani_ext@avinuty.  | 500 | 1000  | 1500  |
| 9.  | NGO Management Career Guidance Facilitating Linkages Start up Guidance   | Dr. S. Meenakshi<br>meenakshi_extn@avin<br>uty.ac.in   | 500 | 1000  | 1500  |
| 10. | Testing of Polyherbal formulations for Pharmaceutical Industries and Nutrient Analysis of food and animal feeds for Academic Institutions  Food label design and nutritive value calculation | Dr.(Mrs.)C. A. Kalpana<br>Email:<br>kalpana_fsn@avinuty.a<br>c.in                              | -   | Nutrien<br>t<br>Analysi<br>s - Rs<br>100-<br>500 /<br>nutrient<br>/sample | Pharmace<br>utical -<br>Rs<br>3,00,000                          |
|     |  |  |     | Rs<br>2000/<br>per foo<br>d label   |   |
| 11. | Edible Packaging   | Dr.(Mrs.)PA. Raajeswari Email: raajeswari_fsn@avinut y.ac.in                                   | -   | -   | Edible cups 100 nos = Rs300  Edible Films 1 ream (500 sheets) = |

|     |  |   |   |               | Rs 2000                    |  |
|-----|--|---|---|---------------|----------------------------|--|
| 12. | Product development from Coconut flakes  | Dr.(Mrs.)S. Thilakavathy Email:thilakavathy_fsn @avinuty.ac.in              | - | -             | Rs<br>10,000               |  |
| 13. | Item creator and item reviewer for Tata Consultancy services, Bengaluru  | Dr.(Mrs.)K.Arockia<br>Maraichelvi<br>Email:<br>arockia_hd@avinuty.ac<br>.in | 1 | -             | Rs<br>50,000/-<br>per year |  |
| 14. | Clinical validation for therapeutic food (nutrient deficiency ad NCD) Clinical validation for ayurvedic foods Glycemic studies Consultation for menu planning for hospitals and dietary departments ICT enabled diet tools /software Nano products Ethnic foods                                    | Dr.S.Uma Mageshwari   |   | As per sample |                            |  |
| 15. | Consultation of value added products, edible films and therapeutic dietary formulations.  Consultation on Food Safety in food service  Nutrient analysis   | Dr.P.L.Sridevi<br>Sivakami  |   | As per san    | nple                       |  |
| 16. | Clinical validation for therapeutic food (nutrient deficiency ad NCD) Glycemic studies Consultation for menu planning for hospitals and dietary departments ICT enabled diet tools /software Value added therapeutic product formulation Shelf life studies Traditional cuisines and food culture. | Dr.V.Premala<br>Priyadarshini   |   | As per san    | nple                       |  |

| 17. | Clinical validation for therapeutic food ICT enabled diet tools /software Consultation for menu planning for hospitals and dietary departments Diets for cancer patients Sport nutrition | Dr.S.Thilagamani | As per sample |
|-----|--|------------------|---------------|
| 18. | Clinical validation for therapeutic food (millets) Millet processing and product developments. Value addition in Channa based products Value added calcite products                      | Dr.R.Radha       | As per sample |
| 19. | Texture analysis Antioxidant analysis in food products Nutrient analysis   | Dr.S. Karthiga   | As per sample |

### **Physical Sciences and Computational Sciences**

The School of Physical Sciences and Computational Sciences integrates the knowledge and tools of chemistry and physics with the principles of computational science to understand and optimize the behaviour of materials, as well as to create new and improved materials. A multidisciplinary approach is adopted with machine learning (ML) and artificial intelligence (AI) applications to design and study physicochemical aspects of novel materials.

Solar energy research involving design of surface coatings on PV modules and formulation of dye sensitized solar cells with screen printed multifunctional nano particles., fabrication of lithium and non-lithium solid state batteries, semi-solid batteries with novel electrolytes and flexi super capacitors and exploration of novel materials to design prospective non linear optical materials by crystal engineering are the research thrust areas of the physics group. Computational biophysics group adopts computational methods for protein-protein interaction prediction using major databases, and molecular dynamic studies to understand the interaction between drug molecules with free radicals.

Extensive work on phytochemicals and their applications in personal and healthcare and bioactivity studies of phytochemicals has been the focus of the phytochemistry research group. Bio mediated synthesis of nanoparticles and nano composites and their applications in health care, as surface coatings and design of new materials is the thrust of the nano science group. Fabrication and performance evaluation of soft material for health - anti microbial trans dermal patches, sunscreen lotions, biodegradable polymers and gold nanoparticle-decorated skin substitutes is extensively carried out. The chemistry group has been focussing on several methods of corrosion mitigation using inorganic, polyfunctional compounds, organic/inorganic composite materials and organic amphiphilic inhibitors. Anti-corrosion and anti-biofouling materials are being designed by the group and studied.

| S.N<br>o. | Nature of<br>Consultancy   | Consultant name & Contact details   | Charges (Rs)                                 |  |  |
|-----------|--|---|--|--|--|
|           |  |   | Inside<br>Institutio<br>n                    | outside<br>Institution                   | Industry                                 |
| 1.        | Formulation of Green<br>Corrosion inhibitors<br>for electroplating<br>industries   | Dr.R.Saratha, Professor & Head Department of Chemistry saratha_chem@avinuty.a c.in                            | Dependi<br>ng on<br>the<br>metal             | Depending<br>on the<br>metal             | Depending<br>on the<br>metal             |
| 2.        | Fabrication of anti<br>microbial herbal<br>textiles  | Dr. Shubashini K<br>Sripathi<br>Professor of Chemistry<br>subhashiniksripathi@avi<br>nuty.ac.in               | 1000 per<br>sample                           | 2000 per<br>sample                       | -  |
| 3.        | Formulation of skin creams and wound healing ointments   | Dr. Shubashini K<br>Sripathi<br>Professor of Chemistry<br>subhashiniksripathi@avi<br>nuty.ac.in               | 1000 per<br>sample                           | 2000 per<br>sample                       |  |
| 4.        | *Isolation of Natural Products and Quantification of active molecules Standardization of Medicinal Plant Extracts,Phytochemic al profiling *only consultancy | Dr. Shubashini K<br>Sripathi<br>Professor of Chemistry<br><u>subhashiniksripathi@avi</u><br><u>nuty.ac.in</u> | -  | 500                                      | 1000                                     |
| 5.        | Extraction of 500g to 1 Kg of plant material can be outsourced   | Dr. Shubashini K<br>Sripathi<br>Professor of Chemistry<br><u>subhashiniksripathi@avi</u><br><u>nuty.ac.in</u> | 500 solv<br>ent<br>charges<br>additiona<br>l | 1000<br>solvent<br>charges<br>additional | 2500<br>solvent<br>charges<br>additional |
| 6.        | Bulk extraction of<br>plant material-<br>Extraction of 20 Kg<br>of plant material –<br>Water extracts for  | Dr. Shubashini K<br>Sripathi<br>Professor of Chemistry<br><u>subhashiniksripathi@avi</u><br><u>nuty.ac.in</u> | 1000   | 3000                                     | -  |

|            | use in dyeing   |   |  |     |      |
|------------|---|---|--|-----|------|
| 7.         | Interpretation of SEM and other spectral data   | Dr.P.Lalitha Professor of Chemistry Director R&D ic Lalitha_chem@avinuty.a c.in | 200  | 200 | 500  |
| 8.         | Nanoparticle<br>synthesis-Nanogold,<br>Nanosilver, Nanozinc<br>– and<br>characterization        | Dr.P.Lalitha Professor of Chemistry Director R&D ic Lalitha_chem@avinuty.a c.in | Dependin<br>g on<br>metal                            | 200 | 500  |
| 9.         | Phytochemical screening of plant extracts   | Director R&D ic<br>Lalitha_chem@avinuty.a<br>c.in                               | 200  |     |      |
| 10.        | NMR structure elucidation   | Dr.P.Lalitha Professor of Chemistry Director R&D ic Lalitha_chem@avinuty.a c.in | Based on<br>structure<br>and<br>number<br>of spectra | 200 | 400  |
| 11.        | Design of Experiments- modeling an experiment based on trial runs,                              | Dr.P.Lalitha Professor of Chemistry Director R&D ic Lalitha_chem@avinuty.a c.in | 200  |     |      |
| 12.        | Drug designing  | Dr.P.Lalitha Professor of Chemistry Director R&D ic Lalitha_chem@avinuty.a c.in | Based on drug  | 200 | 500  |
| 13.        | Reduced graphene<br>oxide – few layer<br>synthesis and<br>characterization                      | Dr.P.Lalitha Professor of Chemistry Director R&D ic Lalitha_chem@avinuty.a c.in | 200  |     |      |
| 14.<br>15. | Fabrication of Polymer Surface Coatings (Self Cleaning) Preparation of Antibacterial Thin films | Dr. J. Shanthi Professor of Physics shanthi_phy@avinuty.ac. in                  | 500  | 500 | 2000 |
| TO.        | Battery materials   | Dr.B.Nalini   | 500  | 500 | 1000 |

| 10  | Quality test and reporting (per sample)   | Assistant Professor Department of Physics nalini_phy@avinuty.ac.i n  |  |                       |                       |
|-----|---|--|--|-----------------------|-----------------------|
| 16. | Tailoring of battery<br>material for required<br>performance                                | Dr.B.Nalini Assistant Professor Department of Physics nalini_phy@avinuty.ac.i n                              | 500  | 1000                  | 5000                  |
| 17. | Assembling and characterization of any type of electrochemical cell                         | Dr.B.Nalini Assistant Professor Department of Physics nalini_phy@avinuty.ac.i n                              | 1000   | 500                   | 1000                  |
| 18. | Structural analysis of<br>any inorganic<br>material through<br>rietveld analysis            | Dr.B.Nalini Assistant Professor Department of Physics nalini_phy@avinuty.ac.i n                              | 500  | 750/person/<br>month  | 750/person/<br>month  |
| 19. | Aptitude Training  TNPSC Coaching (for mathematics content only)                            | Dr. N. Balamani, Assistant Professor (SS) & Head (i/c) Department of Mathematics balamani_mat@avinuty.a c.in | 500/perso<br>n/month   | 1500/person<br>/month | 1500/perso<br>n/month |
| 20. | SET/NET /CSIR-<br>Paper I Coaching  | Dr. D. Jayanthi, Assistant Professor (SS) Department of Mathematics jeyanthi_mat@avinuty.ac .in              | 1000/pers<br>on/month  |                       |                       |
| 21. | Vulnerability Assessment, Security Auditing, Cyber Attack handling through Machine learning | Dr.Padmavathi Ganapathi Professor of Computer Science Dean, School of PSCS padmavathi_cs@avinuty. ac.in      |  |                       |                       |
| 22. | Biometric<br>Authentication for<br>Fraud Detection.   | Dr. D. Shanmugapriya<br>Head, Department of<br>Information Technology  | Based on type of Authentication and required solutions charges will differ |                       |                       |

|     | Assist in identifying and assessing threats and security risks in   | shanmugapriya_it@avinu<br>ty.ac.in  |   |        |        |
|-----|---|---|---|--------|--------|
|     | the organizations and<br>suggest the best<br>solutions  |   |   |        |        |
| 23. | Application of AI and ML for other domains  | Professor of Computer<br>Science<br>subashini_cs@avinuty.ac<br>.in        | Depends<br>on the<br>application<br>and the<br>number of<br>modules |        |        |
| 24. | AI interfaces, software, API etc  | Dr. P.Subashini Professor of Computer Science subashini_cs@avinuty.ac .in | Depends<br>on the<br>application<br>and the<br>number of<br>modules |        |        |
| 25. | Expertise in building up AI based smart applications for household – one of the team participated in Solar Decathlon Africa, 2019 |   | Depends<br>on the<br>application<br>and the<br>number of<br>modules |        |        |
| 26. | Expertise in building up AI based smart applications for campuses – deployed smart solutions in the university                    |   | Depends<br>on the<br>application<br>and the<br>number of<br>modules |        |        |
| 27. | AI based Assistive<br>Technology  | Dr. P.Subashini Professor of Computer Science subashini_cs@avinuty.ac .in | Depends<br>on the<br>application<br>and the<br>number of<br>modules |        |        |
| 28. | Android based mobile application development  | Dr. P.Subashini Professor of Computer Science subashini_cs@avinuty.ac .in | Depends<br>on the<br>application<br>and the<br>number of<br>modules |        |        |
| 29. | Portals for Digital<br>Museums  | Dr. P.Subashini<br>Professor of Computer                                  | 20,000  | 30,000 | 50,000 |

|     |   | Science<br>subashini_cs@avinuty.ac<br>.in  |                    |              |        |
|-----|---|--|--------------------|--------------|--------|
| 30. | Working with special and optimized solar architectures — worked with Moroccan universities and established an advanced optimized solar architecture | Dr. P.Subashini Professor of Computer Science subashini_cs@avinuty.ac .in          | 5,000              | 10,000       | 25,000 |
| 31. | Embedded hardware applications  | Dr. M.Krishnaveni, Assistant Professor (SS) krishnaveni_cs@avinuty. ac.in          |                    | per applicat |        |
| 32. | IoT based Smart applications, Scientific applications   | Dr. M.Krishnaveni, Assistant Professor (SS) krishnaveni_cs@avinuty. ac.in          | As per application |              |        |
| 33. | IoT based Assistive<br>Technology   | Dr. M.Krishnaveni,<br>Assistant Professor (SS)<br>krishnaveni_cs@avinuty.<br>ac.in | As                 | per applicat | ion    |
| 34. | Smart farming   | Dr. M.Krishnaveni, Assistant Professor (SS) krishnaveni_cs@avinuty. ac.in          |                    |              |        |
| 35. | 3D printing applications  | Dr. M.Krishnaveni, Assistant Professor (SS) krishnaveni_cs@avinuty. ac.in          |                    |              |        |
| 36. | Android based mobile application development  | Dr. M.Krishnaveni,<br>Assistant Professor (SS)<br>krishnaveni_cs@avinuty.<br>ac.in | As per application |              |        |
| 37. | Dr. A. Prithiba   | Corrosion Studies Calculation and Interpretation                                   | 100                | 100          | 100    |
| 38. | Dr. E. Yamuna   | Interpretation of compounds IR   | 50                 | 50           | 50     |
| 39. | Dr. E. Yamuna   | Interpretation of compounds UV   | 50                 | 50           | 50     |
| 40. | Dr. E. Yamuna   | Interpretation of compounds <sup>1</sup> H-NMR                                     | 100                | 100          | 100    |

| 41. | Dr. E. Yamuna  | Interpretation of compounds <sup>13</sup> C-NMR   | 125  | 125  | 125  |
|-----|--|---|--|--|--|
| 42. | Dr. E. Yamuna  | Interpretation of compounds HMBC  | 200  | 200  | 200  |
| 43. | Dr. E. Yamuna  | Interpretation of compounds HMQC  | 200  | 200  | 200  |
| 44. | Dr. E. Yamuna  | Designing Drug Molecules/Schemes  | 2000   | 2000   | 2000   |
| 45. | Dr. E. Yamuna  | Proposed Mechanism for final compounds  | 1000   | 1000   | 1000   |
| 46. | Vulnerability<br>Assessment/VAPT   | Centre for Cyber<br>Intelligence – DST –<br>CURIE – AI Phase II   | Rs.<br>1000/hr/la<br>b   | Rs.<br>2000/hr/l<br>ab   | Rs.<br>2000/hr/la<br>b   |
|     |  | cent_ci@avinuty.ac.in<br>padmavathi_cs@avinuty.a<br>c.in  | Based on<br>type of<br>vulnerabilit<br>y and<br>number of<br>systems to<br>be tested<br>the charges<br>will differ<br>as per time<br>duration<br>taken | Based on<br>type of<br>vulnerabili<br>ty and<br>number of<br>systems to<br>be tested<br>the<br>charges<br>will differ<br>as per<br>time<br>duration<br>taken | Based on<br>type of<br>vulnerability<br>and number<br>of systems<br>to be tested<br>the charges<br>will differ as<br>per time<br>duration<br>taken |
| 47. | Security Auditing  | Centre for Cyber<br>Intelligence – DST –<br>CURIE – AI Phase II   | Rs.<br>1000/hr/la<br>b   | Rs.<br>2000/hr/l<br>ab   | Rs.<br>2000/hr/la<br>b   |
|     |  | cent_ci@avinuty.ac.in padmavathi_cs@avinuty.a c.in  | Based on<br>the auditing<br>coverage<br>the charges<br>will differ<br>as per time<br>taken   | Based on<br>the firm<br>the<br>charges<br>will differ<br>as per<br>time taken  | Based on<br>the firm the<br>charges will<br>differ as per<br>time taken  |
| 48. | Consulting Services as interdisciplinary approach with Psychology Department  • Preventive Workshop  • Emotional Intelligence Workshop | Centre for Cyber Intelligence - DST - CURIE - AI Phase II  cent_ci@avinuty.ac.in padmavathi_cs@avinuty.a c.in | Rs.<br>100/perso<br>n  | Rs.<br>200/perso<br>n  | Rs.<br>500/person  |

| 49. | Awareness     Workshop Individual / Group Consultancy Services     Social Media     Addictions     Psychological     Consultancy of     human     behaviours to     prevent     against cyber     criminals  Analysis of Cyber Attacks through Machine Learning | Centre for Cyber Intelligence - DST - CURIE - AI Phase II  cent_ci@avinuty.ac.in padmavathi_cs@avinuty.a c.in | Rs. 5000  Depends on Dataset and Algorithm to be implement ed | Rs.<br>10,000<br>Depends<br>on Dataset<br>and<br>Algorithm<br>to be<br>implement<br>ed | Rs. 10,000  Depends on Dataset and Algorithm to be implemente d |
|-----|---|---|---|--|---|
| 50. | Biometric<br>authentication for<br>fraud detection  | Centre for Cyber Intelligence - DST - CURIE - AI Phase II  cent_ci@avinuty.ac.in padmavathi_cs@avinuty.a c.in | Rs. 5000  Depends on Dataset and Algorithm to be implement ed | Rs.<br>10,000<br>Depends<br>on Dataset<br>and<br>Algorithm<br>to be<br>implement<br>ed | Rs. 10,000  Depends on Dataset and Algorithm to be implemente d |

#### **Biosciences**



# Avinashilingam Institute for Home Science and Higher Education for Women (Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD) Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC Colmbatore - 641 043, Tamil Nadu, India

The mandate of School of Biosciences is to provide support in the efforts of drug development and testing in terms of in vitro anticancer, cytotoxicity, genotoxicity and wound healing studies for academicians as well as private companies. In vitro screening is carried out using MTT assay as per standard protocols. In vitro testing also involves SDS PAGE and Agarose Gel Electrophoresis, Comet Assay and Wound healing-Scratch test and In silico docking using Autodock. The complete MTT, Scratch and Comet assay, agarose gel electrophoresis, SDS-PAGE set up has been developed and standardized in house.

SDS - polyacrylamide gel electrophoresis (SDS-PAGE), a commonly used technique, can yield information about a protein's size (molecular weight) and yield (quantity). The *in vitro* scratch assay is a well-developed method to evaluate cell migration and is very useful to evaluate wound healing. For determination of DNA single- and double-strand breaks, a single-cell gel electrophoresis assay (Comet Assay) is used. Agarose gel electrophoresis is used in biochemistry, molecular biology, genetics, and clinical chemistry to separate a mixed population of macromolecules such as DNA , RNA or proteins. In silico docking techniques are being used to investigate the complementarity at the molecular level of a ligand and protein targets.

The facility is fully equipped for carrying out the in vitro and *in silico* testing. The school has the expertise and established infrastructure of biosafety cabinets, laminar air flow systems, and automated liquid handling systems.

Man power is available to carry out Consultancy projects in the following areas:

- 1. Cancer biology based on animal cell lines
- 2. Assessment of cytotoxicity
- 3. Mechanism of action of compounds of anticancer, antidiabetic and antiinflammatory activities
- 4. Cell death assays
- 5. Cell cycle analysis
- 6. Molecular Docking and ADMET Prediction using open source softwares
- 7. Assessment of liver and kidney functions
- 8. Micropropagation
- 9. Extraction, isolation, concentration and documentation of intracellular proteins
- 10. Toxicity assays with a standardized protocol using the Caenorhabditis elegans as model organisms.
- 11. Analysis of water samples



**Phase Contrast Flourescent Microscope** 



Nanospectrophotometer



**Real Time PCR** 

**High Performance Liquid Chromatography** 



**Two-Dimensional Gel Electrophoresis** 



**Microplate Reader** 



Flow cytometer



**Plant Tissue Culture Laboratory** 



**Automated Clinical Chemistry Analyser** 



**Gel Documentation System** 



Co<sub>2</sub> Incubator

| S.No | Consultancy expertise  | Name of the Faculty                            | Charges<br>for our<br>institute<br>scholars | For<br>Outside<br>institutio<br>ns | For industry      | Sample requireme nts |
|------|--|--|---|------------------------------------|-------------------|----------------------|
| 1.   | Anticancer & cytotoxicity studies-MTT assay  | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 750   | 900                                | 1050              | 2 ml                 |
| 2.   | SDS Page   | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 1200  | 1440                               | 1680              | 2 ml                 |
| 3.   | Wound healing-<br>Scratch test   | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 2500  | 3000                               | 3500              | 2 ml                 |
| 4.   | Comet Assay  | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 2000  | 2400                               | 2800              | 2 ml                 |
| 5.   | Acute skin irritation test (mice model0029   | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 5000  | 6000                               | 6500              |                      |
| 6.   | Total microbial count  | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 1000  | 1200                               | 1300              |                      |
| 7.   | MTT assay (NIH3T3<br>fibroblast cell line- skin<br>cell<br>line)   | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 3000  | 3600                               | 3900              |                      |
| 8.   | Agarose Gel<br>Electrporosis   | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 750   | 900                                | 1050              | 2 ml                 |
| 9.   | Consultancy  | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 1000/ per<br>hour                           | 1200/ per<br>hour                  | 1400/ per<br>hour | online/offlin<br>e   |
| 10.  | Insilico studies using<br>Autodock   | Dr.K S Santhy santhy_zoo@avinuty.ac.in         | 500   | 600                                | 700               | Protein/liga nd name |
| 11.  | Toxicity Assays using Caenorhabditis elegans MTT assay   | Dr. P. Chitra<br>Chitra_zoo@avinuty.ac.in      | 800   | 1000                               | 1100              | 5 ml                 |
| 12.  | Apoptosis Assay  | Dr. P. Chitra<br>Chitra_zoo@avinuty.ac.in      | 1000  | 1200                               | 1500              | 5 ml                 |
| 13.  | lipofuscin Assay   | Dr. P. Chitra<br>Chitra_zoo@avinuty.ac.in      | 1000  | 1200                               | 1500              | 5 ml                 |
| 14.  | Physico chemical characterisation of water samples   | Dr.M.Poonkothai poonkothaii_zoo@avinuty .ac.in | 1500  | 2000                               | 2500              | 21                   |
| 15.  | MPN Analysis   | Dr.M.Poonkothai poonkothaii_zoo@avinuty .ac.in | 200   | 400                                |                   | 250ml                |
| 16.  | cytotoxicity testing and metabolic activity  | Dr.S.Sumathi sumathi_bc@avinuty.ac.in          | 250<br>/treatment<br>group                  | 500/treat<br>ment<br>group         | 1000/<br>sample   |                      |
| 17.  | Mechanism of action of compounds for specific conditions - anticancer, antidiabetic, anti-inflammatory and | Dr.S.Sumathi sumathi_bc@avinuty.ac.in          | depends<br>on number<br>of assays           |                                    |                   |                      |
| 18.  | migration assay  | Dr.S.Sumathi sumathi_bc@avinuty.ac.in          | 250<br>/treatment<br>group                  | 500/treat<br>ment<br>group         | 1000/<br>sample   |                      |
| 19.  | angiogenesis assays  | Dr.S.Sumathi sumathi_bc@avinuty.ac.in          | 250<br>/treatment                           | 250<br>/treatmen                   | 250<br>/treatmen  |                      |

|     |   |   | group                         | t group                         | t group                         |
|-----|---|---|-------------------------------|---------------------------------|---------------------------------|
| 20. | Mechanism of cell   | Dr.S.Sumathi  | 500/sampl                     | 750/sam                         | 1000/sa                         |
|     | death - staining  | sumathi_bc@avinuty.ac.in  | е .                           | ple                             | mple                            |
| 21. | Mechanism of cell   | Dr.S.Sumathi  | 500/sampl                     | 1000/sa                         | 1500/sa                         |
|     | death - flow cytometry  | sumathi_bc@avinuty.ac.in  | е                             | mple                            | mple                            |
| 22. | cell cycle analysis   | Dr.S.Sumathi  | 500/sampl                     | 1000/sa                         | 1500/sa                         |
|     |   | sumathi_bc@avinuty.ac.in  | е                             | mple                            | mple                            |
| 23. | Assays in specific cell   | Dr.S.Sumathi  | 3000 per                      | 3000 per                        | 3000 per                        |
|     | lines   | sumathi_bc@avinuty.ac.in  | cell line                     | cell line                       | cell line                       |
| 24. | Consultancy   | Dr.S.Sumathi  | 1000/ per                     | 1200/ per                       | 1400/ per                       |
|     |   | sumathi_bc@avinuty.ac.in  | hour                          | hour                            | hour                            |
| 25. | Lyophilization of the sample                                      | Dr. Anitha Subash Dr.A.Shobana Dr.K.V. Shalini anithasubash_bc@avinut y.ac.in                       | 300/sampl<br>e                | 600/sam<br>ple                  | 1000/sa<br>mple                 |
| 26. | Gel documentation for protein and nucleic acids                   | Dr. Anitha Subash Dr.A.Shobana Dr.K.V. Shalini anithasubash_bc@avinut y.ac.in                       | 100/sampl<br>e                | 250/sam<br>ple                  | 500/sam<br>ple                  |
| 27. | UV spectrophotometer  | Dr. Anitha Subash Dr.A.Shobana Dr.K.V. Shalini anithasubash_bc@avinut y.ac.in                       | 100/sampl<br>e                | 250/sam<br>ple                  | 500/sam<br>ple                  |
| 28. | Cell distruptor   | Dr.N.Santhi Dr.M.Rajeswari anithasubash_bc@avinut y.ac.in   | 150/sampl<br>e                | 250/sam<br>ple                  | 500/sam<br>ple                  |
| 29. | Molecular Docking and ADME Prediciton using open source softwares | Dr.M.Rajeswari rajeshwari_bc@avinuty.ac .in   | 500/target<br>- 10<br>ligands | 1000/targ<br>et - 10<br>ligands | 1500/targ<br>et - 10<br>ligands |
| 30. | Mechanism of  | Dr.D.Kavitha  | 1000/samp                     | 1500/sa                         | 2000/sa                         |
|     | antimicrobial compounds   | kavitha_bio@avinuty.ac.in   | le                            | mple                            | mple                            |
| 31. | Alpha-amylase inhibitory activity                                 | Dr.S.Gayathri Devi, Dr.S.<br>Velvizhi, Dr.C.C.S.<br>Vasundhara<br>gayathridevi_bc@avinuty.<br>ac.in | 500/sampl<br>e                | 750/sam<br>ple                  | 1000/sa<br>mple                 |
| 32. | Glucose diffusion assay   | Dr.S.Gayathri Devi, Dr.S.<br>Velvizhi, Dr.C.C.S.<br>Vasundhara<br>velvizhi_bc@avinuty.ac.in         | 500/sampl<br>e                | 750/sam<br>ple                  | 1000/sa<br>mple                 |
| 33. | Glucose uptake assay<br>by yeast cells                            | Dr.S.Gayathri Devi, Dr.S.<br>Velvizhi, Dr.C.C.S.<br>Vasundhara<br>vasundhara_bc@avinuty.<br>ac.in   | 500/sampl<br>e                | 750/sam<br>ple                  | 1000/sa<br>mple                 |
| 34. | Lipid profile test-<br>HDL, Total<br>Cholesterol,                 | Dr.S.Gayathri Devi, Dr.S.<br>Velvizhi, Dr.C.C.S.<br>Vasundhara<br>vasundhara_bc@avinuty.            | 750/Sampl<br>e                | 1000/Sa<br>mple                 | 1250/Sa<br>mple                 |

|     | Triglycerides, LDL,<br>VLDL                                     | ac.in   |                |                 |                 |                   |
|-----|---|---|----------------|-----------------|-----------------|-------------------|
| 35. | Renal markers-<br>SGOT,SGPT,<br>ALP                             | Dr.S.Gayathri Devi, Dr.S.<br>Velvizhi, Dr.C.C.S.<br>Vasundhara<br>vasundhara_bc@avinuty.<br>ac.in           | 750/<br>Sample | 1000/Sa<br>mple | 1200/Sa<br>mple |                   |
| 36. | Hepatic markers- Urea,<br>Creatinine, Urea-<br>creatinine ratio | Dr.S.Gayathri Devi, Dr.S.<br>Velvizhi, Dr.C.C.S.<br>Vasundhara<br>vasundhara_bc@avinuty.<br>ac.in           | 500/Sampl<br>e | 750/sam<br>ple  | 1000/sa<br>mple |                   |
| 37. | Plant nutrient analyser   | Dr. G. Sakthivigneswari sakthivigneswari_bot@av inuty.ac.in and Dr. V. Gayathri gayathri_bot@avinuty.ac.i n | 100            | 150             | 200             | 3 fresh<br>leaves |

### **Arts and Social Sciences**

| SN<br>o | Potential Consultancy<br>Services | Consultant contact                                     | Fees (In Rs.) Inside Beneficiaries                                 |
|---------|-----------------------------------|--|--|
| 1.      | Correlation Analysis              | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 2.      | Regression Analysis               | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.200 per 100 observations with 5 and above independent variables |
| 3.      | T test                            | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 4.      | One sample t test                 | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 5.      | Two independent sample t test     | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 6.      | Paired sample t test              | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 7.      | ANOVA                             | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 8.      | MANOVA                            | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 9.      | Chi quare test                    | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.100 per 100 observations  |
| 10.     | Chow test                         | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation   |

| 11. | Probit Regression<br>Analysis | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
|-----|-------------------------------|--|----------------------------|
| 12. | Logit Regression Analysis     | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 13. | Discriminant Analysis         | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 14. | Factor Analysis               | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 15. | Cluster Analysis              | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 16. | Non Parametric Test           | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 17. | One sample                    | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 18. | Two independent sample test   | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 19. | K Independent sample          | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 20. | Two related sample test       | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 21. | K related sample test         | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 22. | Tobit regression analysis     | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |

| 23. | Binary Logistic Analysis                   | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
|-----|--|--|----------------------------|
| 24. | Curve Estimation                           | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 25. | Non linear Regression                      | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 26. | Two stage least square regression Analysis | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 27. | Three stage least square regression        | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 28. | Time Series Analysis                       | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 29. | Unit root test                             | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 30. | Lag length criteria                        | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 31. | Co integration Regression<br>Analysis      | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 32. | Error Correction Model                     | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 33. | Granger causality Test                     | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 34. | Cusum and Cusum Square test                | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |

| 35. | Path Analysis   | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
|-----|---|--|----------------------------|
| 36. | Structural Equation<br>Modelling  | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 37. | Cobb Douglas Production Function  | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 38. | Frontier Production<br>Function   | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 39. | Switching Regression<br>Modelling   | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 40. | Business Model  | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 41. | Censored Regression<br>Analysis   | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 42. | Heckman sample selection model  | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n | Rs.500 per 100 observation |
| 43. | Miscellaneous   | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n |                            |
| 44. | Coaching for TNPSC<br>Examinations and UPSC<br>Examinations-Group I,II,<br>IIA , IV | Dr S. Gandhimathi<br>gandhimathi_eco@avinuty.ac.i<br>n |                            |

### **Commerce and Management**

#### **E filing of Income Tax Returns**

Electronic filing is income tax returns is carried out by the staff of Commerce Department with the help of trained students. E-filing gives taxpayers the benefit of updating the status in real-time and the return has been received and accepted. As it becomes mandatory to file the returns it saves the time of both tax filers as well as the income tax department. The commerce department is rendering consultancy service to both teaching and non-teaching staff of the institution each year on payment of a nominal fee.





Discussion with Mr.G.Daniel Prabhakaran, Chief Executive Officer , Annamalai Innovation and Incubation Research Foundation , Annamalai University and Mr.K.Vivekanandan, Managing Director , Faraday Ozone for consultancy prospects in Talent Management in their respective organisations

| S.<br>N | Potential<br>Consultancy                      | Consultant contact   |                             | Rs.)                         |                |
|---------|---|--|-----------------------------|------------------------------|----------------|
| 0       | Services                                      |  | Inside<br>Beneficiar<br>ies | Outside<br>Beneficiari<br>es | Industrialists |
| 1.      | E-filing of<br>Income Tax<br>Returns          | Dr.P.Deivanai Assistant Professor (SS) deivanai_comm@avinuty.ac.i n  | 300                         | 1000                         | 1000           |
| 2.      | Investment Planning for Tax Exemption         | Dr.P.Santhi Professor shanthi <u>comm@avinuty.ac.in</u>  | 300                         | 500                          | 500            |
| 3.      | Segmentation<br>and Target<br>Market Analysis | Dr.P.Santhi Professor Dr.P.Deivanai Assistant Professor (SS) shanthi comm@avinuty.ac.in deivanai_comm@avinuty.ac.i n | 1000                        | 2000                         | 2000           |

| 4.  | Financial<br>Feasibility<br>Analysis for                  | Dr.K .Kannaiammal Professorkannaiammal comm @avinuty.ac.in   | 1000                          | 1000            | 2000         |
|-----|---|--|-------------------------------|-----------------|--------------|
| 5.  | Project Proposals Construction of                         | Dr.P.Santhi  | 1000                          | 1000            | 2000         |
|     | Research<br>Instrument for<br>Social Science<br>Research  | Professor Dr V.Vimala Assistant Professor (SS)  shanthi comm@avinuty.ac.in vimala_comm@avinuty.ac.in                                     |                               |                 |              |
| 6.  | Assistance in<br>Registration for<br>Start ups            | Dr.D.Vennila Assistant Professor (SG) Dr K.Vidhyakala Assistant Professor (SS) vennila_comm@avinuty.ac.in vidhyakala_comm@avinuty.a c.in | 500                           | 500             | 500          |
| 7.  | PAN Card and linkage with authorized accounts and IDs     | Dr.V.Vimala Assistant Professor (SS) vimala_comm@avinuty.ac.in   | 200                           | 200             | 200          |
| 8.  | Accounting Software - Administration setup & Installation | Dr.P.Sasirekha Assistant Professor sasirekha_comm@avinuty.ac.i n   | 500                           | 500             | 1000         |
| 9.  | Financial analytics with Excel Applications               | Dr A.R.Rihana Assistant Professor rihana_comm@avinuty.ac.in  | 500                           | 1000            | 1000         |
| 10. | DEMAT Account opening services and Online Trading Tips    | Dr.V.Vimala Assistant Professor vimala_comm@avinuty.ac.in  | 200                           | 250             | 250          |
| 11. | Change<br>Management<br>Facilitating                      | Dr.J.Arthi arthi mba@avinuty.ac.in   | Duration<br>Based<br>Rs15,000 | Rs.25,00<br>0/- | Rs. 50,000/- |
| 12. | Behavioural Data<br>Detectives                            | Dr.J.Arthi arthi_mba@avinuty.ac.in   | One<br>Time<br>Assignm        | Rs. 50,000/-    | Rs.75,000/-  |

|     |   |   | ent Rs. 25,000/-                              |                             |   |
|-----|---|---|---|-----------------------------|---|
| 13. | Workplace<br>Environment                              | Dr.J.Arthi arthi_mba@avinuty.ac.in            | Rs.2,000/<br>- Per                            | Rs. 10,000/-                | Rs.15,000/-   |
| 14. | Designing Cross Functional                            | Dr.J.Arthi                                    | visit<br>Rs.25,00                             | Rs.                         | Rs.75,000/-   |
|     | Collaborations  | arthi_mba@avinuty.ac.in                       | 0/- (No. of Teams/D epts.)                    | 50,000/-                    |   |
| 15. | Social<br>Intelligence<br>Audit                       | Dr.J.Arthi arthi_mba@avinuty.ac.in 9843676144 | Rs.25,00<br>0/- (No.<br>of<br>Employe<br>es.) | Rs. 50,000/-                | Rs.75,000/-   |
| 16. | Financial<br>Forecasting                              | Dr.A.Pankajam pankajam_mba@avinuty.ac.in      | Rs.2000/<br>- per                             | Rs.3000/-<br>per            | Rs.5000/- per<br>Session  |
|     | O   |   | Session                                       | Session                     |   |
| 17. | Financial Feasibility Study                           | Dr.A.Pankajam  pankajam_mba@avinuty.ac.in     | Rs.2000/<br>- per<br>Session                  | Rs.3000/-<br>per<br>Session | Rs.5000/- per<br>Session  |
| 18. | Financial Planning for Individuals                    | Dr.K.Ramya ramya mba@avinuty.ac.in            | Rs.3000/<br>- per<br>Person                   | Rs.5000/-<br>per<br>Person  |   |
| 19. | Income Tax Filing for Individuals                     | Dr.K.Ramya ramya_mba@avinuty.ac.in            | Rs.750/-<br>per<br>Person                     | Rs.1000/-<br>per<br>Person  |   |
| 20. | Qualitative Data<br>Analysis                          | Dr.K.Ramya ramya_mba@avinuty.ac.in            | Rs.3000/<br>- per<br>Session                  | Rs.5000/-<br>per<br>Session | Rs.10,000/- per<br>Session  |
| 21. | Quality Enhancement in Higher Educational Institution | Dr.K.Ramya ramya mba@avinuty.ac.in            |   | Rs.2000/-<br>per<br>Session |   |
| 22. | Business Process Engineering & Automation             | Dr.P.Chitramani chitramani_mba@avinuty.ac.i n |   |                             | Rs.2,00,000/-<br>to<br>Rs.25,00,000/-<br>(based on the<br>module) |
| 23. | Mapping Integrated Supply Chain Processes             | Dr.P.Chitramani chitramani_mba@avinuty.ac.i n |   |                             | Rs.2,00,000/-<br>to<br>Rs.25,00,000/-<br>(based on the<br>module) |

| 24. | AI Embedded Digital Marketing Processes & Procedures Talent 4.0 & 5.0 Mapping & GAP Analysis | Dr.P.Chitramani chitramani mba@avinuty.ac.i n  Dr.P.Chitramani chitramani mba@avinuty.ac.i n                          |                              |                             | Rs.2,00,000/- to Rs.25,00,000/- (based on the module) Rs.2,00,000/- to Rs.25,00,000/- (based on the |
|-----|--|---|------------------------------|-----------------------------|---|
| 26. | Training: Lean<br>&Green Supply<br>Chain<br>Management                                       | Dr.P.Chitramani chitramani_mba@avinuty.ac.i n   | Rs.1000/<br>- per<br>Person  | Rs.1500/-<br>per<br>Person  | module)<br>Rs.5000/-  |
| 27. | Training: Talent<br>Management   | Dr.P.Chitramani <a href="mailto:chitramani_mba@avinuty.ac.i">chitramani_mba@avinuty.ac.i</a> <a href="mailto:n">n</a> | Rs.1000/<br>- per<br>Person  | Rs.1500/-<br>per<br>Person  | Rs.5000/-   |
| 28. | Training: E-<br>Customer<br>Relationship<br>Management                                       | Dr.P.Chitramani chitramani mba@avinuty.ac.i n   | Rs.1000/<br>- per<br>Person  | Rs.1500/-<br>per<br>Person  | Rs.5000/-   |
| 29. | Training: Marketing to the bottom of the Pyramid   | Dr.P.Chitramani chitramani mba@avinuty.ac.i n   | Rs.1000/<br>- per<br>Person  | Rs.1500/-<br>per<br>Person  | Rs.5000/-   |
| 30. | Training: Sustainable Business Models  | Dr.P.Chitramani <a href="mailto:chitramani-mba@avinuty.ac.i">chitramani-mba@avinuty.ac.i</a> <a href="mailto:n">n</a> | Rs.1000/<br>- per<br>Person  | Rs.1500/-<br>per<br>Person  | Rs.5000/-   |
| 31. | Training: AI Embedded Business Processes   | Dr.P.Chitramani <a href="mailto:chitramani-mba@avinuty.ac.i">chitramani-mba@avinuty.ac.i</a> <a href="mailto:n">n</a> | Rs.1000/<br>- per<br>Person  | Rs.1500/-<br>per<br>Person  | Rs.5000/-   |
| 32. | Five 'S' in Office<br>Administrations  | Dr.K.Ramya ramya_mba@avinuty.ac.in  | Rs.2000/<br>- per<br>Session | Rs.2500/-<br>per<br>Session | Rs.5000/- per<br>Session  |
| 33. | A to Z of<br>Assessment of<br>NAAC   | Dr.K.Ramya <u>ramya_mba@avinuty.ac.in</u>   | Rs.2000/<br>- per<br>Session | Rs.2500/-<br>per<br>Session |   |
| 34. | Soft Skill<br>Training   | Dr.T.Amutha amutha mba@avinuty.ac.in  | Rs.750/-<br>per<br>Person    | Rs.1000/-<br>per<br>Person  | Rs.2000/- per<br>Session  |
| 35. | HR-<br>Transformation  | Dr.T.Amutha amutha mba@avinuty.ac.in  | Rs.5000/<br>- per            | Rs.6000/-<br>per            | Rs.10,000/- per<br>Session  |

|     |                     |                    |                       | Session   | Session   |               |
|-----|---------------------|--------------------|-----------------------|-----------|-----------|---------------|
| 36. | Data Analytics      | Dr.T               | .Amutha               | Rs.2000/  | Rs.3000/- |               |
|     | J                   |                    | @avinuty.ac.in        | - per     | per       |               |
|     |                     |                    |                       | Session   | Session   |               |
| 37. | Placement           | Dr.M               | .Iswarya              | Rs.3000/  | Rs.3500/- |               |
|     | Trainings (GD's,    |                    | a@avinuty.ac.in       | - per     | per       |               |
|     | Interviews)         |                    |                       | Session   | Session   |               |
| 38. | Resume              | Dr.M.Iswar         | iswarya_mba@av        | Rs.750/-  | Rs.1000/- |               |
|     | Construction        | ya                 | inuty.ac.in           | per       | per       |               |
|     |                     | -                  |                       | Person    | Person    |               |
| 39. | Soft Skills         | Dr.M.Iswar         | iswarya_mba@av        | Rs.3000/  | Rs.3500/- |               |
|     | Training            | ya                 | inuty.ac.in           | - per     | per       |               |
|     |                     |                    |                       | Session   | Session   |               |
| 40. | Workplace           | Dr.R.Hema          | hemavathy_mb          | Rs.3000/  | Rs.3500/- | Rs.5000/- per |
|     | Etiquette           | vathy              | <u>a@avinuty.ac.i</u> | - per     | per       | Session       |
|     |                     |                    | <u>n</u>              | Session   | Session   |               |
|     |                     |                    |                       |           |           |               |
| 41. | Making of Video     | Dr.D.Arthi         | arthid_mba@a          | Rs.2000/  | Rs.2500/- | Rs.5000/- per |
|     | for Micro           |                    | vinuty.ac.in          | - per     | per       | Session       |
|     | Teaching            |                    |                       | Session   | Session   |               |
| 42. | Travel Booking      | Dr.Bindu.          | bindu_tm@avi          | 5%        | 6%        | Nil           |
|     | For Students        | V.T,               | nuty.ac.in            | Commiss   | Commiss   |               |
|     | And Faculty         | Asst.Profess       |                       | ion From  | ion From  |               |
|     |                     | or &               |                       | The       | The Total |               |
|     |                     | Head(i/c)          |                       | Total     | Amount    |               |
| 10  |                     | D 0 11             | G 11 1                | Amount    |           | D 7           |
| 43. | Digital Inventory   | Dr.Sandhya         | <u>Sandhyadurga</u>   | Per       | Per       | Per Enquiry 4 |
|     | Creation            | Durga              | tm@avinuty.ac.        | Enquiry   | Enquiry   | Rupees        |
|     |                     | Prasad,            | <u>in</u>             | 1 Rupee   | 2 Rupees  |               |
|     |                     | Asst.              |                       |           |           |               |
|     |                     | Professor          |                       |           |           |               |
| 44. | Feasibility of      | (Temp) Dr.K.Sathiy | sathyabamavat         | 3%        | 4%        | 5%            |
| 44. | New                 | abamavathy,        | hy_tm@avinut          | Commiss   | Commiss   | Commission    |
|     | Destinations &      | Asst.              | y.ac.in               | ion from  | ion From  | From The Tour |
|     | Marketing Marketing | Professor          | <u>y.ac.iii</u>       | the Tour  | The Tour  | Operator With |
|     | Planning            | (Temp)             |                       | Operator  | Operator  | The Tie Up    |
|     | Strategies For      | (10)               |                       | With Tie  | With The  | Member        |
|     | Existing            |                    |                       | Up        | Tie Up    | 1,10111001    |
|     | Destinations.       |                    |                       | Member    | Member    |               |
| 45. | All Tour            | Mrs.R.Jincy        | jincy_tm@avin         | For       | From      | NIL           |
|     | Planners For        | Teaching           | uty.ac.in             | Local     | Other     |               |
|     | Students, &         | Assistant          |                       | Universit | State     |               |
|     | Faculty             | (Temp)             |                       | y         | Universit |               |
|     | Ž                   |                    |                       | Students  | y Student |               |

|     |                   |             |                 | Per Head | Per Head |               |
|-----|-------------------|-------------|-----------------|----------|----------|---------------|
|     |                   |             |                 | 50       | 100      |               |
|     |                   |             |                 | Rupees   | Rupees   |               |
| 46. | Assistance For    | Mrs.P.Nisha | nishanthi_touri | 6%       | 7%       | 8%            |
|     | Travel Related    | nthi,       | sm@avinuty.ac   | Commiss  | Commiss  | Commission    |
|     | Documents-        | Teaching &  | <u>.in</u>      | ion From | ion From | From The Tour |
|     | Passport, Visa,   | Research    |                 | The Tour | The Tour | Operator With |
|     | Insurance, and    | Fellow      |                 | Operator | Operator | Tie Up        |
|     | Health            | (Temp)      |                 | With Tie | With Tie | Member        |
|     | Certificates Etc. |             |                 | Up       | Up       |               |
|     |                   |             |                 | Member   | Member   |               |

#### **Education**

School of Education comprises of three departments -Department of Education, Department of Special Education and Department of Physical Education.

Being a School producing professionals in Teaching, rehabilitation of persons with Special needs and sports promotion the school of Education has a a full-fledged faculty with the experts in all areas of curriculum framing, pedagogical approaches, e-content development, preparation of different instructional materials, remedial coaching for students with learning problems, Aptitude testing and Vocational counselling for School students, support to school administration and management and in-service training for teachers. The school also can provide Education, Training, Counselling and Rehabilitation of Persons with Special Needs and pave away for inclusive growth. Adapted Sports for differently abled. Fitness & Weight Management, Yoga & Stress Management. Women Fitness programme, Aerobic training and Skill development in various Sports and games are also the potential areas for consultancy of School of Education

| S.No. | Nature of Consultancy work          | Name and Designation, Field of Expertise and |
|-------|-------------------------------------|--|
|       |                                     | Contact details                              |
| 1.    | Counselling to teachers in higher   |  |
|       | education sector to manage          |  |
|       | diverse learners                    |  |
|       |                                     |  |
| 2.    | Educational Research and            | Dr.InduH                                     |
|       | Statistical analysis                | Professor, Department of Education           |
|       |                                     | indu_edu@avinuty.ac.in                       |
| 3.    | Designing and implementing          | Dr.Manimozhi,S.S                             |
|       | strategies that improve student     | Professor, Department of Education           |
|       | outcomes                            | manimozhi_edu@avinuty.ac.in                  |
|       |                                     |  |
| 4.    | Consultancy services to school      | Mrs. S.Andal                                 |
|       | students on their projects          | Assistant Professor(SS)                      |
|       |                                     | Department of Education                      |
|       |                                     | andal_edu@avinuty.ac.in                      |
| 5.    | Identifying learning disability and | Mrs.R.Vaijayanthi                            |
|       | help in taking remedial measures to | Assistant Professor(SG)                      |
|       | school students                     | Department of Education                      |
|       |                                     | vaijanthi_edu@avinuty.ac.in                  |
| 6.    | Preparation, Assessment and         | Dr.C.Karthik Deepa                           |
|       | Evaluation of E content             | Assistant Professor(SS)                      |
|       |                                     | Department of Education                      |
|       |                                     | karthikdeepa_edu@avinuty.ac.in               |
|       |                                     | 9976131831                                   |
|       | Consultancy Potenti                 | al Manual November 2022 Page 93              |

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| 7.  | Media selection for teaching, learning and evaluation   | Dr.C.Karthik Deepa Assistant Professor(SS) Department of Education <a href="mailto:karthikdeepa_edu@avinuty.ac.in">karthikdeepa_edu@avinuty.ac.in</a> 9976131831 |
|-----|---|--|
| 8.  | To educate and advise students on<br>the best universities based on<br>students' scholastic<br>Capabilities and requirements              | Mrs. A.Suryalatha Assistant Professor Department of Education Suryalatha_edu@avinuty.ac.in   |
| 9.  | Aptitude testing and Vocational counselling for High School and Higher Secondary School students  | Mrs. M.Vijayalakshmi Assistant Professor Department of Education vijayalakshmi_edu@avinuty.ac.in   |
| 10. | Career advancement counselling for school teachers  | Dr Vidya,S Assistant Professor Department of Education vidya_edu@avinuty.ac.in   |
| 11. | Designing appropriate Curriculum<br>at different levels of Education like<br>Primary, Secondary, Higher<br>Secondary and Higher Education | Dr.Santhoshini,K Assistant Professor Department of Education santhoshini_edn@avinuty.ac.in   |

# **Physical Education**

| S.No | Nature of Consultancy work          | Name and Designation, Field of Expertise and Contact details |
|------|-------------------------------------|--|
| 1.   | Yoga & Stress Management            | Dr.P.Vanithamani   |
| 1.   | 1 oga & Suess Management            | Associate Professor  |
|      |                                     | Department of Physical Education                             |
|      |                                     | Vanithamani_phys@avinuty.ac.in                               |
| 2.   | Fitness & Weight Management         | Mrs.A.Sivasankari  |
|      |                                     | Assistant Professor  |
|      |                                     | Department of Physical Education                             |
|      |                                     | Sivasankari_phyedn@avinuty.ac.in                             |
| 3.   | Skill development in various Sports | Dr.T.Shanmugavalli   |
|      | and games                           | Associate Professor  |
|      | Volleyball                          | Department of Physical Education                             |
|      |                                     | shanmugavalli_phys@avinuty.ac.in                             |
|      |                                     | Dr.R.Saravana Prabha   |
|      |                                     | Associate Professor  |
|      | Athletics                           | Department of Physical Education                             |
|      |                                     | prabha_phys@avinuty.ac.in                                    |
|      |                                     | Dr.P.Vanithamani   |
|      |                                     | Associate Professor  |
|      | Kho Kho                             | Department of Physical Education                             |
|      |                                     | Vanithamani_phys@avinuty.ac.in                               |
|      |                                     | Dr.M.Mary Glory Ponrani                                      |
|      |                                     | Assistant Professor  |
|      | Racket Sports                       | Department of Physical Education                             |
|      |                                     | Marygloryponrani_phyedn@avinuty.ac.in                        |
|      |                                     | Dr.S.Akilandeswari   |
|      |                                     | Assistant Professor  |
|      | Kabaddi                             | Department of Physical Education                             |
|      |                                     | Akilandeswari_phyedn@avinuty.ac.in                           |
|      |                                     | Ms.A.Sivasankari   |
|      |                                     | Assistant Professor  |
|      | Basketball                          | Department of Physical Education                             |
|      |                                     | Sivasankari_phyedn@avinuty.ac.in                             |
|      |                                     | Mrs.V.Preethi  |
|      |                                     | Assistant Professor  |
|      | Throwball                           | Department of Physical Education                             |
|      |                                     | Preethi_phyedn@avinuty.ac.in                                 |
|      |                                     | Mrs.M.Sudha  |
|      | M. and an                           | Assistant Professor  |
|      | Marathon                            | Department of Physical Education                             |
|      |                                     | Sudha_phyedn@avinuty.ac.in                                   |
|      |                                     | Dr.S.Malar   |

|            |                                      | Assistant Professor                          |
|------------|--------------------------------------|--|
|            | Ball Badminton                       | Department of Physical Education             |
|            |                                      | malarsmped@gmail.com                         |
| 4.         | Fitness – Aerobics & Zumba           | Dr.M.Mary Glory Ponrani                      |
|            |                                      | Assistant Professor                          |
|            |                                      | Department of Physical Education             |
|            |                                      | Marygloryponrani_phyedn@avinuty.ac.in        |
| 5.         | Personal Trainer for Fitness         | Mrs.V.Preethi                                |
|            |                                      | Assistant Professor                          |
|            |                                      | Department of Physical Education             |
|            |                                      | Preethi_phyedn@avinuty.ac.in                 |
|            |                                      |  |
| 6.         | Walking Club                         | Dr.S.Malar                                   |
|            |                                      | Assistant Professor                          |
|            |                                      | Department of Physical Education             |
|            |                                      | malarsmped@gmail.com                         |
| <i>7</i> . | Avinuty Fitness Club                 | Dr.R.Saravana Prabha                         |
|            |                                      | Mrs.A.Sivasankari                            |
|            |                                      | Sivasankari_phyedn@avinuty.ac.in             |
| 8.         | Organizing and Officiating           | Staff and Students of Department of Physical |
|            | Competitions                         | Education                                    |
| 9.         | Adapted Sports for differently abled | Dr.M.Mary Glory Ponrani                      |
|            |                                      | Assistant Professor                          |
|            |                                      | Department of Physical Education             |
|            |                                      | Marygloryponrani_phyedn@avinuty.ac.in        |
| 10.        | Summer Camp                          | Staff and Students of Department of Physical |
|            | _                                    | Education                                    |

# **Special Education**

| S.No | Nature of Consultancy work  | Beneficiaries                                 | Amt in Rs. | Name and Designation,<br>Field of Expertise and<br>Contact details   |
|------|---|---|------------|--|
| 1    | Educational Guidance on<br>Rehabilitation of persons with<br>Disabilities                                 | Educational<br>Administrators                 | 1000       | Dr.G.Victoria Naomi,<br>Prof. of Spl Ed & Dean,<br>School of Education<br>dean_education@avinut<br>y.ac.in |
|      | Functional Assessment of Visual Impairment  | Children/Adult<br>s with Visual<br>Impairment | 200        |  |
|      | Ways to foster Universal Design for Learning  | Educational administrators                    | 1000       |  |
|      | Guidance on fostering Reading   | Children/stude nts                            | 200        |  |
|      | Guidance on promotion of Inclusive and Special Education  | Educational<br>Administrators                 | 1000       |  |
| 2    | Functional Assessment Children with Cognitive Disabilities  Mental Retardation Autism Sprectrum Disorders | Children/stude<br>nts                         | 200        | Dr.K.Sambath Rani, Assoc. Prof. & Head, Dept of Special Education, sambathrani_spl@avinut                  |
|      | Functional Vision Assessment  |   | 200        | y.ac.in  |
|      | Guidance on promotion of Inclusive Education  | Educational<br>Administrators                 | 1000       |  |
|      | Functional Curriculum for the children with cognitive Disabilities  | Teachers/Speci<br>al Educators                | 1000       |  |
|      | Counselling for Parents of Children with Disabilities   | Parents                                       | 500        | -  |
| 3    | Educational Assessment of Children with Disabilities  | Children                                      | 200        | Dr.V.Mrunalini,<br>Assistant Professor(SG)   |
|      | Guidance on promotion of  | Educational<br>tialdManualaNoye               | 1000       | Dept of Special Education Page 97  |

|   | Special Educational Support at<br>Higher Educational<br>Institutions             | Educational Administrators    | 1000 | mrunalini_spl@avinuty. ac.in                                     |
|---|--|-------------------------------|------|--|
|   | Counselling  | Parents/care givers/PWD       | 200  |  |
| 4 | Educational Rehabilitation of persons with Hearing Impairment                    | Educational<br>Administrators | 1000 | Dr.R.Shanthi, Assistant Professor(SG), Dept of Special           |
|   | Sign Language  | All stakeholders              | 1000 | Education shanthi_spl@avinuty.ac.                                |
|   | Functional Assessment of Children with Disabilities                              | Children                      | 200  | in   |
| 5 | Educational Rehabilitation of persons with Disabilities                          | Educational Administrators    | 1000 | Mrs.R.Nagomi Ruth, Assistant Professor(SS),                      |
|   | Guidance on promotion of Inclusive Education                                     | Educational Administrators    | 1000 | Dept of Special Education  |
|   | Assessment and Education of Children with Disabilities                           | Children                      | 200  | nagomi_spl@avinuty.ac.<br>in                                     |
| 6 | Education of the Children with Hearing Impairment                                | chidren                       | 200  | Mrs.K.Kalaivani<br>Assistant Professor,                          |
|   | Sign Language  | All stakeholders              | 1000 | Dept of Special Education,                                       |
|   | Educational Assessment of Children with Disabilities                             | Children                      | 200  | kalaivani_spl@avinuty.a<br>c.in                                  |
| 7 | Guidance on Education of<br>Children with Visual<br>Impairment                   | Children                      | 200  | Dr.S.Revathi Assistant Professor, Dept of Special                |
|   | Inclusive Education  | Educational<br>Administrators | 1000 | Education revathi_edn@avinuty.ac                                 |
|   | Guidance on Community<br>Based Rehabilitation                                    | CBR<br>Institutions           | 1000 | .in  |
|   | Functional vision Assessment and Education of Children                           | children                      | 200  |  |
| 8 | Educational Guidance on Children with  • Hearing Impairment  • Visual Impairment | Parents/teacher s             | 500  | Dr.A.Divya Priya Assistant Professor, Dept of Special Education, |
|   | Universal Design for Learning  | Educational<br>Administrators | 1000 | divyapriya_spl@avinuty .ac.in                                    |
|   | Functional Assessment and Education of Children with Disabilities                | Children                      | 200  |  |

| 9  | Educational guidance                                 |                 | 500  | Dr.M.Revathi,           |
|----|--|-----------------|------|-------------------------|
|    | Children with Visual                                 | S               |      | Assistant Professor,    |
|    | Impairment   |                 |      | Dept of Special         |
|    | Facilitating Inclusive                               | Educational     | 1000 | Education,              |
|    | Education  | Administrators  |      | revathi_spl.ed@avinuty. |
|    | Remedial Intervention                                | children        | 200  | ac.in                   |
|    | Educational Assessment of Children with Disabilities | children        | 200  |                         |
| 10 | Guidance on Education of                             | Parents/teacher | 500  | Mrs.B. Rajeswari,       |
|    | Children with Visual                                 |                 |      | Teaching and Research   |
|    | Impairment   |                 |      | Fellow,                 |
|    | Guidance on Inclusive                                | Educational     | 1000 | Dept of Special         |
|    | Education  | Administrators  |      | Education,              |
|    | Educational Assessment of                            | children        | 200  | rajeswari_spl@avinuty.a |
|    | Children with Disabilities                           |                 |      | <u>c.in</u>             |
| 11 | Functional assessment of                             | children        | 200  | Mrs.S.Lavanya           |
|    | Children with Visual                                 |                 |      | Teaching and Research   |
|    | Impairment   |                 |      | Fellow                  |
|    | Assessment and Education of                          | children        | 200  | Dept of Special         |
|    | Children with Disabilities                           |                 |      | Education               |
|    |  |                 |      | lavanya_spl@avinuty.ac  |
|    |  |                 |      | in , in                 |

### **Engineering**

| Consultancy  | Name and Designation  | Prospective industry<br>/Concern that may<br>require your<br>consultancy (specific<br>name of the<br>industry may also<br>be included) | Cost  |
|--|---|--|---|
| Measuring the quality of water<br>based on parameters like pH,<br>Alkalinity, Hardness, Chloride<br>content, Dissolved oxygen,<br>conductivity etc,  | Dr.S.Malarvizhi<br>Associate Professor  | All industries which<br>use water for<br>different processes<br>Water Treatment<br>Plans   | Rs.1,250/- per water sample   |
| The statistical analysis needed for projects   | Dr.T . Poongodi<br>Assistant Professor (SG)                                     | Research Scholars  | Rs.2000/-   |
| Do Statistical Analysis needed for projects  | Dr.D.Sumitha Associate Professor  | All the research scholars  | Rs.2000/-   |
| -  | Dr.V.M.Vijayalakshmi<br>Assistant Professor<br>Dr.J.Sri Kiruthika               | -  | -   |
| Biopolymer edible coating on various fruits and vegetables for preservation  | Assistant Professor Dr.A.Ayisha Begam Associate Professor                       | Food packaging and preservation Industry   | Rs.500 per hr   |
| -  | Dr.S.Rani<br>Assistant Professor (SS)   | -  | -   |
| Blood grouping, Hb, Sugar, total protein, and lipid profile  | Dr.R.Pappa Ammal<br>Associate Professor   | People who need an examination of the mentioned hematological parameters   | Rs. 500/-   |
| Designing of building interiors especially kitchen working centers as per the anthropometric measurements of the workers or homemakers. (Working Counters' heights and width, Storage -wall and base cabinets, Sink-height and depth etc.) | Dr. Rymala Mathen<br>Chief coordinator,<br>Entrepreneurship<br>Development Cell | Architects, Civil engineers who plan and construct houses/ offices and Interior designers.   | <ul> <li>Rs. 5000/ for designing alone and giving the plan (Rs. 65 to Rs.75 per sq. ft)</li> <li>3% of the total cost (Designing and finishing including a site visit)</li> </ul> |
| Subject Field: General English & Basic Sciences  | Dr.T.Mekala<br>Assistant Professor  | Those who need to translate Course material can avail.   | Rs. 10/- per page   |
| Hands-on training – Polymer preparation  | Dr.R.Vini<br>Assistant Professor  | Students and Industry  | Rs.500/- per candidate (one day)  |

| Hands-on training – Metal      | Dr.A.Banu            | Students and           | Rs.500/- per candidate                 |
|--------------------------------|----------------------|------------------------|--|
| oxide and biomaterials         | Assistant Professor  | Industries to whom     | (one day)                              |
| preparation                    |                      | material synthesis is  | (* * * * * * * * * * * * * * * * * * * |
|                                |                      | required               |  |
| Development of Unique          | Dr.TKS.Lakshmi Priya | Small Scale Cottage    | Rs 1.00 per package                    |
| Packages and Fabrication of    | Prof. & Head / PT    | Industry and Women     | print                                  |
| Die-Cutting Machine            |                      | Self-help group        |  |
| Fabrication of Paper Case Pen  | Dr.A.Arulmozhi       | Small Scale or         | 5 % of the machine                     |
| Making Machine and             | Associate Prof./PT   | Cottage Industry and   | cost price                             |
| Fabrication of Four Colour     |                      | Women's Self-help      | •                                      |
| Color Screen Printing Machine  |                      | group                  |  |
| Fabrication of Interactive     | Dr.N.Alagusundari    | Machine                | 5% of the product cost                 |
| Printed Electronics Boards for | Asst. Prof./PT       | Manufacturing          | _                                      |
| Marketing                      |                      | Industry               |  |
| Automatic discovery of         | Dr.S.Sivakumari      | AI and ML solutions    | Rs.75,000/-                            |
| insights from high volume      | Professor and Head   | for Financial,         |  |
| data, protect sensitive        |                      | insurance, agriculture |  |
| information using privacy-     |                      | and healthcare sectors |  |
| preserving data mining, using  |                      |                        |  |
| machine learning algorithms    |                      |                        |  |
| Automatic detection of threats | Dr.P.Amudha          | Software Companies     | Rs.75,000/-                            |
| using swarm optimization       | Professor            | or any organization    |  |
| algorithms                     |                      |                        |  |
| Web Application Development    | Dr.K.Rajakumari      | Digital Marketing      | Rs.15,000/-                            |
| for small-scale industries     | Associate Professor  | Companies              |  |
| Rechargeable Transportation    | Dr.D.Nithya          | Travelling agencies    | Rs.50,000/-                            |
| card                           | Assistant Professor  |                        |  |
| Medical Chatbot for            | Dr.R.Ahila           | Hospital and Elderly   | Rs.55,000/-                            |
| Alzheimer's Patients           | Assistant Professor  | Person                 |  |
| Disease prediction using       | Mrs.S.Shanmugapriya  | Health informatics     | Rs.25,000/-                            |
| Machine Learning Techniques    | Assistant Professor  |                        |  |
| Critical Care Monitoring       | Ms.P.Sindhuja        | Hospital & Caretaker   | Rs.20,000/-                            |
| System                         | Assistant Professor  |                        |  |
| Eye Motion Detection based     | Ms.K.Divya           | Hospitals              | Rs.30,000/-                            |
| Assistive System for Paralyzed | Assistant Professor  |                        |  |
| Patients using Back            |                      |                        |  |
| Propagation Networks           |                      |                        |  |
| Autonomous Vehicle             | Mrs.K.Thamaraiselvi  | Self-Driven Cars       | Rs.75,000/-                            |
| Technology                     | Assistant Professor  |                        |  |
| Anomaly and Intrusion          | Mrs.D.Rajeswari      | Banking Sector         | Rs.50,000/-                            |
| Detection in Cyber Security    | Assistant Professor  |                        |  |
| Energy Efficient Coverage      | Mrs.C.Janani         | Medical sciences and   | Rs.50,000/-                            |
| <del>-</del>                   | Assistant Professor  | Environmental          |  |
|                                |                      | Sciences               |  |
| Web Application Development    | Ms.J.Kowsalya        | All Industries         | Rs.50,000/-                            |
| for all Industries             | Assistant Professor  |                        |  |
| Testing of physical, chemical, | Dr.R.Nithya          | Water Resource         | Testing charges of                     |
| and biological characteristics | Associate Professor  | Organization, Public   | each parameter is                      |
| of water and wastewater        |                      | Works Department       | enclosed                               |

|  | T   |  |  |
|--|---|--|--|
| Consultation for solid waste management  Land Survey Consultancy Services: Area measurement Level measurement  |   | Any construction industry wants to check the water quality  Construction industry who seeks  | Rs.2000 with a report  Rs.3,000/Acre without transit charge  |
| Level measurement  |   | outsourcing and public   | truisit charge   |
| <ol> <li>Arriving at Mix design for various concrete</li> <li>2D CADD drawing for building plans, and building elevations can be done using CAD and REVIT Software</li> <li>Analysis and designing of a building using ETABS software can be dine</li> <li>Test the workability of the fresh concrete to check its ease of placement</li> <li>Test the mechanical properties of concrete to check its compressive strength, tensile strength, and flexural strength,</li> <li>Test the impact, crushing, flakiness and elongation, abrasion properties of coarse aggregate</li> <li>Test the fine aggregate for finding its properties such as specific gravity, sieve analysis, bulking</li> <li>Test cement mortar for its workability and compressive strength</li> <li>Test the quality –the strength</li> </ol> | Dr.S.Shanthi Assistant Professor                          | All construction industry which involves planning, designing, and executing the construction work.  Sukra Property Developers Pvt. Ltd.  Karunanidhi Constructions Pvt. Ltd. | 1. Mix design - Rs. 2000 2. Analysis and design of a building - Rs 5000 3. Workability - Rs 500 4. Mechanical property of concrete - Rs 1200 5. Quality of aggregate - Rs 4100 6. Quality of fine aggregate - Rs 1000 7. Quality of cement mortar - Rs 1000 8. Quality of brick, block - Rs 900 9. Quality check of paver block - Rs 3500 The cost for report writing is Rs 1000 |
| of bricks, solid blocks, and paver blocks  1. Collection of Site Surveyor services, Boundary   | Dr.N.Srimathi<br>Associate Professor                      | Construction development sector  | Charges Per day -<br>Rs.5000   |
| Services, Levelling Services, Testing of hardened congrete   | Mrs M Popus Povi  | Construction industries  | Cost for plan  |
| Testing of hardened concrete   | Mrs. M. Ramya Devi<br>Assistant Professor<br>Mrs.G.Aswini | Construction industry  | Cost for plan<br>Rs.3500/-   |
|  | MIS.G.ASWIII  |  |  |

|   | Assistant Professor                            |   |  |
|---|--|---|--|
| Device and method of an<br>Infrared Camera to Detect<br>Dental caries and images<br>captured and stored   | Dr.Judith Justin<br>Professor and Head         | Healthcare industry                           | Technology Transfer & Licensing: Rs. 2 Lakhs Cost of the device: Rs.1,000/- Charges for one test: Rs.100/- |
| Design and development of wireless medical devices  | Dr. R. Vanithamani<br>Professor                | Healthcare industry                           | Cost of the device:<br>Rs.5,000/-  |
| Development of Biosensors using nanomaterials for clinical analysis.  | Mrs. M. Nila Nandhini,<br>Assistant Professor  | Healthcare Industry                           | Rs. 5000/-   |
| The computer-assisted analysis for better interpreting images has been a long-standing issue in the medical imaging field. Recent developments in machine learning, particularly in the form of deep learning, have made significant strides in image understanding by making it easier to recognize, categorize, and quantify patterns in medical images. Deep learning is quickly establishing itself as the cutting-edge foundation in this approach, achieving improved performances in a variety of medical applications. This domain introduces the principles of deep learning techniques and evaluates how well they work with picture registration, the identification of anatomical and cellular features, tissue segmentation, computer-aided disease diagnosis or prognosis, and so on. | Mrs.Shijitha R<br>Assistant Professor          | Clinical Laboratories and Scientific Research | Rs. 5,000/-  |
| Design and development of biosensors by nanofabrication techniques.   | Mrs.A.Mahalakshmi<br>Assistant Professor       | Wearable Medical<br>Device industry           | Rs. 50,000/-   |
| Design and engineering of wearable medical sensors for facilitating at-home health monitoring   | Dr. E.Smily Jeya Jothi<br>Assistant Professor, | Wearable Medical<br>Device industry           | Rs. 5,000/-  |

| AI-enabled speech devices     Calibration of medical devices in hospitals  | Mrs.S.Gowri<br>Assistant Professor           | 1. Rehabilitation Engineering, Healthcare devices for the differently abled 2. Healthcare industry | 1. Rs. 5,000/- for a speech-to-text device 2. Calibration and testing services Rs.2,500/-  |
|--|--|--|--|
| Digital hardware system design using VHDL/Verilog HDL, FPGA Prototyping  | Dr. B. Sargunam Dean i/c, Professor and Head | Semiconductor<br>Industry  | Rs. 10,000   |
| Design, simulation and fabrication of RF components and systems  | Dr. K. Annaram,<br>Professor                 | Electronics, RF, IoT, DRDO and ISRO  | For training and consultancy Rs 2500 to 3500 per day. Design, simulation and fabrication price will vary based on the nature of the work and design. |
| Continuous monitoring of real-<br>time parameters using sensors<br>and<br>NFC Tags for freshness<br>identification of packed foods | Dr. R. Sudarmani<br>Associate Professor      | Healthcare, logistics<br>and food industries<br>(supply chain)                                     | Phase I: Rs. 50,000 /-<br>Phase II: Rs. 15,000 /-  |
| Designing hardware devices<br>for preventing vehicle<br>accidents using embedded<br>systems  | Dr. D. Veera Vanitha<br>Associate Professor  | Automobile manufacturing industries  | Rs. 10,000   |
| Digital System Design using<br>Embedded System   | Mrs. R. Chitra<br>Assistant Professor (SS)   | Semiconductor industry   | Rs. 10,000   |
| Computer-Aided Diagnosis of<br>Medical Images  | Mrs. K. V. Archana<br>Assistant Professor    | Medical Diagnostic<br>Centres  | Rs. 5,000 /-   |
| Design of Schematic Circuit<br>simulation and Printed circuit<br>board layout using software<br>tools (Easy EDA, KiCad EDA)        | Ms. S. Priyadharshini<br>Assistant Professor | PCB Assembly industries, Siemens   | Rs. 10,000/-   |
| Embedded hardware Design<br>using software tools (Python,<br>PHP, Javascript)  | Mrs. R. Padma Priya<br>Assistant Professor   | Automation Industry  | Rs. 10,000/-   |
| 1. Design, Development, and<br>Optimization of food<br>processing machinery and<br>process<br>2.NewProduct Development             | Dr. A.Lovelin Jerald<br>Professor and Head   | MSME, Food industries, Farmers, and Entrepreneurs  | Rs.50,000/-  |
| New Product development and process development  | Dr. P.HemaPrabha<br>Associate Professor      | Food Industries,<br>farmers, and<br>Entrepreneurs  | Rs.20,000/-  |
| 1. Designing of food processing machinery and process optimization   | Dr. A.Reni<br>Associate Professor            | Food industries and start-ups  | Rs.50,000/-  |

| 2. Thermal processing of foods   |                     |                         |             |
|----------------------------------|---------------------|-------------------------|-------------|
| Small fabrications and           | Dr. S.Ramani        | Small-scale             | Rs.10,000/- |
| composite fabrications           | Assistant Professor | fabrication industries  |             |
|                                  |                     | and Researchers         |             |
| Machine fabrication for          | Mrs. K.Pooja        | Food industries,        | Rs.50,000/- |
| agricultural uses and industrial | Assistant Professor | farmers, and            |             |
| uses                             |                     | agricultural industries |             |
| Non-Destructive quality          | Ms. R.Sharmeela     | Food industries and     | Rs.15,000/- |
| evaluation of foods              | Assistant Professor | quality control         |             |
|                                  |                     | laboratories            |             |
| Non-Invasive quality detection   | Ms. B.Janani        | Fruit and vegetable     | Rs.15,000/- |
| of fruit and vegetables          | Assistant Professor | industries              |             |

| S.No. | Name of the Principal Investigator/ Co Investigator, Department and Project Title   | Name of the<br>Funding<br>agency | Year of<br>Award<br>and<br>Duration | Outcome of social relevance  |
|-------|---|----------------------------------|-------------------------------------|--|
| 1     | Dr. B. Nalini, Physics, Developmnt of ZnCo204 based Electochemic battery,   | MINOR<br>RESEARCH<br>GRANT       | 2022, 1 yr                          | A constructed device with ZnCo2O4 as cathode and Lithium titanate as anode with transparency and photostimulative characteristics will be generated  •The constructed device will be having a photo dependent electrochemical performance that is charging and discharging cycles will get altered due to the exposure of light.  • Two publications  • Pilot study for one major proposal for submitting to any of funding agency |
| 2     | Dr. K. Bagyalakshmi, , Co-PI, Dr. Kalaiarasi Dr. M. Poonkothai, Textiles and clothingExtraction of sustainable Bioactive black dye from selected bio- sources for Textile colouration,    | MINOR<br>RESEARCH<br>GRANT       | 2022, 1 yr                          | Natural colourants with functional properties in textile fabrics maintain a pollution free environment.  |
| 3     | PI - Dr. D. Kavitha CoPI Dr. M. Rajeswari,Biochemis try Biotechnology and Bioinformatics,Reve rsal of Multidrug resistance in Heliobacter pylori using Chemosensitization strategies with | MINOR<br>RESEARCH<br>GRANT       | 2022, 1 yr                          | The biofilm inhibition capacity of the selected natural compounds combination with antibiotics could provide a way for the quick reduction of H. pylori counts in the host. There by reducing the penetration of H. pylori into the epithelial cells of gastric mucosa and prevents the carcinogenesis   |

|   | Natural compounds<br>targeting efflux<br>transporters and<br>Bioinformatics,   |                            |            |  |
|---|--|----------------------------|------------|--|
| 4 | Dr. T.K.S. Lakshmipriya, Dr N Vasugi, Dr. Karthikdeepa Dr. Alagusundari, Printing Technology, Fabricat ing a prototype of an Interactive board game to exploit the sensory skills of Toddlers, | MINOR<br>RESEARCH<br>GRANT | 2022, 1 yr | Game board to help the toddlers to develop their sensory aspects as well for the teachers or parents to find the ability of the toddlers and helps to enhance the skillset at the right time.  |
| 5 | Dr. Mahalakshmi, Librarian, Assessing Information Literacy competency of PG students and research scholars of Avinuty,   | MINOR<br>RESEARCH<br>GRANT | 2022, 1 yr | The study findings will help the students and research scholars of our Institute to locate, evaluate and use the information effectively for their academics and research work. It will also help them in lifelong learning and result in learned society.                         |
| 6 | Dr. A. Pankajam, Co-PI - Dr. T. Amudha, Business administration, Street vendors\'s attitude and adoption towards digitalization in coimbatore,,  | MINOR<br>RESEARCH<br>GRANT | 2022, 1 yr | empowerment of the street Vendors/Hawkers India should also adopt to the digital intervention for better results in economic development.Awareness can be created among the street vendors regarding the government schemes and make them benefitted through the digital adoption. |
| 7 | Dr N V Amudhadevi & Dr N Krishnaveni, Dr T Jayamalar,Analysis of Psychological impacts on Virtual learning environment among Higher Education students   | SEED GRANT                 | 2022, 1 yr | Creates a positive attitude towards online learning technologies and digital developments. It creates an opportunity to provide suggestions and recommendations for achieving an optimal online mode of learning during the post-COVID-19 era.                                     |

|    | using Machine<br>Learning<br>Techniques   |            |            |   |
|----|---|------------|------------|---|
| 8  | Dr V Vimala, Commerce,Adoption of Mobile banking Apps& Transaction Apps:Cyber security issues among digital customers   | SEED GRANT | 2022, 1 yr | Expanding the knowledge through adoption of Mobile Banking technology which provides the updated database to both banker and customers. The findings of this study will help banks and other financial institutions to develop their strategies and operations in regard to customer-oriented thinking, which will further help them to create long-term, profitable customer relationships and improve future viability. |
| 9  | Dr Ramya & Dr M Iswarya, Business Administration, Branding and Perception of Higher Education Institutions: Moderating Role of e-WOM Platforms                | SEED GRANT | 2022, 1 yr | Role of Students and other stakeholders in Perceptions towards HEIs Role of E-WoM in promoting HEIs Identification of right HEI for pursuing programmes   |
| 10 | Dr C Karthik deepa & S S Manimozhi, K Deepa, EducationCreation of Puppets by Student teachers and its effectiveness among school students,                    | SEED GRANT | 2022, 1 yr | Puppets, Books, and papers in<br>Journals related to puppet making<br>by student teachers and its<br>effectiveness among school<br>students. One WOrkshop<br>organized on Puppet making   |
| 11 | Dr R Shanthi & Dr<br>Sambathrani, Special<br>Education, Developi<br>ng Elementary<br>health habits<br>among Children<br>with special needs<br>through Rhymes, | SEED GRANT | 2022, 1 yr | Developing Testing and Intervention Tool for Elementary health habits of Children with special needs through Rhymes   |
| 12 | Dr. V. Saraswathi,  | SEED GRANT | 2022, 1 yr | This study aims to provide  |

|    | Resource managementTransfo rmation of ecological solid waste into marketable product: A Green Approach,  |            |            | insights on the development and transformation of waste into organic fertilizer to help reduce the impact to the environment.   |
|----|--|------------|------------|---|
| 13 | Dr U Ratna, Ms Shakti Uma Maheshwari, Texiles and clothing, Design and Development of Textiles Products from Reclaimed Fibers                        | SEED GRANT | 2022, 1 yr | To bring innovative change in textile waste management processes, products and sustainable development for the future. Using reclaimed fibres we can reduce energy consumption and waste going to landfills.  |
| 14 | P Jagathambal & S Rajakumari,Perceive d Parenting style and its relationship with self esteem and resilience among First generation College students | SEED GRANT | 2022, 1 yr | First Genration College Students (FGCS) will be sensitized on strategies to enhance self esteem and resilience.   |
| 15 | Dr M Amutha Selvi,<br>Chemistry,Investiga<br>tion of Modified Mn<br>II Complexes as<br>potential MRI<br>Contrast agent                               | SEED GRANT | 2022, 1 yr | The cyclic shape prepared CA, which can bind with Mn metal and it should prevent the release of free Mn(II) and thus improve the clinical safety and higher relaxivity which is high compare to Gd-DTPA contrast agent  |
| 16 | Dr V Srividhya, Computer Science, Automated Question paper generation system using Bloom's Taxonomy - to include learning outcomes                   | SEED GRANT | 2022, 1 yr | preparing a question paper<br>through an automated system for<br>question paper generation makes<br>it a lot more efficient, reliable,<br>improved in quality, and also cut<br>this back the time taken by<br>instructors in setting the question<br>papers manually. |
| 17 | Dr S Velvizhi &<br>Dr E<br>Nithya,Biochemistry   | SEED GRANT | 2022, 1 yr | Oxygen nanobubbles production was tried with 3 different shell  |

|    | Biotechnology and<br>Bioinformatics, Asses<br>sment of the ability<br>of Oxygen<br>Nanobubbles to<br>reverse Acute<br>Hypoxia in Rats  |            |            | types such as sodium carboxymethyl cellulose, lecithin and chitosan. Chitosan and lecithin formed only layers instead of nanobubbles, whereas Sodium CarboxyMethyl Cellulose Oxygen formed nanobubbles. These nanobubbles were not effective in reversing hypoxia in isolated peripheral isolated lymphocytes.                              |
|----|--|------------|------------|---|
| 18 | Dr. V. Sasirekha (Physics) Dr D Shanmugapriya, & Dr Nethra Pingala Suthishni,Energy Efficient Intrusion Detection System for Zigbee based Wireless Sensor Networks using Machine Learning Techniques | SEED GRANT | 2022, 1 yr | The understanding regarding the traffic dynamics within WSNs provide a basis for further works on network optimization and anomaly detection for WSNs. The construction of a strong framework system for detecting intrusions based on the machine learning techniques is a novel aspect of this suggested research                         |
| 19 | Dr Sreeja Balakrishnan, English, Culture bias and gender representation in Indian Advts and Its impact   | SEED GRANT | 2022, 1 yr | Helps individuals to know the level of the influence of these advertisements in their lives and identify the positive and negative influence of this aspect. The Research project is multidisciplinary in nature; it deals with the concepts of Culture, Gender, and Media with special emphasis on its impact on the contemporary society. |
| 20 | Dr B Rani & Dr. M. Kavitha, Tamil, Sanga Ilakkiyangalil Malarum Maruthuva Gunangalum   | SEED GRANT | 2022, 1 yr | Crete awareness on the medicinal properties of flowers as spoken about in Sangam Literature   |
| 21 | Dr C Priyadharshini<br>& Dr S Bharani,<br>Tamil, <b>Tamil</b><br>Elakiyangalil Velan   | SEED GRANT | 2022, 1 yr | Introduction of the sustainable farming practices and environment friendly lifestyle spoken about in Sangam literature  |

|    | Marabu   |            |            | to the present generation   |
|----|--|------------|------------|---|
| 22 | Mrs V Ezhilarasi, Visual Communication,Artif icial Intelligence based interactive Audio lessons in Irula Dialect for the Pre Primary School Tribal Students in Coimbatore Dist         | SEED GRANT | 2022, 1 yr | The concept of introducing lessons in native dialect in the early stages will carry the uniqueness and legacy of their culture to the next generation preventing it from the verge of extinction.   |
| 23 | Dr K Devi, FSN, Impact of Transfer of Functional and Nutritional Dairy Technologies on household food security and Nutritional status among small dairy farmers                        | SEED GRANT | 2022, 1 yr | Improvement of nutritional status and food security of small dairy farmers through effective transfer of technology   |
| 24 | Dr G Sudhamathy, Dr N Valliammal, Computer Science, Sleep recommendation System for Elderly People based on Convolutional Neural Network and Long short Memory                         | SEED GRANT | 2022, 1 yr | An intelligent model based on Deep<br>Learning is built in this paper to<br>display sleep stage patterns. This<br>model is helpful for physicians as it<br>classifies the sleep stages faster than<br>the manual classification, which in<br>turn saves time and cost.  |
| 25 | Dr R Saravana Prabha & S Archana Mani, A Sivasankari, Physical Education, Implementing Schematic Action plan for Fit Avinashilingam Movement- An Experiential Initiative towards Women | SEED GRANT | 2022, 1 yr | The proposed schematic action plan on Physical Activity through Fit Avinashilingam Movement proposes solutions to strengthen leadership, governance, workforce capabilities, and advocacy to create a social movement to address the complex problem of physical inactivity. Thereby promote women empowerment and wellbeing. |

|    | Empowerment and Well being  |            |            |  |
|----|---|------------|------------|--|
| 26 | Dr Nirmaladevi, Dr Sudhadevi M,Biochemistry Biotechnology and Bioinformatics, Assessment on health hazard of using mosquito repellant and creating awareness on healthy alternatives among people in and around Coimbatore City | SEED GRANT | 2022, 1 yr | Existing synthetic chemical based repellent has health hazard and proven to be carcinogen. An attempt will be been made a) to assess health hazard of using mosquito repellent among people in and around Coimbatore city b) to produce herbal based incense bar possessing mosquito repellent property with the knowledge from traditional practices. Also planned to get certification for the product developed after evaluation of its efficiency, efficacy and safety |
| 27 | Dr T Radha, Dr S Meenakshi, Resource Management, Participatory Approach for sustainable Horticulture development through Smart farming in Thondamuthur Block  | SEED GRANT | 2022, 1 yr | Involvement of farmers' participation in all the phases of project to make them self-reliant Making the selected villages as a Smart Horticulture Technology Cluster   |
| 28 | Dr R Sunitha, Ms Channa, Vimala, Bharathi, Deepthi, Textiles and clothing, Upcycling of Textile waste into value added Composite products   | SEED GRANT | 2022, 1 yr | Upcycling is the best strategy that brings positivity in the societal impacts. The recycling of waste reduces the prevailing waste in the environment and also this strategy reduces the production cost of the Upcycling products.  |
| 29 | Dr Jansi Rani & Dr. P. Kalaivani,Resource Management,Traini ng on Artificial Jewellery Making as a Strategy for Women   | SEED GRANT | 2022, 1 yr | This training programme gives a chance to rural women to grow professionally. It helps the young generation to make them self-reliant which will in turn reduces the issues of unemployment and dependency. T  |

|    | Empowerment   |            |                               |  |
|----|---|------------|-------------------------------|--|
| 31 | Dr Priya M & Dr M Thilagu, Human Development, Aware ness and Knowledge on Fertility among Rural and Urban Women: An AI based Interpretation Dr. V. Premala Priyadarsini, Food Service Management and Dietetics & Dr Thilagamani, FSMD, Examinning the impact of Covid 19 Pandemic on Dietary and Lifestyle behavious of Children in select schools of | SEED GRANT | 2022, 1 yr<br>2022, 1<br>Year | Fertility awareness and knowledge level of rural and urban women from Coimbatore would be identified to extend the research for further study. The reasons/causes of infertility may be derived from this study and people will get aware of what are the factors responsible for infertility and treatment methods.  The present investigation will aid to assess the impact of COVID - 19 pandemic on dietary and life style behaviour of school children (preteens and teens) in selected schools of Coimbatore and the educating the school children on good dietary practices and desirable life habits for healthy living will foster a healthy society. |
| 32 | Coimbatore and promotions of healthy dietary habits  Dr.P.A.Raajeswari , FSN,Student- N Roshini,Upscaling Bio waste- Ground   | TNSCST-SPS | 2021                          | One stop solution for Single Use Plastics because they reduce the plastic pollution and carbon footprint.  |
|    | nut shell to Eco-<br>friendly packaging<br>materials  |            |                               |  |
| 33 | Dr.K.Devi , Food Science and Nutrition Student- M.Steffi Vergina, Self heating approach and protein enrichment in the development of ready to eat pasta   | TNSCST-SPS | 2021                          | Development of pasta with protein enrichment. Instant heating adds the convenience to the product  |
| 34 | Dr.E.Nithya   | TNSCST-SPS | 2021                          | Exploring the means to tackle  |

|    | Biochemistry Biotechnology and Bioinformatics Student-Nandhini.S, Sujitaa.R, Sandhya.S,Assessing the ability of oxygen nanobubbles to reverse acute hypoxia in isolated peripheral blood lymphocytes |            |      | acute hypoxia with the technology of using oxygen nanobubbles   |
|----|--|------------|------|---|
| 35 | Dr.R.Saratha Professor/ Chemistry Student- U.Mithra, Study on artificial intelligence in lithium-ion battery prediction  | TNSCST-SPS | 2021 | Multidiscipliary research focussing on exploring the possiblities of application of AI in battery fabrication addressing the needs for developing indigenous batteries.       |
| 36 | Dr.S.Amsamani Dept. of Textiles and Clothing Student- Roshna. A Enhancement of handloom fabrics through selected Indian tribal art   | TNSCST-SPS | 2021 | Enhancement of Handloom fabric production through application of Indian Tribal arts. Promotion of Indian art culture.   |
| 37 | Dr.S.Thilakavathy Dept. of Food Science and Nutrition Student-G.P.Abinaya, Formulation of beta carotene and fibre rich nutritious bar using sweet potato (Ipomoea batatas) and millets               | TNSCST-SPS | 2021 | Beta-Carotene and Fibre Rich<br>Nutritious Bar developed using<br>Sweet Potato and Millets was<br>rich in Beta-Carotene and shelf<br>stable with good nutritional<br>profile. |
| 38 | Mrs.S. Anitha, Physics Student- C.Devasri, V.Sneka, Enhanced biological activity   | TNSCST-SPS | 2021 | A study exploring the application of protein favonol bioconjugates. Study focussing on structure activity and metabiloic interactions of metal                                |

|    | of syneristic effect<br>of metal<br>nanoparticles with<br>flavanols and<br>protein<br>bioconjugate  |              |                  | nanoparticles with these conjugates.   |
|----|---|--------------|------------------|--|
| 39 | Dr.Premavathy Vijayan, Dr. P Subashini, Computer Science, Core Research Grant for Artificial Intelligence   | DST          | 2019, 2<br>Years | Promotion of Artificial Intelligence, Establishment of Artificial Intelligence core Research lab, Centre for Cyber Intelligence, AI startup programme for IoT based products and projects  |
| 40 | Dr.(Mrs).K.Manimoz hi, Resource Management,UGC Assistance for Component 1 (Research Capacity Building and Human Resource Development) under STRIDE                        | UGC          | 2019, 3<br>Years | Promotion of Transdisciplinary research. Development of infrastructure for research capacity building.   |
| 41 | Dr.P.Subashini, Computer Science, Consolidation of University Research for Innovation and Excellence in Women Universities (CURIE) to support Artificial Intelligence Lab | DST          | 2019, 2<br>Years | Promotion of Artificial Intelligence, Establishment of Artificial Intelligence lab, AI club, AI for Education Lab, Centre for Machine Learning ad Intelligence, Centre for AI and Robotics |
| 42 | Dr.A Reni, Food Processing and Preservation Technology, Processing & Development of value added products from Millets for the   | TNSCST (DIT) | 2020, 1<br>Year  | Provide livelihood opportunities for Rural Women with food processing techniques for production of value added millet based products   |

|    | enrichment of<br>livelihood of rural<br>women and<br>farmers   |                            |                   |   |
|----|--|----------------------------|-------------------|---|
| 43 | Dr. Sargunam Balusamy, Electronics and Communication Engineering,Modern ization and Removal of Obsolescence (MODROB)                                   | AICTE                      | 2019, 2<br>Years  | 1. C700-SDR with VNA Port /Transmission Configuration and Advanced Microstrip Trainer Kit were purchased for IC and Communication Laboratory 2. One day Workshop on " Analysis Using SDR with VNA Port and Advanced Microstrip Trainer"conducted on 12.10.2021 (Beneficiaries-54 ECE students and faculty) 3. Syllabus of Microwave Engineering and Optical Communication Practicals revised to include experiments on Advanced Misrostrip Trainer kit. 4. Improvement of functional efficiency of labs and computing facilities. |
| 44 | Dr.Judith Justin, Biomedical Instrumentation Engineering,Modern isation and Removal of Obsolescence (MODROB) of Biosensors and Transducers Laboratory  | AICTE                      | 2019, 2<br>Years  | 1.Calibration Equipment purchased for Biosensors and Transducers Laboratory, 2. Two day Workshop on "Calibration of Biomedical Equipment"conducted on 27th & 28th September 2021 (Beneficiaries-59 BMIE students) 3. Syllabus of Biosensors and Transducers lab revised to include experiments on Calibration of Medical Equipment.   |
| 45 | Dr.Judith Justin, Biomedical Instrumentation Engineering, Development of screen printed grapheme based ECG Sensor for wearable E-Textiles applications | DST CURIE<br>minor project | 2019, 4<br>Months | 1.Research Paper presented in 1st National Conference on Advancements in Communication and Information Technology Essentials, organized by Department of Information Technology and ICT Academy on February 15 & 16, 2019 at Dr.N.G.P. Institute of Technology, Coimbatore, and won the BEST  |

|    | (Technology<br>Development)  |                            |                   | PAPER AWARD. 2.ECG for 100 patients recorded with the screen printed graphene based sensor (at Kongunad Hospital, Coimbatore) towards experimental work and data was analyzed.   |
|----|--|----------------------------|-------------------|--|
| 46 | Dr.K.S.Santhy, Zoology, Integrated analysis of Gene expression and Genome-wide DNA Methylation for Uterine Leiomyoma Prediction :an Association Rule Mining Approach | DST CURIE<br>minor project | 2019, 4<br>Months | The study revealed a potential mechaism for the pathogenesis and development of the uterine leiomyomas which could help in personalized medicine and targeted therapy.   |
| 47 | Dr.M.Rajeswari, Biochemistry Biotechnology and Bioinformatics, Structure-Activity Relationship of LasR inhibition using Machine Learning Algorithms                  | DST CURIE<br>minor project | 2019, 4<br>Months | Published a Research paper: Combined Machine Learning and pharmacophoric based Virtual Screening approches to screen for antibioticfilm inhibitors targeting LasR of <i>Pseudomonas aeruginosa</i> in Journal of Biomolecular Stucture and Dynamic (2022). |
| 48 | Dr.K.Manimegalai, Zoology, Smart Phone Image for identification of mosquito species using Artificial Neural Network  | DST CURIE<br>minor project | 2019, 4<br>Months | The Research paper published:Detection of Anopheline Mosquito from microscopic image using Image Processing (2021).Journal of Huazhong University of Science and Technology. 6:1-8   |
| 49 | Dr.N.Santhi, Biochemistry, Biotechnology and Bioinformatics, Prediction of semen quality as an outcome of environment and lifestyle habits using ANN                 | DST CURIE<br>minor project | 2019, 4<br>Months | Creating awareness on impact of lifestyle on fertility and other reproductive issues.  |
| 50 | Dr.P.Subashini,  | DST CURIE                  | 2019, 4           | Enable the use of AI in emotional  |

|    | Computer Science, Detection of Emotions from Physiological Signals using AI   | minor project              | Months            | management by detecting physiological signals  |
|----|---|----------------------------|-------------------|--|
| 51 | Dr.M.Poonkothai, Zoology, Identification of algae using AI approach in textile dye removal  | DST CURIE<br>minor project | 2019, 4<br>Months | Effective handling of textile effluents and prevention of environmental degradation and contamination with the application of AI.Possible Microalgae based remediation approaches in textile dye removal enhancement |
| 52 | Dr.M.Poonkothai & Dr.P.Subashini, Zoology & Computer Science, AI-A gadget to recognize fungi in spoiled bread   | DST CURIE<br>minor project | 2019, 4<br>Months | Exploration on application of AI in identifying food pathogens such as fungi.  |
| 53 | Dr.R.Nithya, Civil Engineering, Development of air quality modeling for Brick Kiln using Artificial Neural Network  | DST CURIE<br>minor project | 2019, 4<br>Months | Air quality prediction modeling<br>for particulate matter has been<br>developed using Artificial Neural<br>Network   |
| 54 | Mrs.S.Premalatha, Civil Engineering, Optimized Lightweight Light Emitting Concrete Blocks   | DST CURIE<br>minor project | 2019, 4<br>Months | Ecofriendly option, energy saving using natural light, adding aesthetical beauty to external structure   |
| 55 | Dr.TKS.Lakshmi Priya, Mrs.N.Alagusundari, Printing Technology, Exploring AI Techniques to effectively classify and identify conductive inks for specific applications | DST CURIE<br>minor project | 2019, 4<br>Months | An effective AI system to find the conductive inks for the appropriate substrate to print out the required prototype.  |
| 56 | Dr.E.Nithya,  | DST CURIE                  | 2019, 4           | bring out the required prototype.  |

| 57 | Biochemistry, Biotechnology and Bioinformatics, Predicting obstructive sleep Apnea using Artificial Intelligence Dr.P.Lalitha, Chemistry, Targeted | minor project  DST CURIE minor project | Months  2019, 4 Months | AI based inexpensive screening of drugs to meet the urgent needs of  |
|----|--|--|------------------------|--|
|    | Therapeutic Design exploiting Artificial Intelligence  | mmor project                           | riontils               | society  |
| 58 | Dr.N.Valliammal, Computer Science, Detection and Prevention of Cyber-Harassment against Women in Social Media Using Supervised Learning Algorithm  | DST CURIE<br>minor project             | 2019, 4<br>Months      | Women's safety measure. Helping women to be aware and cautious of Cyber harassment.  |
| 59 | Dr.B.Kalpana, Computer Science,Smart Home Automation System using AI   | DST CURIE<br>minor project             | 2019, 4<br>Months      | Creating intelligent environment at home using AI powered smart home devices. Provides confortability at different levels. remote accessibility and monitoring of household appliances                                     |
| 60 | Dr.S.Sumathi, Biochemistry, Biotechnology and Bioinformatics, Detection of cervical cancer using image processing and artificial neural network    | DST CURIE<br>minor project             | 2019, 4<br>Months      | This approach will help us to identify cervical cancer by image processing without using any invasive methods like biopsy sampling. It might help in screening and detection of cervical cancer without human intervention |
| 61 | Dr.PA.Rajeswari, Food Science and Nutrition, Development and Characterization of   | DST CURIE<br>minor project             | 2019, 4<br>Months      | Protein source for Vegans. Application of AI in development of nutritious food product.  |

|    | Vegan Egg with AI  |                            |                   |   |
|----|--|----------------------------|-------------------|---|
| 62 | Dr. T. Angayarkanni, Biochemistry, Biotechnology and Bioinformatics, Training ANNs to study the structure -activity relationships of antidiabetic phytochemicals                                       | DST CURIE<br>minor project | 2019, 4<br>Months | Exploring the use of phytochemical rich natural foods in treatment of diabetes. Application of AI in studying the structural and metabolic activities of these chemicals                        |
| 63 | Dr.B. Sarojini, Computer Science,Personal Healthcare Management using Chatbot  | DST CURIE<br>minor project | 2019, 4<br>Months | To use CHATBOT in effective personal healthcare management. Helps manage lifestyle effectively and prevention of lifestyle associated diseases.   |
| 64 | Dr.P.Lalitha, Chemistry, Computing Stable Structures, Properties, Energy of Configuration of selected Organo Sulphur Compounds using Computational Software for Arriving at broad spectrum Antibiotics | DST CURIE<br>minor project | 2019, 4<br>Months | AI based inexpensive screening of antibacterial drugs   |
| 65 | Dr.S.Shanthi, Civil Engineering, Prediction of Landside Stability Model using MLP method: an AI approach   | DST CURIE<br>minor project | 2019, 4<br>Months |   |
| 66 | Dr.P.Amudha, Computer Science and Engineering,Congest ion control techniques using   | DST CURIE<br>minor project | 2019, 4<br>Months | Research Paper tilted "Congestion<br>Control in Wireless Sensor<br>Network using AI Techniques – A<br>survey" was presented in<br>International Conference on<br>Modern Engineering Science and |

|    | Artificial<br>Intelligence for<br>Wireless Sensor<br>Networks(Basic<br>Research   |                            |                   | Technology organised by Dr.Kalam Institute of Engineering Research,Ooty on 17.02.2020,ISBN 978-81-940569-3-5. The paper was published in International Journal of Innovative Technology and Exploring Engineering, in vol. 9, ISSN: 2278- 3075,pp 1607-1609,Issue5, March2020. |
|----|---|----------------------------|-------------------|--|
| 67 | Dr.Anitha Subash, Biochemistry, Biotechnology and Bioinformatics, Using ANNs to predict the structure-activity relationships of anticancer phytochemicals | DST CURIE<br>minor project | 2019, 4<br>Months |  |
| 68 | Dr.R.Radha, Food Service Management and Dietetics, Artificial Intelligence in prediction of calorie expenditure for Sports Persons                        | DST CURIE<br>minor project | 2019, 4<br>Months |  |
| 69 | Dr.R.Radha, Food Service Management and Dietetics, Artificial Intelligence in the Prediction and Prevention of Osteoporosis                               | DST CURIE<br>minor project | 2019, 4<br>Months | Prevention of Osteoporosis and debilitatory effect thorugh early prediction using AI   |
| 70 | Dr.R.Radha, Food Service Management and Dietetics, Transforming Diabetes care through Artificial Intelligence among the selected                          | DST CURIE<br>minor project | 2019, 4<br>Months | Novel AI approach in diabetes care and management through early identification and diagnosis   |

|    | subjects  |                            |                   |  |
|----|---|----------------------------|-------------------|--|
| 71 | Dr.M.Krishnaveni, Computer Science, Detection of Malarial Parasite from Human Blood Smear Images Using Image Processing and Machine Learning                                      | DST CURIE<br>minor project | 2019, 4<br>Months | Image processing and Machine learning techniques applied for detection of Malaria parasite   |
| 72 | Dr.A.Shobana, Biochemistry, Biotechnology and Bioinformatics, Dimensionality reduction for DNA sequence of ESRI using Artificial Intelligence                                     | DST CURIE<br>minor project | 2019, 4<br>Months |  |
| 73 | Dr.Judith Justin, Biomedical Instrumentation Engineering, Lung Function monitoring device for asthma and jaundice (Technology Development)  | DST CURIE<br>minor project | 2019, 4<br>Months | Translation of technological development in enhancing healthcare.Implementation of Machine Learning Techniques for Asthma Monitoring using IoT |
| 74 | Mrs.J.Revethi, Biomedical Instrumentation Engineering, Non- invasive Measurement of Glaucoma Disease at earlier stage using Bio-Magnetic signal from eye (Technology Development) | DST CURIE<br>minor project | 2019, 4<br>Months | Translation of technological development in enhancing healthcare. Early detection of Glaucoma using Bio- Magnetic signals from eye.            |
| 75 | Mrs.J.Revethi,<br>Biomedical<br>Instrumentation   | DST CURIE<br>minor project | 2019, 4<br>Months | Enhancement of dental care practices using Neural Network based oral disease detection.  |

|    | Engineering, Neural Network based oral disease detection using WI FI Module (Technology Development)  |                            |                   |  |
|----|---|----------------------------|-------------------|--|
| 76 | Dr.P.Amudha, Computer Science and Engineering, Air Quality Prediction using Artificial Intelligence (Basic Research)                                  | DST CURIE<br>minor project | 2019, 4<br>Months | 1. Research paper tilted "Air QualityPrediction using Artificial Intelligence-A survey" was presented in International Conference on Modern Engineering Science and Technology organised by , Dr. Kalam Institute of Engineering Research, Ooty on 17.02.2020, ISBN 978-81-940569-3-5. The paper was published in International Journal of Innovative Technology and Exploring Engineering, in vol. 9, ISSN: 2278-3075, pp 1417-1420, Issue 5, March 2020. |
| 77 | Dr. K. Manimegalai, Zoology, "In silico studies and effect of allium sativum against Sri Lankan weevil myllocerusundatus (Coleoptera :Curculionidae)" | TNSCST                     | 2019, 4<br>Months | To minise the impact of environmental pest Sri Lankan weevil myllocerusundatus using Allium Sativum  |
| 78 | Dr.S.Amsamani , Textiles and Clothing, Eco Friendly Effluent Treatment Method Using Shrimp Waste  | TNSCST                     | 2019, 4<br>Months | Novel eco friendly waste management method of treating effulents with Shrimp waste.  |
| 79 | Dr. V. Premala Priyadarsini, Food Service Management and Dietetics, "Nurturing holistic health among visually challenged                              | TNSCST                     | 2019, 4<br>Months | Creating awareness on importance of holistic health among visually challenged adolescents.   |

|    | adolescent<br>boys and girls<br>through technology<br>assisted<br>intervention<br>for inclusion"  |                            |                   |  |
|----|---|----------------------------|-------------------|--|
| 80 | Dr. Anitha Subash, Biochemistry, Biotechnology and Bioinformatics, "An Ecofriendly approach for the synthesis of bioplastic using vegetable and fruit wastes"   | TNSCST                     | 2019, 4<br>Months | The bioplastic obtained was reasonably good and strong. The methods have to be futher standardized for improving the plastic |
| 81 | Ms.A.Caroline, Food Processing and Preservation Technology, Automated Fish Cutter Cum Cleaner and organic Feed Maker  | TNSCST                     | 2019, 4<br>Months | Finds application in Seafood processing industry.  |
| 82 | Dr. Anitha Subash, Biochemistry, Biotechnology and Bioinformatics,"Utili zation of Fruit, Vegetable and Flower Wastes for Vermicomposting and Screening for Industrial Enzymes" "An Ecofriendly approach for the synthesis of bioplasic using vegetable and fruit wastes" | TNSCST                     | 2019, 4<br>Months | Waste to wealth measure. Effective means for Household waste management. Develop industrial enzymes from waste products.     |
| 83 | Dr.R.Vanithamani, Biomedical Instrumentation  | DST CURIE<br>minor project | 2019, 4<br>Months | Research Paper published in<br>International Conference on<br>"Recent Trends in Computer                                     |

|    | Engineering,Bone Osteoarthritis(Tech nology Development)   |  |                | Science and Information Technology" (ICRCSIT-20) organized by the Department of Computer Science and Engineering & Information Technology, St. Martin's Engineering College in Association with Computer Society of India, Hyderabad & Global Cyber Security Forum, India on 17th & 18th June, 2020. |
|----|--|--|----------------|--|
| 84 | Dr.S.Gandhimathi and Dr.M.Manonmani, Impact of Water Pollution on Welfare of Farm Households in Tiruppur District  | Project under<br>IMPRESS<br>scheme of<br>ICSSR | 02 Years       | Will be Published as a book or research articles in reputed journals after receiving the permission from the ICSSR   |
| 85 | Dr. A. Vijayalakshmi and Dr. R. Karthiyayini, Vermicompost as soil supplement to enhance biometric yield and biochemical analysis of selected medicinal plants | In-house                                       | 2016, 4 months | To study the impact of Vermicompost application as a soil quality enhancement technique: its effects on biometric yield.   |
| 86 | Dr. A. Vijaylakshmi<br>and Dr. V. Gayathri,<br>Growth of<br>Vegetable crop<br>using<br>Vermicompost  | In-house                                       | 2016, 4 months | Promotion of Environment friendly safe agricultural practices using Vermicompost   |
| 87 | Dr. Nisha, M.K. and Dr. D. Leena Lavanya, Ecofriendly production and purification of tannase obtained from Aspergillus flavus                                  | In-house                                       | 2018, 4 months | Application in food processing industries where Tannase enyme is used. Ecofiendly option.  |

| 88 | Dr. Nisha, M.K., "AI based Environmental Monitoring System for Mushroom Cultivation"  | DST-CURIE-AI-<br>Phase II-Proj.<br>30 | 2021, 1<br>year             | Development of Mushroom cultivation with better monioring of environmental parameters with application of AI   |
|----|---|---------------------------------------|-----------------------------|--|
| 89 | Dr. R. Karthiyayini, Design and Implementation of Artificial Intelligence Based Machine Learning Algorithm for Plant Herbarium Species Identification | DST Curie<br>Phase II                 | 2021, 1<br>year             | Exploring the possibilities of designing effective tools with Machine learning techniques for identification of Plant Herbarium species  |
| 90 | Dr. S. Amutha, Plant<br>Monitoring System<br>using Raspberry Pi<br>3 B+ Model   | DST Curie<br>Phase II                 | 2021, 1<br>year             | A Plant Monitoring System opens up the possibility of developing automated agricultural farming. It is an efficient method of agricultural farming as well as medicinal plant farming to solve the irrigation problem and conserve medicinal plants.   |
| 91 | Dr. M. Kavitha & Dr. B. Rani ,Artificial Intelligence based Adaptive Learning tool for Tamil Grammar  | DST CURIE<br>minor project            | 2021, 1<br>year             | Multidisciplinary research project exploring the possibilities of applying AI for developing effective learning tools for tamil grammar.   |
| 92 | Dr.S.Uma Mageshwari, Department of Food Service Management and Dietetics, Socio Cultural Explorative Study on Ethnic Foods of Tamil Nadu              | ICSSR Major<br>Research Project       | 2020 -<br>2022 (2<br>years) | Ethnic foods of Tamil Nadu were identified. About 400 ethnic foods from different regions of Tamil Nadu were documented. A software was developed as a database for all the collected ethnic recipes. The developed software is user friendly and highly secure. It enable storage of any number of recipes, and also supports recipe and enlargement. Different Tamil literature were reviewed to determine the ethnic foods and food mapping was done. |

| 93 | Dr.V.Premala Priyadharsini and Dr.R.Radha, Department of FSMD,Analysis of Heavy Metal Contamination in Selected Green Leafy Vegetables              | In House - Avinashilingam Institute for Home Science and Higher Education for Women                    | 1st Dec<br>2015-31st<br>Apr 2016<br>- 5 months   | Contamination of heavy metal in greens due to agricultural practices, environmental changes pollution and use of pesticides result in the contamination pose serious health issues. The heavy metal contamination of commonly consumed greens.cultivated from three different sites of Coimbatore ( agricultural field, near contaminated water beds and organic farm) was tested for Chromium, lead and Zinc using atomic absorption spectrophotometer and the reading were noted at wavelength of 425.4nm for chromium 405.4nm for lead and 213.9nm for zinc. Irrespective of the sites of cultivation all four selected greens were contaminated with heavy metals. Palak keerai purchased from Ukkadam market was highly contaminated for all the three heavy metals namely chromium (72.5ppm), zinc (87.5ppm) and lead (113.1ppm) compared to palakkeerai purchased from other two sources. Except for chromium the mint purchased from organic store was highly contaminated for zinc (23.5 ppm) and lead(18ppm). |
|----|---|--|--|---|
| 94 | Dr.R.Radha,Departme nt of FSMD,Effect of Protein Supplement on the Anthropometric and Biochemical Parameters in Selected Adults                     | SKM Egg<br>Products Export<br>(India) Limited,<br>Erode  | 1st Apr<br>2017- 8th<br>Apr 2018<br>- 1 year     | The supplementation study revealed a significant increase in protein levels and hence it can be recommended for growing children, adults, athletes/sports persons expectant and lactating mothers, geriatrics also for special therapeutic purpose like trauma care, renal problem, diabetes etc  |
| 95 | Dr.R.Radha,Departme<br>nt of FSMD,Egg<br>based snack recipes<br>formulation   | Eggs world ,<br>Namakkal   | 4th Nov<br>2019 – 4th<br>Jan 2020-<br>2 months   | Innovative and healthy egg based recipes were developed. The recipes were developed under all categories like starters, maincourse and desserts. Which can be suggested/consumed as high protein receipes   |
| 96 | Dr.R.Radha,Dr.S.Kala iselvi,Department of FSMD and Department of BCBT,Effect of value added millet flakes on weight management and stress levels of | Department of Science and Technology – Science for Equity Empowerment and Development Division - Ref - | 28th Apr<br>2017 –<br>April<br>2020 - 3<br>years | 4 machines were facbricated for the production of Ready to Eat millet flakes and patent was published. RTE millet flakes produced is a healthy snack .As part of the study teh value added RTE foxtail millet fales were supplemented to selected adolescent girls, which helped to maintain their body weight  |

|     | selected obese<br>women   | SEED/WN/048/<br>2014                              |   |  |
|-----|---|---|---|--|
| 100 | Dr.R.Radha,Departme<br>nt of FSMD,Nutritive<br>Value of Commonly<br>consumed breakfast<br>and snack items | Indus Electronics<br>India (P) Ltd,<br>Coimbatore | April<br>2021 - 1<br>month                  | Calculated Natritive value of commonly consumed breakfast and snack receipes which helps to know about the nutrition facts |
| 101 | Dr.R.Radha,Departme<br>nt of<br>FSMD,Development<br>of Channa Based<br>products                           | Jeyyam Global<br>Foods private<br>Limited         | 11 Jul<br>2022- 10<br>Nov 2022-<br>4 months | In the process of developing Channa based products   |

## **Contact details**

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