SAVEETHA

INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES

(Declared as Deemed to be University under Section 3 of UGC Act 1956)

Accredited with Grade 'A' by NAAC | 12B Status by UGC | Approved by AICTE

SIMATS

RESEARCH POLICY

SIMATS – Research Policy

1, The SIMATS – Research policy pertains to research and its related activities of the Institute. The policy will be modified and improved, time to time as per the needs, by taking inputs from various committees relevant to research. The following are the main office bearers for taking decisions on the SIMATS – Research Policy on 16/05/2016.

Chair Person	-	Vice Chancellor
Member Secretary	-	Registrar
Co-ordinator	-	Director, Research

2. The major components of the research policy consist of the following -

2.1. Policy on Research
2.2. Policy on Staff and Faculty Research
2.3. Policy on Research Collaborations
2.4. Policy on Research Guides
2.5. Policy on DSc and PhD Scholars
2.6. Policy on Laboratories – Infra structure and Centres of Excellence
2.7. Policy on Ethics
2.8. Policy on IPR
2.9. Policy on Research Publications

2a. Each component will be monitored by duly appointed committees. The committees will meet at regular intervals. Record of minutes of the meeting will be maintained. The decisions taken will be informed to all concerned accordingly.

Dr. R. Vijayaraghavan
Director, Research

Dr. V. Thiyagarajan
Registrar

Dr. Jawahar Nesan
Vice Chancellor

2.1. Policy on Research

Research is a systematic inquiry to describe, explain, predict and control the observed phenomenon, and to invent new materials, effective drugs, methods, technologies, to develop process and to generate new knowledge for the welfare of human beings and their belongings.

The undergraduates, postgraduates, students of other courses, PhD scholars, DSc scholars, Staff and Faculty of SIMATS can do research.

Research laboratories and centres of excellence will be created by the constituent colleges of SIMATS for carrying out research.

The research areas and the thrust areas for undergraduates, postgraduates and other courses will be decided and monitored by the respective Director/Dean/Principal of the college.

The research areas selected for the PhD scholars, DSc scholars, Staff and Faculty will be monitored by SIMATS - Research Council

An amount will be sanctioned for the undergraduate and postgraduate research projects to motivate them to carry out quality research. The respective colleges will propose the names of the students every year. The Research Council will scrutinise them for further necessary action.

Potential staff and faculty will be provided research assistants for carrying out the research work. The research assistants will pursue PhD work at SIMATS. They will be motivated to carry out quality research.

Awards/Honours/Recognitions for research achievements and outcome of research carried out by the undergraduates, postgraduates and student of other courses, will be decided by the respective Director/Dean/Principal of the colleges, and recommended to the higher authorities to take decision.

Awards/Honours/Recognitions for research achievements and outcome of research carried out by the PhD scholars, DSc scholars, Staff and Faculty, will be decided by the research council, and recommended to the higher authorities to take decision.

A compendium on research achievements and outcomes of SIMATS shall be prepared every year by the research council for the scrutiny of the Governing Council of SIMATS.

2.2. Policy on Staff and Faculty Research

All the staff and faculty will be motivated to carry out quality research. They will be encouraged to carry out research with undergraduates and postgraduates. They will be encouraged to carry out research in interdisciplinary areas. Senior faculty who are PhD-guides of SIMATS will be encouraged to work with PhD scholars. Those who do not have a PhD degree will be encouraged to do PhD.

The staff and faculty will be encouraged to carry out government sponsored projects, company sponsored projects, sponsored clinical trials and inter-institutional collaborative projects. It is mandatory for the career advancement.

The staff and faculty research projects will be monitored by the Research Council.

2.3. Policy on Research Collaborations

The research collaborations are classified in the following four categories -

2.3.1. Government sponsored projects
2.3.2. Company sponsored projects
2.3.3. Sponsored Clinical trials
2.3.4. Inter-institutional collaborative projects

All permanent staff and faculty of SIMATS will be encouraged to take-up collaborative projects. They will be encouraged to take-up projects based on the thrust areas and the infra-structure available.

They will be encouraged to follow all the ethical principles of carrying out research.

They will be encouraged to sign Memorandum of Understanding with the sponsoring agency.

The academic load of staff and faculty who get major sponsored projects will be reduced for carrying out efficient research work.

Those staff and faculty, who complete major sponsored projects will be appropriately honoured by SIMATS with awards and promotion.

The research – council will monitor the staff research projects.

2.4. Policy on Research Guides

The research guides of undergraduate and postgraduate students will be monitored by the respective Directors/Deans/Principals of the constituent colleges.

The PhD guides will be monitored by the Research Council.

For the PhD guides the minimum requirements and guide – scholar ratio will be as per UGC guidelines.

The PhD guides will be encouraged to work along with the scholar in an amicable manner on quality research for mutual benefits. They should motivate the scholar on – topic selection, ethical approval, methodology standardisation, data collection, analysis, publication, thesis writing and overall supervision of the research work.

Periodic meetings will be arranged by the research council to update the knowledge of the PhD guides on various interdisciplinary and thrust areas.

2.5. Policy of DSc and PhD Scholars

This will be monitored by the Research Council

2.5.1. PhD Guidelines

1. Admission to Ph.D.
2. Course work classes on research methodology
3. Course work, biostatistics and research methodology examination
4. Methodology/Comprehensive examination on the thesis topic
5. IAEC/IEC – Ethics Clearance
6. Regular research progress meetings
7. Ph.D. Duration – minimum and maximum
8. Draft thesis submission
9. Synopsis presentation
10. Publication in referred journals
11. Thesis submission
12. Thesis evaluation (one abroad, one Indian)
13. Public Viva Voce
14. Final Thesis – hard bound
15. Soft copy to INFLIBNET
16. CONVOCATION

[As per minimum requirements of UGC]

PhD Admission criteria as per UGC and SIMATS guidelines

2.5.2. DSc Guidelines

1. After one year of Ph.D. Completion
2. Admission to D.Sc
3. Duration – 5 years maximum
4. D.Sc. Thesis submission
5. Minimum 5 indexed papers
6. Minimum 10 impact factor
7. More than 50 % papers as first author
8. Thesis evaluation (one abroad, two Indian)
9. Presentation of D.Sc thesis
10. CONVOCATION

DSc Admission criteria as per SIMATS guidelines

[See Annexure]

2.5.3. Course work classes for PhD – Health Sciences and related fields

1. Biostatistics
2. Computer applications and software
3. Behavioural science
4. Epidemiology
5. Research ethics
6. Patents, copyright, design patents.
7. How to write good research paper and reports
8. Thesis format and guidelines
9. Plagiarism in research – detection and decontamination
10. Hands on training on animal experimentation

The post graduate students of health science and the research guides will also be encouraged to attend the research methodology classes. This will provide them adequate knowledge for completion of the projects and quality publication.

2.5.4. Course work classes for PhD – Engineering, Management, Law and related fields

Selected topics from the above as research methodology as one course.

Three other courses related to the PhD work decided by the Thesis Advisory Committee (TAC).

2.6. Policy on Laboratories – Infra structure and Centres of Excellence of Constituent Colleges

All the constituent colleges of SIMATS should have separate research laboratories and should also provide centres of excellence. The colleges should work on the thrust areas based on the available infra-structure and the research requirements of the society. The Director/Dean/Principal of the respective colleges should monitor them with appropriate standard operating procedures.

The thrust areas and infra-structure will be modified and improved, time to time as per the needs. The constituent colleges should provide research outcome and important achievements.

2.6.1. Thrust areas

1. Drug delivery and formulation
2. Nanotechnology
3. Integration of generic and alternative medical systems for holistic approach of treatment
4. Neurobehavioural studies
5. Point of care diagnostics
6. Tele medicine
7. Clinical trails

2.6.2. Infra structure for research

1. Advanced clinical investigations
2. Advanced diagnostic centre
3. Super speciality hospital
4. Corporate wards

2.6.3. Centres of Excellences

1. Clinical research facility (CRF)
2. Microsurgery
3. Vestibular stimulation

2.6.4. Technology development

1. Entrepreneurial innovations and start-ups of students and faculties in the University through Technology Business Incubation (TBI) programs in the Saveetha Entrepreneurship and Empowerment Department (SEED).

2.6.5 Research outcome

1. Research projects by undergraduates on health needs
2. Experimental investigation with ethical principles by postgraduates
3. Clinical trials for leading agencies
4. Interdisciplinary research
5. Publications in refereed journals – JAMA, Lancet, Nature genetics
6. Improvement in h-index and citations

2.6.1. Thrust areas

1. Dental biomaterials
2. Implant biomaterials
3. CAD/CAM dentistry
4. Oral surgical oncology
5. Oral precancerous lesions
6. Regenerative Endodontics
7. Maxillo facial Trauma management
8. Cleft lip and palate rehabilitation
9. Community oral Health
10. Periodontal plastic surgery
11. Stem cell Therapy
12. Geriatric Orthodontics
13. Regenerative and surgical orthodontics
14. Paediatric dental anaesthesiology
15. Oral biomarkers for cancer

2.6.2. Infra structure for research

1. Excellent availability of clinical material and infrastructure
2. High profile academic research scientists and faculty
3. BRULAC -Animal Research Centre
4. Dental Materials laboratory
5. Tessellation laboratory
6. Advanced histopathology laboratory
7. Design laboratory for Orthodontics
8. CAD/CAM laboratory for prosthodontics
9. Advanced research training modules for students and faculty

2.6.3. Centres of Excellences

1. Centre of Implantology
2. Centre of Tessellation
3. Centre of Aesthetic Dentistry
4. Centre of Oral oncology

2.6.4. Technology development

1. Multiple Integrated Learning Algorithm (MILA) for teaching
2. Dental Information and Archives System (DIAS) for clinical management and documentation
3. Academic Record Management System (ARMS)
4. Digital Design Studio for prosthetic Rehabilitation
5. Virtual simulation for implant placement
6. CAD/CAM Orthodontics studio and Laboratory

2.6.5 Research outcome

1. High Quality Randomised control clinical trials
2. Extensive community oral health promotion and research
3. Clinical research with innovative and effective interventions
4. Development of patents and innovation
5. Publications in high impact journals
6. Research consultancy services to other institutions
7. Trans Disciplinary Research
8. Research Summits and symposiums
9. Employability and Career placements for research scholars

2.6.1. Thrust areas

1. Non-communicable Diseases – Early detection, preventive measures and therapeutic nursing intervention
2. Reproductive and child health
3. Adolescent Health
4. Communicable Diseases – Remerging infectious diseases
5. Mental Health

2.6.2. Infra structure for research

1. Nutrition laboratory
2. Simulation laboratory
3. Foundation laboratory

2.6.3. Centres of Excellences

1. Efficacy studies on various nursing interventions
2. Pre-emptive prevention
3. Excellence in nursing practice
4. Critical care nursing

2.6.4. Technology development

1. Cycle ergo meter
2. Reckon App guide
3. Gladsome restraint

2.6.5 Research outcome

1. Individual research projects by undergraduates
2. Experimental investigation with ethical principles by postgraduates
3. Research in clinical and community settings
4. Translational and interdisciplinary research
5. Publications in refereed journals
6. Improvement in h-index and citations

2.6.1. Thrust areas

1. Balance and rehabilitation
2. Dysphagia
3. Patello-femoral pain syndrome
4. Post stroke management
5. Manual therapy
6. Diabetic peripheral neuropathy

2.6.2. Infra structure for research

1. Post-graduate research laboratory for physiotherapy

2.6.3. Centres of Excellences

1. Stroke rehabilitation
2. Child development centre
3. ACL rehabilitation
4. Diabetic peripheral neuropathy

2.6.4. Technology development

1. Technology development for pelvic floor muscle strength
2. Technology development for lung endurance and volume
3. Technology development for trunk muscle strength and range of motion
4. Technology development for diabetic peripheral neuropathy

2.6.5 Research outcome

1. Publication in appropriate journals
2. Improvement in h-index
3. Technology transfer

2.6.1. Thrust areas

1. Artificial intelligence and machine learning
2. Cloud computing
3. Image processing and neural networks
4. Computer networks
5. Internet of things
6. Embedded systems
7. Wireless communication
8. Power systems
9. Power electronics
10. Thermal engineering
11. Manufacturing
12. Machine design
13. Concrete technology
14. Design of buildings

2.6.2. Infra structure for research

1. Image processing laboratory
2. Mobile App development laboratory
3. Artificial intelligence laboratory
4. Computer aided design laboratory
5. Power electronics laboratory
6. Crystal growth and nano laboratory
7. Saveetha Engineering Industry
8. Modern Library

2.6.3. Centres of Excellences

1. CISCO laboratory
2. Wireless communication
3. LADDER: laboratory for advanced design
4. Advanced Manufacturing Centre
5. Concrete and highway laboratory
6. Water quality Laboratory
7. Renewable energy park

2.6.4. Technology development

1. Saveetha Engineering Industries - An industry within the campus to enhance the practical exposure and real time experimentation in the field of mechanical and automobile engineering.

2.6.5 Research outcome

1. Post Doctoral Fellowships to scholars and faculty
2. STAR (Saveetha Trans disciplinary Annual Research) Summit - A research platform for UG and PG students with Faculty and Guides to present innovative ideas as poster and model.
3. Government sponsored projects
4. Consultancy projects and company sponsored research project by students and faculty members.
5. Collaborative projects with reputed institutions from overseas.
6. Publications in reputed journals
7. Intellectual property rights in the form patent filing.

Department of Research and Development

2.6.1. Thrust areas

1. Drug discovery, drug formulation and drug delivery systems,
2. Safety evaluation and efficacy studies of drugs and chemicals,
3. Phytochemical research,
4. Toxicological effects of drugs, chemicals and biological agents and their medical counter measures and antidote development.
5. Molecular and cellular biology,
6. Stem cell research for tissue regeneration,
7. Developments of therapeutics for neurological disorders,

2.6.2. Infra structure for research

1. CRL - Central Research Laboratory
2. CLAR - Centre for Laboratory Animal Research

2.6.3. Centres of Excellences

1. Drug discovery, drug formulation and drug delivery systems
2. Safety evaluation and efficacy studies of drugs and chemicals

2.6.4. Technology development

Amikacin Autoinjector

Buprenorphine Autoinjector

2.6.5 Research outcome

1. PhD and DSc degrees
2. Publication in highly cited journals
3. Improvement in h-index and citations

2.7. Policy on Ethics

There should be separate committees approved by the regulatory authorities for monitoring the ethical principles involved in research. The following should be given importance.

1. Green chemistry
2. Environmental ethics
3. Radioactive materials
4. Biosafety
5. Biological materials
6. Animal experimentation
7. Human experimentation
8. Plagiarism

Green chemistry encourages the design of products and processes that minimise the use and generation of hazardous substances. Environmental ethics is related to the release of polluting substances. For radioactive materials, issues related to safety and waste disposal should be addressed. Biosafety is the prevention of large-scale loss of biological integrity, focusing both on ecology and human health. The use of biological materials, whole or in part for research should have appropriate approval. Experiments involving laboratory animals and human participants should have approval from Institutional Animal Ethics Committee (IAEC) and Institutional Human Ethics Committee (IHEC) respectively.

The ethical issues related to undergraduate and post graduate research will be monitored by the respective Director/Dean/Principal of the constituent colleges. The Institutional Review Boards (IRB) will scrutinise the proposals. For animal and human research work, for certain undergraduate and postgraduate research work, and PhD, DSc, Staff and Faculty Research work, and sponsored clinical trials will be monitored by the appropriate Institutional Ethics Committees (IAEC and IHEC).

Copying phrases or publication in pieces and modifying it in few places without giving appropriate citation is plagiarism. For plagiarism the UGC guidelines should be followed. 90 percent originality is expected for PhD and DSc thesis in the text writing. Recommended plagiarism checking software should be used. The issues on plagiarism for undergraduate and post graduate research will be monitored by the respective Director/Dean/Principal of the constituent colleges. The research council will monitor the plagiarism issues related to PhD, DSc thesis and Staff and Faculty research.

2.8. Policy of IPR

A patent is a form of intellectual property rights (IPR) granted to the inventor for a limited period of time. The students, staff and faculty are encouraged to file and publish patents.

Issues related to - Who will do patents; How it will be done; What are the requirements; What are the benefits; Who will be the patent applicant/the organisation; and Who will be the inventors should be included.

This will be monitored by IPR Cell.

2.9. Policy on Research Publications

Issues related to research publication of students. Staff and faculty; Issues related to the quality of publication; Issues related to benefit of quality publication will be addressed.

All manuscripts should undergo plagiarism check before submitting to the publisher.

This will be monitored by Research Publication Cell

Spare Page

Annexures

SIMATS – Research Policy

List of Annexures

1. PhD guidelines
2. DSC guidelines
3. Institutional Ethics Committee (IHEC) format
4. Institutional Animal Ethics Committee (IAEC) format
5. PhD Progress report – form
6. PhD Thesis writing guidelines
7. PhD Evaluation report
8. PhD Guide and Examiner information.
9. PhD Public Viva Voce agenda

1. Application for Ph.D. Admission will be available from SIMATS, from April of each year. The form should be filled with all details.

1.1. Proposed thesis title and a brief write-up of one page.

1.2. Name of the Guide/Supervisor.

1.2.1. The Guide/Supervisor should be selected from SIMATS only.

1.2.2. The Guide/Supervisor at any time should not have more than the permitted number of Ph.D. Scholars from SIMATS.

Professor	-	8 Ph.D. Scholars
Associate Professor	-	6 Ph.D. Scholars
Assistant Professor	-	4 Ph.D. Scholars

1.2.3. If the Scholar is not from SIMATS or not from Chennai, a Co-guide/Co-supervisor should also be selected from the place of work of the Scholar. A letter of consent from the Co-guide/Co-supervisor (for the external scholars) for willingness to guide the Scholar and also will attend meetings at SIMATS should be produced. If necessary, an MoU will be signed.

1.2.4. The Guide/Supervisor and Co-guide/Co-supervisor should be of the same field or should have research experience in the field of the proposed thesis work of the Scholar.

1.2.5. Guide/Supervisor and Co-guide/Co-supervisor should be a Ph.D. or with 10 years of experience after MD/MS/MDS degree.

1.2.6. Guide/Supervisor should have published research articles in referred journals (Thomson Reuters and Scopus index is preferred).

Professor	-	5 Publications
Associate Professor	-	2 Publications
Assistant Professor	-	2 Publications

However, where there is smaller number of indexed journals, lesser number of publications can be considered.

1.3. No Objection Certificate (NOC) from the employer of the Scholar for pursuing Ph.D. programme at SIMATS should be produced.

1.4. The cost of application form is Rs. 1000.

1.5. The filled form should be sent to The Registrar, SIMATS, Thandalam, Chennai 602 105

1.6. Duration of the Ph.D. programme:

1.6.1. External – Part Time	-	4 years
1.6.2. Internal – Part Time	-	4 years
1.6.3. Internal – Full Time	-	3 years

(External means, Scholars those who are not working at SIMATS.
Internal – Part time means, Scholars who are Faculty or
Staff of SIMATS. Internal – Full time means, Scholars who are not
Faculty or Staff of SIMATS but will work voluntarily in the respective

colleges for their doctoral degree. If they have fellowships from other agencies, they can utilise it.

2. Last date for submission of the application form is 30th June of each year.

3. Entrance test of one hour duration will be conducted at SIMATS, Chennai during the third week of July of each year. The results will be announced on the same day and for those who qualify the examination the interview will be conducted on the same day to discuss about the research interest/area.

4. Selected Scholars will be informed by email by 25th July of each year.

5. Fees should be paid on or before 10th August each year.

Fees : Health Sciences

At the time of admission	=	Rs. 15000
Annual fee for External	=	Rs. 50000
Annual fee for Internal	=	Rs. 25000
Engineering and Management		
At the time of admission	=	Rs. 15000
Annual fee for External	=	Rs. 25000
Annual fee for Internal	=	Rs. 10000

6. Admission (provisional) will be effective from 1st August of each year.

7. For all Scholars a three member Thesis Advisory Committee (TAC) also called as Doctoral Committee (DC) will be constituted by the Guide/Supervisor or the Department of Research and Development in consultation with the Guide/Supervisor.
   (i) Guide/Supervisor
   (ii) Co-guide/Co-supervisor or internal member from SIMATS
   (iii) One expert member who has experience in the field of the Scholar's research area.

8. Research Methodology Courses will be conducted at SIMATS from August of each year to January of the next year, consisting of Biostatistics, Computer applications, Research ethics and Behavioural sciences. The Research Scholars should attend these courses. In addition to Research Methodology Course, additional Course Work on 3 subjects has to be completed by the engineering and management scholars as decided by the TAC.

9. For the Health Sciences Scholars two course work examinations of two hours each on Paper I - Biostatistics and Paper II - Research methodology and ethics, will be conducted in February - March of each year. Pass marks is 55 %. For Engineering and Management scholars one Research Methodology Examination (3 hours) and the 3 Course subjects of engineering and management (3 hours) will be conducted

in February - March of each year. Pass marks is 55 %. In the case of failures in the examinations a repeat examination will be conducted. A total of three attempts will be allowed. Fee for the Research Methodology Examination will be announced later and has to be paid before the examination.

10. Methodology Examination (Part II; on the subject of the proposed thesis work) will be conducted by the Thesis Advisory Committee (TAC) from August of each year for those who passed the Research Methodology and Course Work Examinations. For Engineering and Management this Examination is called as Comprehensive Examination. In the case of non-satisfactory performance of Methodology Examination or Comprehensive Examination, a repeat examination will be conducted. Only two attempts are allowed for the Methodology Examination or the Comprehensive Examination. The fee for Methodology Examination or the Comprehensive Examination will be announced later and has to be paid before the examination.

11. For the Health Science Scholars, proposal for the ethical clearance, for animal studies (IAEC, Institutional Animal Ethical Committee) or the human studies (IHEC, Institutional Human Ethics Committee) should be submitted just before or immediately after the Methodology Examination (Part II). For the Engineering, Management and other fields, if the research involves any animal model or human participants for validation of the research method or any questionnaire has to be answered, appropriate ethical clearance from Institutional Ethics Committee should be taken. External Scholars can get the clearance in their respective Institutes, if necessary.

12. After the Methodology Examination or the Comprehensive Examination, regular meetings will be organised at SIMATS for discussing the progress of the research work. Regular six monthly progress report should be submitted by all the scholars.

13. 3 months before the stipulated period (3 years for Internal – Full time Scholars and 4 years for Internal and External – Part time Scholars), a synopsis (6 copies) and a draft thesis (1 copy), both soft bound copies should be submitted. Fee for the synopsis submission should be paid (Rs. 15000).

14. The draft thesis will be evaluated by an Internal – Thesis Evaluation Committee for improving the quality of the thesis work.

15. The synopsis presentation will be organised for the Scholars at SIMATS in 2 – 3 weeks after the submission of the synopsis and draft thesis. The Thesis Advisory Committee members, Post Graduates and Doctoral Scholars working at the respective college and selected Faculty and Staff will be invited for the presentation. Suggestions given during the synopsis presentation and in the draft

thesis can be suitably incorporated in the thesis by the Scholars in consultation with the Guide/Supervisor.

16. Final thesis soft bound (6 copies), synopsis soft bound (6 copies), the draft thesis, one CD containing the synopsis and thesis, and No Due Certificate should be submitted at the end of the stipulated period. Two research articles in referred journals (One as first author and the other as first or co-author) is required, either published or accepted at the time of final thesis submission. Fee for the thesis submission should be paid (Rs. 30000).

17. Ph.D. Scholars should submit the thesis not later than 6 years after the admission. (Fees should be paid for every year, from 1st to 10th August every year). Extension can be granted by SIMATS if there are valid reasons.

18. The thesis will be evaluated by two experts. A list of experts can be given by the Guide/Supervisor. The decision of selection of the experts for the evaluation of the thesis will be done by SIMATS.

19. If both the experts give positive opinion and give suggestions for improvement including language, the same should be corrected or incorporated in consultation with the Guide/Supervisor. If required the corrected thesis may be resent to one of the experts for a final decision. Fee has to be paid for the re-evaluation (will be informed later).

20. If any one of the experts give negative opinion (not accepting the quality of the thesis), it will be sent to a third expert. Fee has to be paid for the re-evaluation (will be informed later). If the third expert gives positive opinion with suggestions, the same should be incorporated. If required the corrected thesis may be resent to one of the experts who showed positive opinion.

21. If the third expert also shows negative opinion (two negative opinions and one positive opinion) no further action will be taken and degree will not be awarded.

22. After the corrections in the thesis and positive decisions from the experts a Ph.D. Public *Viva Voce* will be organised at SIMATS, appointing an expert along with the Guide/Supervisor as the examiners. Invitation for attending the *Viva Voce* will be given within and outside SIMATS by the Department of Research and Development. The Scholar has to present the work efficiently and satisfy the examiners as well as the audience. On successful completion of the *Viva Voce*, a recommendation will be forwarded to the Controller of Examinations. If any minor corrections are suggested the same has to be incorporated in the thesis. Three copies of the Hard Bound Thesis and one CD containing the Thesis and the Synopsis (in PDF format) should be submitted finally.

23. Within one month after the Public *Viva Voce*, the soft copy of the thesis and the synopsis will be sent to the UGC site INFLIBNET (Ahmadabad).

24. The Ph.D. Degree will be awarded at the next Convocation of SIMATS.

25. The Department of Research and Development, SIMATS will provide all assistance to help the Scholars from the day of admission to the award of the degree.

26. The thesis should be written chapter wise. Each chapter should approach 90% originality by a standard plagiarism check software.

For further details contact:

Director (Research),
Department of Research and Development
SIMATS, Thandalam, Chennai - 602 105.

D.Sc. programme – Guidelines

1. The D.Sc. Degree will be the highest degree of Saveetha Institute of Medical and Technical Sciences (SIMATS).

2. Admission to the D.Sc. programme will be done once in a year.

2.1. Applications from suitable scholars will be received in the D.Sc. application form from 1st May to 30th June every year (Annexure 1).

2.2. All scholars who have completed 1 full year after the award of Ph.D. Degree from a recognised university and who are continuously engaged in research are eligible for admission to D.Sc. programme.

2.3. The applications will be scrutinised by the 'D.Sc. Expert Committee - SIMATS. The prospective scholars will be informed accordingly before 10th July.

2.4. There will be an interaction session for the prospective scholars with the D.Sc. Expert Committee – SIMATS on any one day in the third week of July. The scholar's research interests, the importance to the scientific field and its feasibility will be assessed by the committee.

2.4.1. A tentative title for the D.Sc. thesis will decided in the interaction session.

2.4.2. The D.Sc. thesis can be in the same field of Ph.D. work or in a different field.

2.5. The selected scholars will be informed about their selection before 25th July.

2.6. The admission will be effective from 1st August every year.

2.7. The Scholars have to pay an Admission Fee (for Internal Scholars Rs. 50,000 and for external Scholars Rs. 100,000),

2.8. The duration of the D.Sc. programme is 5 years.

2.9. The Scholar can change the title within 1 year after the admission and the same has to be approved by the D.Sc. Expert Committee - SIMATS in their next meeting. There after title change will not be allowed.

2.10. The scholars have to work for a minimum period of 3 years in the same organisation declared by them during the admission time (internal or external).

3. Before the completion of 5 years the scholar should produce a D,Sc. thesis. There will be no extension. Eight copies of the thesis with a soft copy (Annexure 3; PDF format) in a CD should be submitted.

3.1. The minimum period for the submission of D.Sc. thesis is 3 years and the maximum period is 5 years.

3.2. The scholar should pay D.Sc. thesis submission fee (for Internal Scholars Rs. 100,000 and for external Scholars Rs. 200,000),

4. The D.Sc. thesis should be in one area only. All publications in the thesis should be inter-related.

4.1. In the D.Sc. thesis the scholar should have published (or accepted for publication) 5 or more original research papers with a cumulative Impact Factor of 10.0 or more (the journals Impact Factor at the time of thesis submission will considered).

4.1.1. Among the research papers the scholar should be the first author in more than 50 % of the articles and that the cumulative Impact Factor should be more than 5.0 (the journals Impact Factor at the time of thesis submission will considered).

5. The scholar should give a list of 12 experts for D.Sc. thesis evaluation (4 from southern region of India, 4 from northern region of India and 4 from other countries).

5.1. The scholar should attach the filled Expert Information Form (Annexure 2).

5.2. The expert should have a D.Sc. degree from a recognised university or a Ph.D. degree from a recognised university with peer reviewed publications and the expert should have a cumulative Impact Factor of more than 50.0. They should be actively engaged in research in the related field of the D.Sc. scholar as judged by publications in peer reviewed journals in recent years.

6. The D.Sc. Expert Committee – SIMATS, will choose one expert from each region and the thesis will be sent to them for evaluation. All the three experts should accept the thesis (there may be corrections including grammatical corrections, and the same should be rectified before acceptance).

6.1. If any of the experts delay for more than 3 months after the despatch of the thesis without any valid reason, the thesis will be sent to another expert from the panel.

7. The D.Sc. Expert Committee – SIMATS, will study all the reports and will take a decision. If any one of the three experts does not accept the thesis, degree will not be awarded.

8. The D.Sc. Degree will be awarded (D.SC. – Health Science) in the next convocation. The scholar has to receive the award in person.

For further details: 1. www.saveetha.org

2. Department of Research and Development
SIMATS, Thandalam, Chennai - 602 105.

D.Sc. APPLICATION FORM

1. Name of the Scholar :
2. Institutional Address :
   Mobile number :
   Email :
3. Home Address :
4. Date of Birth :
5. Sex :
6. Educational Qualifications :

S.No.	Degree	Month and Year	Subjects and Dissertation/Thesis title
1	Post Graduation		
2	M.Phil.		
3	Ph.D.		
4	D.Sc.	Proposed title	

7. Experience : Teaching and Research

S.No.	Name of post	Organisation	Duration (from – to)

8. Number of publications :
   (attach list with
   Impact Factor)
9. Number of patents
   (attach list)
10. Number of Ph.D. Scholars
    Degree awarded :
    Pursuing :
    (attach list with
    name of scholar and title)
11. Scopus h index :
12. i10 index :
13. Citation index :
14. Awards and Honours :
15. Members of Societies :
16. Editorial Board Member :
17. Areas of research work :
18. Signature with date :
19. Forwarding Authority :
    Signature with date and seal

D.Sc. EXPERT INFORMATION FORM

1. Name of the Scholar :
2. Institutional Address :
   Mobile number :
   Email :
3. Home Address :
4. Date of Birth :
5. Sex :
6. Educational Qualifications :

S.No.	Degree	Month and Year	Subjects and Dissertation/Thesis title
1	Post Graduation		
2	M.Phil.		
3	Ph.D.		
4.	D.Sc.		

7. Experience : Teaching and Research

S.No.	Name of post	Organisation	Duration (from – to)

8. Number of publications :
   Cumulative Impact Factor :
   (attach list with
   Impact Factor)
9. Number of patents
   (attach list)
10. Number of Ph.D. Scholars
    Degree awarded :
    Pursuing :
    (attach list with
    name of scholar and title)
11. Scopus h index :
12. i10 index :
13. Citation index :
14. Awards and Honours :
15. Members of Societies :
16. Editorial Board Member :
17. Areas of research work :

D.Sc. Thesis Format

1. Introduction
2. Aim and objective
3. Methodology
4. Results
5. Discussion
6. Summary, conclusion and recommendations
7. Acknowledgements
8. References
9. List of scholar's publications of the D.Sc. thesis with Impact Factor

SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES

(Declared under section 3 of the UGC Act 1956)
162, Poonamalle High Road, Velappanchavadi, Chennai – 600 077

INSTITUTIONAL ETHICS COMMITTEE

Application to involve human participants in research

1. Name of the College :

2. Title of the Research Project :

3. Name and designation of the investigators :

S.No.	Name, qualification and designation	Address	Phone number Email	Signature
Principal Investigator				
3.1				
Co-Investigators				
3.2				
3.3				
3.4				

Note :	Font style - Arial or Comic Sans MS, Size 11 and Line space 1. Margins 2.5 cm on all sides; type on both sides of paper. Submit 10 copies, 1 original and 9 photocopies.

4. Duration of the Research Project :
4.1 Period of data collection :
4.2 Period for analysing the data :
4.3 Probable date of initiation :

5. Institutions involved in the Research Project

S.No.	Name of the Institution	Address	Phone numbers website or email
5.1			
5.2			
5.3			
5.4			

6. Ethical issues

S.No.	Details	Information	Remarks
6.1	Risk to participants/patients	Yes/No	
6.2	Invasive test	Yes/No	
6.3	Confidentiality will be maintained	Yes/No	
6.4	Informed consent form required	Yes/No	
6.5	Any other information		

7.0 Material/biological/hazardous information

7.1	Is the project a part of previously approved program? If yes, give Funding agency, Project number, Project title and the Principal Investigator	
7.2	Does the project involve the administration of personality test, inventory or questionnaire? If yes, provide the name of the standard tests or attach copies of the proposed tests.	
7.3	Does the project involve the use/drawing of human blood products, tissues or body fluids?	
7.4	Does the project involve administration of ionising radiation to subjects for other clinical purposes?	
7.5	Does the project involve fetal tissue or abortus?	
7.6	Does the project involve infectious/biohazardous specimens? If yes, how they are going to be disposed off.	
7.7	Does the project involve the testing of investigational drugs or devices? If yes, provide the name of the drug, device and name of the manufacturer.	

8. The research project proposal has been approved by –

Name of the Committee	Approval No. and Date
Scientific Review Board	
Institutional Review Board	
Ph.D. Methodology Examination	
Any other	

9. Signatures

S.No.	Investigator	Name	Signature
9.1	Principal Investigator		
9.2	Co-Investigator		
9.3	Co-Investigator		
9.4	Co-Investigator		

Forwarding Authority Signature Seal
(Name, Designation, Address)

DETAILS OF RESEARCH PROJECT

10. Title of the Research project :

11. Name of the Principal Investigator :

12. Names of the Co-Invesitgators/ :

13. Source of funding :

14. Objectives of the project :

15. Expected duration of the project :

16. Benefit of the research project :
16.1 To the Participants/patients :
16.2 To the Society/Knowledge :

17. Anticipated risks to Participants/ Patients :

18. Is there any compensation for the Participants ? :

19. Is there any compensation for injury to Participants ? :

20. How confidentiality will be maintained? :

21. Conflict of interest :

22. Brief description of the Research Project (about 250 words)
(Introduction, Need for the study, Objectives, Methodology, Analysis of results and Expected outcome)

RESEARCH PROJECT PROPOSAL

23. Research project Proposal : Give details elaborately

23.1 Title of the research project
23.2 Aim and objectives of the research project
23.3 Introduction and need for the research
23.4 Methodology and research design
23.5 Inclusion criteria
23.6 Exclusion criteria
23.7 Sample size, sampling technique and statistical analyses
23.8 Potential risks and benefits
23.9 Expected outcome
23.10 Limitations of the study
23.11 Participant/Patient information sheet (English and local language)
23.12 Informed consent form (English and local language)
23.13 References

PARTICIPANT/PATIENT INFORMATION SHEET

24. Participant information sheet : Give details in a simple manner (English and local language, and should be explained to the participants/patients)

24.1 Title of the research project
24.2 Description of the study
24.3 Possible risk to the participant/patient
24.4 Benefit of the study
24.5 Compensation to the participant/patient
24.6 Confidentiality
24.7 Participants right to withdraw from the study
24.8 Complaints regarding the study should be reported to :

The Member Secretary
Institutional Ethics Committee
Saveetha University
162, Poonamalle High Road
Chennai – 600 077
Phone : 044-66726611
Mobile : 099412 20727
Fax : 044-26800892
Email : dir.res.su@gmail.com

24.9 Detailed information and clarification can be obtained from :

The Principal Investigator's Name
Address
Phone :
Mobile :
Fax :
Email :

24.10 I, (Principal Investigator) _____
have explained clearly to the Participant/patient all the above details. All questions and clarifications by the participant/patient has been fully answered.

24.11 Signature of Principal Investigator with date

INFORMED CONSENT FORM

(To be prepared in English and local language)

25. Informed Consent Form

25.1 I _____ (change as per need)
Agree to take part in the study, conducted by _____
(Principal Investigator Name and address.

25.2 Title of the research project :

25.3 I acknowledge that I have read the information and the same has been explained to me clearly by the Principal Investigator.

25.4 I know about - Possible risks in the study
Benefits of the study
Compensation if any and if applicable
Confidentiality of all the informations
Withdrawal from the study at any stage
If more information is required, whom to contact
Complaints regarding the study, whom to contact

25.5 I agree to give the necessary informations and participate in the study.

25.6 Signature of the participant/patient
Address

(For office use only)

SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES

(Declared under section 3 of the UGC Act 1956)

INSTITUTIONAL ETHICS COMMITTEE

Date :
Number :
Title :
Name of the Investigator :
Course :

This research project proposal has been reviewed by the IEC and the decision is –

Approved – with or without suggestions or comments	
Revision with minor modifications/amendments	
Revision with major modifications for resubmission	
Not approved (or termination/ revoking of permission if applicable)	

S.No.	Name	Designation	Signature
1.		Chair Person	
2.		Member Secretary	
3.		Member	
4.		Member	
5.		Member	
6.		Member	
7.		Member	
8.		Member	
9.		Member	
10.		Member	
11.		Member	
12.		Member	
13.		Member	
14.		Member	
15.		Member	

Director, Research

SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES

(Declared under section 3 of the UGC Act 1956)

Form B (per rule 8(a)*

APPLICATION FOR PERMISSION FOR ANIMAL EXPERIMENTS

Application to be submitted to the CPCSEA, New Delhi after approval of Institutional Animal Ethics Committee (IAEC)

Part A

1. Name and address of establishment
2. Registration number and date of registration.
3. Name, address and registration number of breeder from which animals acquired (or to be acquired) for experiments mentioned in parts B & C
4. Place where the animals are presently kept (or proposed to be kept).
5. Place where the experiment is to be performed (Please provide CPCSEA Reg. Number)
6. Date on which the experiment is to commence and duration of experiment.
7. Type of research involved (Basic Research / Educational/ Regulatory/ Contract Research)

Signature

Name and Designation of Investigator

Date:
Place:

---

*The filled in Form B having above information / details / supporting documents (1 original + 14 copies and 1 soft copy in CD) should be sent to: -
The Member Secretary,
CPCSEA, Ministry of Environment & Forests,
8th floor, Jeevan Prakash Building,
25, Kasturba Gandhi Marg,
New Delhi-110 001

PART B

Protocol from for research proposals to be submitted to the committee / Institutional Animal Ethics Committee, for new experiments or extensions of ongoing experiments using animals other than non-human primates.

1. Project / Dissertation / Thesis Title:
2. Principal Investigator / Research Scholar / Research Guide / Advisor:
   a. Name
   b. Designation
   c. Dept / Div/ Lab
   d. Telephone No.
   e. Experience
3. List of names of all individuals authorized to conduct procedures under this proposal.
   Co-guides
   a. Name
   b. Address
   c. Experience
4. Funding source with complete address (Please attach the proof)
5. Duration of the project
   a. Number of months
   b. Date of initiation (Proposed)
   c. Date of completion (Proposed)
6. Detailed study plan may be given (Not more than one page)
7. Animals required
   a. Species / Common name
   b. Age/ weight/ size
   c. Gender
   d. Number to be used (Year-wise breakups and total figures needed to be given)
   e. Number of days each animal will be housed.
   f. Proposed source of animals.
8. Rationale for animal usage
   a. Why is animal usage necessary for these studies?
   b. Why are the particular species selected required?
   c. Why is the estimated number of animals essential?
   d. Are similar experiments conducted in the past? If so, the number of animals used and results obtained in brief.
   e. If yes, why new experiment is required?
   f. Have similar experiments been made by any other organization agency ? If so, their results in your knowledge.
9. Description the procedures to be used.
   List and describe all invasive and potentially stress full non-invasive procedures that animals will be subjected to in the course of the experiments.

Furnish details of injections schedule
Substances :
Doses :
Sites :
Volumes :
Blood withdrawal
Volumes :
Sites :
Radiation (dosage and schedules):

10. Please provide brief descriptions of similar studies from in vitro / in vivo (from other animal models) on same / similar test component or line of research. If, enough information is available, justify the proposed reasons.
11. Does the protocol prohibit use of anesthetic or analgesic for the conduct of painful procedures (any which cause more pain than that associated with routine injection or blood withdrawal)? If Yes, explanation and justification.
12. Will survival surgery be done?
    If Yes, the following to be described.
    a. List and description of all such surgical procedures (including methods of asepsis)
    b. Names, qualifications and experience levels of operators
    c. Description of post-operative care
    d. Justification in major survival surgery is to be performed more than once on a single individual animal.
13. Methods of disposal post-experimentation
    a. Euthanasia (Specific method):
    b. Method of carcass disposal :
    c. Rehabilitation :
14. Animal transportation methods if extra-institutional transport is envisaged.
15. Use of hazardous agents (use of recombinant DNA-based agents or potential human pathogens requires documented approval of the Institutional Biosafety Committee (IBC). For each category, the agents and the biosafety level required, appropriate therapeutic measures and the mode of disposal of contaminated food, animal wastes and carcasses must be identified)
    (a) Radionuclides
    (b) Microorganisms / Biological infectious Agents
    (c) Hazardous chemicals or drugs
    (d) Recombinant DNA
    (e) Any other (give name)

If, your project involved use of any of the above, attach copy of the minutes of IBC granting approval.

Investigator's declaration.

1. I certify that I have determined that the research proposal herein is not unnecessarily duplicative of previously reported research.
2. I certify that, I am qualified and have experience in the experimentation on animals.
3. For procedures listed under item 11, I certify that I have reviewed the pertinent scientific literature and have found no valid alternative to any procedure described herein which may cause less pain or distress.
4. I will obtain approval from the IAEC/ CPCSEA before initiating any significant changes in this study.
5. Certified that performance of experiment will be initiated only upon review and approval of scientific intent by appropriate expert body (Institutional Scientific Advisory Committee / funding agency / other body (to be named).
6. Institutional Biosafety Committee's (IBC) certification of review and concurrence will be taken (Required for studies utilizing DNA agents of human pathogens).
7. I shall maintain all the records as per format (Form D)
8. I certify that, I will not initiate the study unless approval from CPCSEA received in wiring. Further, I certify that I will follow the recommendations of CPCSEA.
9. I certify that I will ensure the rehabilitation policies are adopted.

Signature

Name of Investigator

Date :

Certificate

This is certified that the project title ……...
……...
has been approved by the IAEC.

Name of Chairman/ Member Secretary IAEC: Name of CPCSEA nominee:

Signature with date

Chairman/Member Secretary of IAEC: CPCSEA nominee:

(Kindly make sure that minutes of the meeting duly signed by all the participants are maintained by Office)

PhD – Progress Report

S.No.	Information	Details
1	Name Address Mobile Email	
2	Guide's Name Address Mobile Email	
3.	Title of Thesis	
4	Work carried out so far	
5	Work carried out in the last six months	
6	Work that will be carried out in the next six months	
7	Publications of thesis work	
8	Scholar Signature; Date	Guide Signature; Date

PhD Thesis writing guidelines
(SIMATS Format)

1. **Title page**
2. **Certificates**
3. **Acknowledgement**
4. **List Contents, Tables, Figures and abbreviations**
5. **Chapter 1**
   Introduction – brief (10 pages approximately)
   What is the positiveness of the society presently ?
   What is negative presently ?
   Why this topic is very important presently ?
   What is the international status ?
   What is the national status ?
   What are the methods available for detection, diagnosis and identification ?
   What remedial measures are available ?
   What alternative methods of remedy are known ?
   What are the limitations and disadvantages ?
   What is the research gap ?
   The need for the study !
6. **Chapter 2**
   Aim, Objectives, Hypothesis, Ethical Considerations (2 to 3 pages)
   Aim
   Objectives
   Hypothesis
   Ethical issues
7. **Chapter 3**
   Review of literature – elaborate (30 pages approximately)
   Introduction about the importance of the study
   International studies
   National studies
   Known methods of detection, diagnosis and identification
   Known methods of medical management
   Alternative methods of management
   Limitations and disadvantages of the detection or diagnosis and treatment
   Limitations and disadvantages of the treatment
   Where more information is required

8. **Chapter 4 – Objective 1**

Introduction

Materials and methods

Research design in detail

Enumerate the methods that will be adopted

What statistical procedures will be followed

Results

Discussion

9. **Chapter 5 – Objective 2**

Introduction

Materials and methods

Research design in detail

Enumerate the methods that will be adopted

What statistical procedures will be followed

Results

Discussion

10. **Chapter 6 – Objective 3**

Introduction

Materials and methods

Research design in detail

Enumerate the methods that will be adopted

What statistical procedures will be followed

Results

Discussion

11. **SIMATS format for results and discussion writing**

Result writing guidelines

(i) Actual change

(ii) Percent change

(iii) How many fold change

Discussion writing guidelines

(i) What is this parameter/variable for ?

(ii) How it is important ?

(iii) What happens in young and old ?

(iv) What happens in male and female ?

(v) What happens in disease condition ?

(vi) What is the relevancy in this study ?

(vii) What happened in this study ?

(viii) Who worked with this parameter ?

(ix) What was the result ?

(x) What is the interpretation ?

12. **Chapter 7**

Summary and Conclusion

Structured format

13. **References (150 references approximately)**

APA style – Uniformity is required

In text	-	a, year
		a and b, year
		a et al, year
		Give reference at the end of the sentence only
		Chronological order
		Last or surname only
		Do not give initials
In reference list	-	Alphabetical order
		Give all authors name; no et al
		Give journal or book reference only
		Avoid internet reference

14. **Publication of the thesis work (1 page approximately)**

15. **Typing style**

Left margin 5 cm; right, top and bottom margins 2.5 cm each

Arial – 12 points

1.25 line spacing

Continuous information (avoid bullets and presentation type writing)

2 to 4 paragraphs per page

Avoid 1st and 2nd person

Use 3rd person; passive voice

Avoid plagiarism

90 % originality required chapter wise

PhD Evaluation report

1. Name of Candidate :
2. Title of the thesis :
3. Discipline and subject :
4. Name and address of the Examiner :
5. Recommendations of the Examiner :

(Please strike out whichever are not Applicable) :

a. Thesis is highly commended.
b. Thesis is commended

Or

c. Thesis is commended and Degree may be awarded subject to the candidate's furnishing satisfactory clarification to my queries during the public viva-voce examinations.

Or

d. Thesis is commended and Degree may be awarded subject to the condition that the corrections / modifications, suggested by me are carried out in the thesis and duly certified by the Supervisor-Convener before the public viva-voce examination.
e. Thesis needs to be resubmitted after revision for evaluation

Or

f. Thesis is not commended and the Degree may not be awarded.

Note :
Please enclose your detailed report on the thesis. Please also enclose a list of questions, if any, to be asked at the public viva-voce examinations.

6. Any other remarks :

Place :
Date :
Address :

(Signature of Examiner with Designation)

Information for Guide and Examiner information

S.No.	Information	Details
1	Name	
2	Present position - College, University, address, mobile and email	
3.	Post-graduation and PhD - Field, College and University	
4	Years of Experience - Teaching, Research, Clinical and Industry	
5	Field of research interest	
6	Funded projects, Agency and amount	
7	Awards	
8	Number of PhD Scholars - guided and guiding	
9	Research papers, book chapters and books. Number of Patents	
10	Additional information, if any	

Please send it by mail – dir.res.su@gmail.com

Ph.D. Public *Viva Voce*

AGENDA

I. Welcome and Introduction by Director, Research

II. Presentation by the Scholar

III. *Viva voce* examiner – questions and clarifications

IV. Guide – questions and clarifications

V. Audience questions and clarifications

VI. External reviewer's (National and International) questions and clarifications - by *viva voce* examiner

(External reviewer's report will be given to the viva voce examiner before the presentation of the scholar on the day of *viva voce*).

VII. Final remarks and the decision.

- by *viva voce* examiner

VIII. Vote of thanks