

JSS Academy of Higher Education and Research, Mauritius

(A Degree Awarding Institution Registered with the Higher Education Commission, Mauritius)

Doctor of Philosophy (PhD) (Life Sciences)

Programme Handbook

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Programme Handbook

A. Programme Aims

The aim of PhD degree in Life Sciences is to advance research, theoretical, methodological and strategic knowledge and practical skills. The program shapes innovative research idea and methods required for strong research in Life Science.

The programme aims to:

- 1. Impart a cutting-edge knowledge to the students in the theory and practice of Life sciences with advanced concept and research intention.
- 2. Prepare students for critical problem solving in life sciences, decision making on various situations and responsibilities in their career.
- 3. Improve and unify students with Research knowledge and aptitude that is useful for their personal and professional development.
- 4. Develop students be familiar with the ethical issues involved in research and teaching and promote the attainment of the highest standards in the professional environment.
- 5. Enhance advanced research capabilities among students, including theoretical, methodological and strategic knowledge and skills.
- 6. Encourage students to be self-assured, well-informed and skilled researchers who can make significant contributions in life sciences, policy decisions, strategy formulation, leadership, research and practice.
- 7. Provide to the field of life science research in suitable and innovative ways.

Some of the Job Prospects include:

- 1. Research and Development
- 2. Educational Institutions Professors / Teaching / Research oriented opportunities
- 3. Research Scientist
- 4. Consultants

B. Programme Objectives

The programme objectives are to;

- (a) afford profound knowledge, competencies and skills in life sciences
- (b) prepare individuals to conduct independent research and apply in-depth specialized knowledge in life sciences
- (c) present students with a powerful educational, technical, and practical experience base to operate in the academic, industrial, governmental and other spheres.

- (d) establish a background that supports and promotes students' and faculty's research interests as well as their intellectual progress, including a venue for scientific and professional dialogue.
- (e) educate students for a variety of employments, including those in life sciences, academia, industry and regulatory bodies.
- (f) develop students to conceptualize, plan, and execute a project at the cutting edge of the discipline for the advancement of new information, applications, or understanding, as well as to adapt the project design in the face of unforeseen complications.

C. Overall Programme Learning Outcomes

This programme will enable students to:

- Conduct advanced research and development in basic and/or applied fields. Making significant contributions to the development of new techniques, concepts, or approaches in the field of life sciences
- Master the key disciplines of their interest in life sciences. They will demonstrate these skills to use modern tools, software, and equipment to analyse & solve problems
- Think logically and critically and solve the problems, develop an ability to conduct, analyse and interpret data gathered from different sources
- Visualize and work on multidisciplinary tasks. They will be able to demonstrate necessary skills (e.g., working independently, time management and organizational skills). They will also demonstrate an adaptable, flexible, and effective approach towards organizational development.

D. Entry Requirements

Candidates must have a Master's Degree or equivalent.

The Masters' degree required for admission in the PhD Life Sciences programme include:

- 1. MSc in Microbiology
- 2. MSc in Environmental Science
- 3. MSc in Biotechnology
- 4. MSc in Biological Sciences
- 5. MSc in Phytochemistry
- 6. MSc in Marine Science
- 7. MSc in Molecular Biology
- 8. MSc in Nano Science
- 9. MSc in Cosmetic Science

At the time of the application, the applicant must submit a brief research proposal stating clearly the field in which he/she wishes to pursue the research study.

In general, admissions would be based on

- 1. qualifications and suitability of the applicant;
- 2. availability of supervisors,
- 3. resource and facilities;
- 4. evidence of language proficiency; and
- 5. appropriateness of the research proposal.

The admission of an applicant and interview may be subject to conditions specified by the Post Graduate Research Degree Committee (PGRDC) of JSSAHERM.

E. Fees Structure

The fee structure and breakdown refund policy are indicated in the Programme Document and Module Information Sheets – **Annex e**. An extract is shown hereunder.

Programme	Programme Duration (Years)		Tuition Fee per annum (MUR)		USD		
Health Sciences (PhD)	FT - 3 PT - 3.5		PT – 100,000 FT – 150,000		PT – 2,500 FT – 3,600		
Other Fees	Other Fees			Aı	mount (MUR)		
Application Fees		Non-refundable		1,000 one off			
Registration Fees		Non-refundable		5,0	000 one off		
Administrative Fees		No	on-refundable	5,0	000 per annum		
Library Fees		Non-refundable		5,0	000 per annum		
Library Deposit		Refundable		5,000 one off			
Laboratory Fees (if app	plicable)	Non-refundable		10,000 per annum			
Examination Fees course work		Non-refundable		5,000 one off			
Examination Fees Thesis		Non-refundable		25,000 one off			
Marks card fees		No	on-refundable	1,000 one off			
Convocation Fees		No	Non-refundable		on-refundable 2,000 one off		000 one off

Hostel Fees:

Accommodation Charges	Non-refundable	45,000 per annum	
Food Charges	Non-refundable	40,000 per annum	
Caution Deposit	Refundable	15,000 One Off	

Refund Policy:

Tuition fees are not refundable except in special circumstances on a limited number of grounds, which are as follows:

- 1. A refund of full tuition fees paid is considered for students having for some reasons made the wrong choice or who realise that they are unable to cope with the regime of higher studies, provided that the application for refund is made to the Management within the first **thirty** working days of the start of the programme.
- 2. A refund of 50% of the full semester tuition fees is considered on medical, family or other acceptable grounds if full fees for the semester have been paid, provided the request is received before the fifth week of the semester. No refund will be made if a lesser amount has been paid.
- 3. There is no refund for the accommodation charges. Food charges may be refunded on a pro rata basis by giving one-month notice. Caution deposit is refundable at the end of the stay.

(i)	Delivery mode	Full Time and Part Time
(ii)	Delivery Type	Face to face/contact Face to face with some online provisions
(iii)	Duration (minimum and maximum) in terms of years, and contact hours per year	Full-time: Minimum 3 years Maximum 6 yearsPart-time: Minimum 3 and half years Maximum: 7 years
(iv)	Number of semesters	Not Applicable

F. Programme Mode and Duration

G. Teaching and Learning Strategies

The teaching and learning are based on explicit learning outcomes which are consistent with programme/course aims and objectives. The programme consists of a wide variety of teaching methods, including lectures, individual or group projects, assignments, presentations, workshops, seminars, laboratory practical's, problem-based learning, independent learning and research projects and case studies. The programme also consists of class tests, structured discussions, self-development activities. Self-learning is a key feature of the programme, enabling students to explore, investigate and research in various issues related to pharmacy.

Positive learning outcomes reflect an interplay between the teaching activities and learning environment provided by JSSAHERM and the skills, knowledge, attitudes and behaviour of its students. The institution has brought forward a few principles to help ensuring that the quality of teaching and learning is always respected and to guide excellence in learning and teaching practices, while recognising that effective learning and teaching involves a partnership between students and the institution.

The following principles aim to guide excellence in learning and teaching practices, while recognising that effective learning and teaching involves a partnership between students and the institution:

- Creating an engaging, motivating, and intellectually stimulating learning environment and experience.
- Encouraging the spirit of critical inquiry and creative innovation informed by current research.
- Emphasising the importance, relevance and integration of theory and knowledge with professional practice to develop solutions to real world issues.
- Providing learning experiences that develop inter-culturally capable graduates who can make a difference as socially and ethically responsible global citizens.
- Valuing and recognising individual and cultural diversity through the provision of an inclusive context of support and respect for all students.
- Enhancing student engagement and learning through effective curriculum design, pedagogy, and assessment strategies.
- Continuously improving teaching practice through academic staff professional development, and critical reflection informed by a range of evaluation approaches.
- Conducting evaluation (feedback) exercises, through which the students will be encouraged to give their view and rate the teaching quality of each lecturer The feedback survey forms would be analysed, and reports would be generated. Appropriate measures would be taken to eliminate weaknesses and shortcomings; all feedback survey forms would be securely kept for verification and consultation as and when required; the feedback exercise will be conducted every semester before the end of courses to ensure that students' views are appropriately taken care prior to their sitting for examinations.
- Conducting Performance Appraisal exercises for all teaching and non-teaching staff members; This exercise allows the institution to find room for improvement, evaluate the staff's opportunities for promotion and to channel staff members for training and development as learning is an on-going process not only students but for lecturers and other staff members also.

H. Post Graduate Research Degrees Committee

The purpose Post Graduate Research Degrees Committee is to oversee the management of research degrees. It will be responsible to approve and administer research degree registrations, examination arrangements, monitor student progress and make recommendations for the award of research degrees.

It will also have the responsibility to oversee the training of research students, monitoring the quality of supervision of research students and enhancing the quality of such supervision.

Terms of Reference

- 1. Conduct interviews of PhD candidates to evaluate the research proposal, assess the feasibility of the project and to assess the capabilities of the candidates for conducting the research.
- 2. Approval of programmes of work proposed in applications to register for PhD/Doctorate degrees
- 3. Approval of the appointment of the main supervisors and co-supervisors during the registration process
- 4. Monitoring of the progress of candidates through considering their submission of research progress report

- 5. Receiving and considering reports on candidates
- 6. Approval of changes to supervisory arrangements for candidates
- 7. Approval of extensions and interruptions to the period of registration of candidates;
- 8. Approval of examiners and examination arrangements;
- 9. Receiving and considering internal and external examiners reports
- 10. Conducting interviews (Research Audits) of scholars on receiving their 6 monthly reports as from the second year of the research to evaluate the status of the research proposal and to assess the progress made
- 11. Making recommendations on the conferment of award to the Academic Council
- 12. Providing feedback to the Faculty, students and supervisors
- 13. To monitor the quality of supervision of research student
- 14. To maintain and improve the quality of research supervision;
- 15. To implement and monitor mechanisms for the training of supervisors;
- 16. To consider matters brought to the Committee by the Chair, schools and institutes;
- 17. To promote the development of the postgraduate research
- 18. To propose to Academic Council changes to the Academic Regulations for Research Awards as and when required.
- 19. To prepare an annual report on the work of the Committee for consideration by Academic Council
- 20. To follow the principles of natural justice while deciding about the allegation of plagiarism against the student, faculty, researcher and staff.
- 21. To have the power to assess the level of plagiarism and recommend penalty (ies) accordingly.
- 22. To consider report of Plagiarism check from scholars.
- 23. To set up any subcommittee to assist the PGRDC to effectively and efficiently perform its functions.

Composition of PGRDC Committee

- a) Head of Faculty
- b) Two members from the Academic Council
- c) Two members from the industry, preferably with a Doctorate degree
- d) The Controller of Examinations
- e) Two members from any other Higher Education Institution, preferably at Professorial level

The secretary shall be the Research Degree Coordinator.

Note:

- No person who is registered as a candidate for research or any other degree of JSSAHERM may be a member of the PGRDC.
- A member who is a supervisor or an external examiner for a PhD candidate must declare his/her interest and must not participate in any meeting or deliberation in connection with that candidate.

The tenure of non-ex-officio members shall be three years.

Research Degree Coordinator

The Research Degree Coordinator will, amongst other things:

- a) Counsel and advise students on matters relating to their programmes
- b) Conduct induction programme for scholars
- c) Attend to academic the needs and requirements of scholars
- d) Be the linking-pin between students and various stakeholders in/outside JSSAHER
- e) Be the coordinator between scholars and the institution
- f) Be responsible for collecting progress reports of scholars and process same for the PGRDC
- g) Inform and update the PGRDC on various research and related activities of scholars
- h) Assist in the conduct various workshops and seminars for scholars

I. Student Support and Guidance

JSSAHERM is a student-centered institution. The programme aims at making students understand, think, and imbibe certain qualities that make them excellent professionals and leaders. The provision is made to advise the students in all the three domains. The supports required by the students are recognized by one-to-one interaction with the student, feedback analysis, group discussion etc. The students are advised for their research activities, participation in extra/co-curricular activities during the interactive sessions conducted periodically. The faculty members are mentor's and guide the students in developing specific skills and knowledge that will enhance the student's career and personal growth.

JSSAHERM has a student affairs officer who regularly meets students and look at the grievances if any. The institution also has for the program has mentor system for student support and mentoring of academic and social performance.

- 1. The research supervisor will be the mentor for the students registered under him/her.
- 2. The Dean and the mentors meet periodically/ in an emerging situation and discuss the problems if any of the students both academically and socially/ and individually/ collectively.
- 3. Collects information from the hostel warden about the wellbeing and regularity of his mentees staying in the hostel.
- 4. Discusses the collected information with the Dean and takes appropriate decisions to mentor the student wherever necessary.
- 5. Wherever absolutely essential, students needing psychological counselling are referred to experts.

Counselling and career guidance are an integral part of the activities of JSSAHERM and information about job prospects and career progression is provided in the course documentation, on the website and communicated to students during meetings and interviews. Students are recruited either by direct application or through recruitment

agencies (local or overseas). The admissions procedures, requirements and application forms will be provided on the JSSAHERM's website <u>http://jssaher.edu.mu/</u>. A preliminary shortlisting of candidates is done by the Admissions Office and then submitted to the Admissions Committee. An interview is carried out before final selection and issue of the letter of offer of admission.

JSSAHERM provides career counselling, remedial coaching, bridge courses, soft skill development, personal counselling and guidance for competitive examinations besides improving their communication and language skills to improve their employability as well as build human values in their personality. The institution strongly believes that its primary stakeholders are students. The institution tries to realize its vision and mission centering on student empowerment, inclusive practices, and knowledge – skill – competence development. Accordingly, the institution has implemented suitable supporting steps and facilities for the benefit of students. Towards this, the institution has a provision for counsellors/ mentors /advisors for each class or group of students for academic and personal guidance.

The various student support mechanisms are summarised in the Figure 2 below:



Mentoring	 Mentorship - Mentor, Batch teacher, Class teacher 	
Support & Progression	 Scholarship Health Care & Insurance Placement Cell Alumni Support for competitive exams Student Support Centre Skill development Personality Development 	
Activities	 Cultural Sports Magazine Outreach 	
Professional Bodies	 Local Branch Student Charter Institutional Society 	

Student support and guidance at JSSAHERM include:

- 1. Tutoring
- 2. Access to library / E-library/ Research journals
- 3. Access to IT workshop
- 4. A variety of student welfare activities
- 5. Workshop and Laboratories

With counselling and career guidance forming an integral part of the activities of JSSAHERM, information about job prospects and career progression is provided in the course documentation, on the website and communicated to students during meetings and interviews. Students are recruited based on their research interest either by direct application or through recruitment agencies (local or overseas).

A section of the Student Handbook is dedicated to foreign students. This section contains information on the institution, the programme, the country, living conditions and essential telephone numbers.

J. Attendance Requirement

The students must secure a minimum of 80% attendance in each subject to become eligible to take term end examination. All students must attend every lecture except for approved leave like medical emergencies etc. Each module shall be treated as a separate unit for calculation of the attendance. A student, who does not satisfy the attendance requirement, mentioned as above, shall not be eligible to appear for the examination.

K. Credit System

- (i) 1 credit = 15 hours of lecture
- (ii) 1 credit = 30 hours of practical/tutorials/seminars

Total Number of Credits – Full Time			
Year No. of Credits			
Ι	12		
Total Number of	f Credits – Part Time		
Year	No. of Credits		
Ι	12		

L. Student Progress and Assessment

JSSAHREM is a degree awarding institution registered with the Higher Education Commission. It has developed its own monitoring and assessment. For the taught component of this programme, the monitoring and assessment processes are elaborated in its Examination Manual.

A range of assessment methods including coursework, projects, research and examinations etc. is used in a planned manner to serve diagnostic, formative and summative purposes.

The regulations for assessment, evaluation and grading of student performance in the taught component of PhD programme are as follows:

- 1. The evaluation of performance of the student is based on the marks obtained in each module.
- 2. Modules are assessed through written examinations of duration of 3 hours.
- 3. All modules are normally assessed over 100 marks.
- 4. Minimum of 50% marks to be secured in all the modules to be declared successful in the Course Work / Methodology Examination.
- 5. All modules must be passed in the examinations, coursework and other forms of assessment.

The modules will be assessed as follows:

- End semester examinations contributing to 70% of the total marks for theory.
- Continuous Internal assessment carrying 30% of total marks for theory. Continuous assessment can be based on attendance, national/international conference attended by the students, research/review papers published in indexed journal and other activities
- In order to pass in a module, a minimum of 50% should be attained in:
 - Continuous Internal assessment, and in
 - End semester examination

Scheme for awarding Continuous mode marks;

Criteria	Maximum Marks			
Attendance	4			
Academic activities (Assignment, Journal club,				
Seminar)	3			
Teacherinteraction	3			
Total	10			

Guidelines for the allotment of marks for attendance

Percentage of Attendance	Marks
95-100	4
90-94	3
85-89	2
80-84	1
Less than 80	0

Scheme for internal assessments and end semester examinations

Module	Assessment				emester ams	Total Marks	
	Continuous	Internal assessment		Total	Marks	Duration	
	Mode	Marks	Duration	-			
Theory	10	20	1 Hr	30	70	3 Hrs	100

Thesis Examination

The student is required to submit his/her Thesis as per the prescribed format. The prescribed format for Thesis Submission is at **Annex 6** (Sub ANNEX 3).

The examination will be conducted by at least two examiners external to JSSAHERM and its parent institution in Mysore, India.

The external examiners shall be appointed by JSSAHERM upon recommendation of the COE and with the approval of the PGRDC. The examiners will be academics of higher education institutions at preferably professorial level with PhD qualifications or practicing professionals with PhD qualifications from the relevant industry having at least 5 years' experience.

The examination shall consist of 2 parts,

- a) Evaluation of the Thesis by external examiners
- b) A public Viva Voce.

The purpose of such an examination shall be to establish that the:

- 1. work presented arises from the candidate's own efforts;
- 2. candidate has an awareness of their broader subject discipline beyond the confines of the thesis their knowledge being typical of a competent researcher in the discipline;
- 3. candidate is capable of exercising independent critical analysis of data presented.

4. the candidate has developed the ability to formulate investigations into appropriate questions for study

The examiners shall report on their findings. They may recommend that the Degree:

- 1. Be awarded
- 2. Be awarded, subject to minor corrections made to the thesis to the satisfaction of the Supervisor
- 3. Not be awarded, but that the student be permitted to submit a revised thesis.

The examiners shall:

- 1. Submit their report within three months from the date of receipt of the thesis if not, a reminder may be sent by the Controller of Examinations. The examiners shall send their evaluation report to the Controller of Examinations.
- 2. If the report is not received by the Controller of Examinations from an examiner in the prescribed time, the thesis may be referred to another examiner of the same category.
- 3. The Controller of Examinations shall submit the examiners reports to the PGRDC for appropriate decisions

PUBLIC VIVA VOCE EXAMINATION

The viva on the thesis will be evaluated as follows:

Dimensions	Percentage of Marks
Achievement of Objective(s)	05
Methodology	20
Results and Discussions	35
Conclusions and Outcomes	15
Response to questions	15
Presentation of work	05
Communication skills	05
Total	100

The candidate shall score at least 60% in the viva voce for awarding the doctoral degree. A candidate who is not successful in the Public Viva Voce Examination shall be permitted to reappear for a similar examination for a second time within a period of 3 months.

The candidate shall incorporate all the changes/corrections suggested by the thesis evaluators and the public viva voce examiners in the thesis and submit the same along with the corrected soft copy as prescribed within 30 days of public viva voce examination.

Assessment schemes are compatible with the aims and aspects of the programme as taught.

The following are the assessment schemes of the PhD programme compatible with the aims and aspects of the programme as taught.

Sn	Assessment measures	Category	Methods Employed	Outcomes measured
1	Research Audit and Literature Review	Direct	The research audit is given every six months for the assessment of research work	Subject understanding, presentation skills, argumentative and critical thinking
2	Seminar / Journal Club	Direct	Individual seminar topics as assigned by academic staff.	Subject understanding, presentation skills, argumentative and critical thinking
3	Summative evaluation	Direct	Structured Question Papers	Knowledge, understanding at micro level, critical & analytical thinking, problem solving skills, ability to perform activities, comprehension, application, analysis, synthesis and evaluation

M. Award Classification

Course work/Methodology: Minimum of 50% marks to be secured in all the modules to be declared successful in the Course Work / Methodology Examination.

Thesis: Based on the evaluation report of the examiners and public viva-voce examination.

N. Programme Organization and Management

Programme Coordinator:

Name: Dr. Jaishree Vaijanathappa

Email: vjaishree@jssuni.edu.in

O. Programme Structure

The PhD programme consists of 2 parts including Course Work (taught component) and Research.

A. COURSE WORK

The Course Work will comprise 3 modules to equip students with the necessary skills to conduct research. Students shall take up the course work and simultaneously are allowed to start the research work.

The three modules are

- a) Principles of Research Methodology
- b) Basics and Advances in Specific Research Area
- c) Systematic Literature Review.
- 1. Candidate should appear for the Course Work after completion of 6 months and not exceeding 18 months from the date of provisional registration.
- 2. The JSSAHERM shall conduct the Course Work/Methodology Examination common to all the provisionally registered candidates twice in a year.
- 3. The examination shall consist of
 - i. PhD 101 Principles of Research Methodology (100 marks- 4 credits)
 - ii. PhD 102 Basics and Advances in Specific Research Area (100 marks 4 credits)
 - iii. PhD 103- Systematic Literature Review (100 marks 4 credits)

	PAPER	NAME OF THE PAPER	MAX MARKS	CREDITS
1	PhD 101	Principles of Research Methodology	100	4
2	PhD 102	Basics and Advances in Specific Research Area	100	4
3	PhD 103	Systematic Literature Review	100	4
		Total	300	12

Examination Structure

1. PhD 101: Principles of Research Methodology (100 marks)

- i. Fundamental Concepts of Research
- ii. Research Bioethics and good laboratory practice
- iii. Fundamentals of Statistics
- iv. Advanced Statistical Methods for Quantitative and Qualitative research
- v. Computer Application for Research
- vi. Scientific writing

2. PhD 102: Basics and Advances in Specific Research Area (100 marks)

This module teaches students the fundamentals of research and how to conduct it. It also covers some of the most important aspects of doctoral research and writing. The nature of the research process is discussed, as well as the processes to be followed in planning and developing a research project, which leads to a discussion of research philosophy and the methods by which researchers identify issues, develop hypothesis, and obtain knowledge.

The topic covered includes;

- i. Identification of research related issues
- ii. Research approaches and strategies and developing timeline
- iii. Choosing a research topic and research focus
- iv. Feasibility of research instruments/equipment's/ tools involved to conduct the research
- v. Specific Analysis and interpretation related to undertaken research work.
- vi. Referencing tools (EndNote, Mendeley, Zotero etc.), Interpretation and Report Writing of the Research Work.

3. PhD 103: Systematic Literature Review (100 marks)

The module teaches students how to perform a systematic literature review and how to describe and critically evaluate published work by the other researchers. Students also undertake an advanced level of directed, in-depth reading in the field of research in which they choose to specialize for their dissertation.

The topic covered includes;

- i. Literature review of the selected research problem
- ii. Critical analysis of scientific literature
- iii. Literature search techniques and search engines
- iv. Literature sources and relevant of literature to the field of study
- v. Art of publication Choice of journals peer reviewed, Books and Book Chapters

B. RESEARCH

The programme involves an intensive research component. Through the research process candidate will develop advanced analytical skills and the ability to work independently.

Supervisors and Co-Supervisors

Supervisors refers to persons or the committee that provide supervision and support for the research conducted by candidates. They can be categorized as Main Supervisor, and Co-supervisors. All students will be supervised by appointed supervisors for their period of study with JSSAHERM.

Main Supervisors

Main Supervisors refers to head of the supervisory team for the research/project conducted by candidates. Main supervisors will be appointed/provided by JSSAHERM.

Co-Supervisor

Where required, Co-Supervisors may be appointed in addition to the Main Supervisors. Co-Supervisors assist the Main Supervisor in the supervision of the candidates in their research/project, dissertation/thesis preparation and other programme/academic issues related to the study.

Location of Supervisors

One of the supervisors (either the main supervisor or the co-supervisor), should be a member of the staff of JSSAHERM and based locally.

Criteria for Supervision

The Supervisor (whether Main or Co-Supervisor) should meet the following criteria:

- a) The supervisor should have PhD Degree and at least two (2) years of post-PhD research experience and Publications in the Proposed Field of Study.
- b) Holders of a PhD Degree with less than two (2) years post-PhD research experience will be eligible to act as Co-supervisor.

Roles and Responsibilities of the Supervisors

A PhD supervisor's role is to guide the PhD candidates, helping them to select research work, as well as shaping, refining and directing the students' choice of sub-discipline in which they will be examined or on which they will write a dissertation.

The PhD Students generally choose supervisors based on their areas of interest within their discipline, their desire to work closely with particular PhD faculty, and the willingness and availability of those faculty to work with them.

The Supervisor is required to be familiar with the regulations and guidelines which is being implemented within JSSAHERM.

The role of the supervisors includes, but is not limited to:

- 1. Guide the student in a choice of the research topic; a suitable topic of research that can be completed as a research project and written up within the prescribed period of study
- 2. Encourage the scholar to complete the taught modules and a basic structure of the research project with an appropriate research method, a realistic plan of work, and any additional required study within six months of registration.

- 3. Help students to develop professional skills in writing reports, papers, and grant proposals.
- 4. Ensure that, where applicable, risk assessment of laboratory and/or field-based activities has been carried out and that the student receives the required safety training, if any.
- 5. Monitor the progress according to agreed milestones (and revise same based on issues in the research).
- 6. Ensure that students stay abreast of the literature and cutting-edge ideas in the field.
- 7. Establish a practice of regular meetings with the student at which all matters relating to the research project can be discussed. Provide commentary, constructively and within a reasonable timeframe, on the student's oral and written work. Ensure that the written evidence of the meeting is timely submitted to RDC and PGRDC.
- 8. Advise the student to what they may expect from the supervisor by way of a critique of work.
- 9. Monitor experimental work, keep a watch on results obtained and allocate sufficient time and effort in discussion of the interpretation of the results.
- 10. Encourage the student to present work in progress from time to time, as appropriate, attend relevant conferences, meetings and workshops and publish their work in recognized / impact factor journals.
- 11. Provide guidance on the preparation of the thesis and the viva voce examination.
- 12. Ensure that the timely submission of PhD thesis by the student
- 13. Guide to student who act like an author who submits substantially similar work to more than one publisher must disclose this to the publishers at the time of submission.
- 14. Ensure that the student in familiar with the JSSAHERM policy on plagiarism.

Time Allocation

Time allocation will depend on the stage of the research reached (there will probably need to be more intensive supervision in the initial planning stage and at the writing-up stage). Also, the nature of the supervision (face-to-face meetings, contact via email/fax/telephone, and reading of submitted material) will have a bearing.

A minimum time allocation of:

- 1. 100 hours of supervision per year for a full-time research student; and
- 2. 50 hours per year for a part-time student should be observed.