M.Sc. (Herbal Medicine and Natural Product Chemistry)
1 Year Program – Research Only
Program Code: HSHSS6.5MSCHMC

Department of Scientific Spirituality, Faculty of Human Values,
School of Humanities, Social Sciences and Human Values, DSVV
in collaboration with
Yagyavalkya Center for Yagya Research, School of Indology, DSVV

Overview

This is a pioneering one-year, research-focused Master of Science (M.Sc.) program that is aligned with the National Education Policy (NEP-2020), and provides participants a unique opportunity to do research in specific areas related to herbal medicine and natural product chemistry. The program integrates indigenous wisdom with modern scientific approaches, that can prepare the students for careers in research, product development, and quality control, related to their specific area of research work.

Program Focus and Possible Research Areas/Topics

The research work in this program shall focus on one or more of the following areas (although a specific student will actually work on a single or a few of these areas):

1. **Natural Product Chemistry:** Study of plant-derived compounds, their bioactivities, and chemical properties.
2. **Quality and Regulatory Standards:** Emphasis on GMP and WHO guidelines for ensuring purity, quality, and consistency of herbal products.
3. **Interdisciplinary Insights in Herbal Medicine:** For example, exploring philosophical and practical aspects of Ayurveda and Yagya Therapy (ancient herbal therapy including inhalation and rhythmic chanting, etc.), and blending them with modern validation techniques.
4. **Hands-on Training:** Practical exposure to laboratory skills and industrial applications.

Research Framework

This program provides an opportunity of exploring one or more of the following techniques in one's research (including, but not limited to):

1. **Phytochemical Studies**:
   Analysis of secondary metabolites (alkaloids, flavonoids, terpenoids, saponins, essential oils).
   Structural analysis of bioactive compounds and understanding herbal databases.
2. **Practical Techniques**:
   Solvent extraction, distillation, and chromatography.
   Identification methods: Thin-Layer Chromatography (TLC), UV-visible spectrophotometry.
   Advanced analysis using HPLC and GCMS.
3. **Herbal Medicine Preparation**:
   Development of powders, tablets, and their therapeutic applications.
4. **Specialized Research**:
   Capstone project focusing on new herbal medicines or bioactivity studies.
   Emphasis on Himalayan herbs and Ayurveda-based medicinal plants.
5. **Industry Exposure**:
   Field trips to herbal medicine industries.

Research aligned with industrial needs.

6. **In Vitro Cell Culture Studies:**
   Efficacy and mechanistic evaluation of herbal medicine through in vitro cell culture studies.

Outcomes from Job Perspective

Students shall develop expertise in their specific area of research related to Herbal Medicine and Natural Product Chemistry, that can prepare them for:

- Doctoral studies (Ph.D.) in Herbal Medicine, Natural Product Chemistry, or integrative health sciences.
- Careers in research and development within the herbal pharmaceuticals, biotechnology, Ayurveda industries, etc.
- Clinical research opportunities, contributing to evidence-based healthcare.
- Roles in the scientific exploration of traditional health practices and herbal therapeutics.

Course and Credit Structure

Semester 1
Thesis Phase 1 - 20 Credits
Life Management Course-1 – 2 Credits

Semester 2
Thesis Phase 2 - 20 Credits
Life Management Course-2 – 2 Credits
Total Credits = 44

Life Management – A Value Added Course (VAC) offered by Life Management Department of the University
MOOCs (massive open online courses) will be allowed as per University policy

Eligibility Criteria – The eligibility criteria for this 1-year/2-semester PG program, at level 6.5 on the NHEQF, are:

- 4 year bachelor's degree with Honours or Honours with Research with a minimum of 160 credits, in any field of study (passed with minimum 50% marks), or
- 4 year B.Tech., B.E., or any other professional degree, with a minimum of 160 credits (passed with minimum 50% marks), or
- Master's degree, at level 6.5 on the NHEQF, in any field of study (passed with minimum 50% marks)
- Age limit - 30 years [a relaxation of up to 10 years in age (i.e. up to the age of 40 years) may be given to those who have constantly been in some occupation, and can provide a proof of constantly being in job that made it difficult for them to apply earlier]

Entrance Examination Format

With reference to June 2024 UGC Guidelines titled - Curriculum and Credit Framework for Postgraduate Programmes (available from https://www.ugc.gov.in/pdfnews/4682468_Curriculum-and-Credit-Framework-for-Postgraduate-Programmes.pdf) - "A student is eligible for a PG programme in a discipline corresponding to either major or minor(s) discipline in UG programme. In this case, the University can admit the students in the PG programme based on the student's performance in the UG programme or through an entrance examination."
Therefore, for students satisfying this criterion, the entrance examination comprising of only an Interview will be taken for this 1-year/2-semester PG program.

Further, the above guidelines state - "However, irrespective of the major or minor disciplines chosen by a student in a UG programme, a student is eligible for admission in any discipline of PG programmes if the student qualifies the National level or University level entrance examination in the discipline of the PG programme."
Therefore, for such students, the student's earlier academic record in the field of this 1-year/2-semester PG program will be reviewed, as well as an entrance examination comprising of only an Interview will be taken.

Course and Credit Structure

Semester	**Major Course**	**Value Added Course**	**Total Credits**
Semester 1	**20 Credits** Thesis Phase 1 (0,0,20)	**2 Credits** Life Management (LM*) Course-1 (0,2,0)	**20+2**
Semester 2	**20 Credits** Thesis Phase 2 (0,0,20)	**2 Credits** Life Management (LM*) Course-2 (0,2,0)	**20+2**
	40 Credits	**4 Credits**	**40+4 Credits**

LM* - "Life Management" Value Added Course (VAC) offered by Life Management Department of the University

MOOCs (massive open online courses) will be allowed as per University policy

M.Sc. (Herbal Medicine and Natural Product Chemistry)
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School of Humanities, Social Sciences and Human Values, DSVV &
Yagyavalkya Center for Yagya Research, School of Indology, DSVV

Preamble

DSVV's Vision & Research Environment

Dev Sanskriti Vishwavidyalaya is a special purpose University established for global culture and spiritual renaissance as per the vision and literature of its patron founder Pandit Shriram Sharma Acharya and Mata Bhagawati Devi Sharma. The vision of research was clearly evinced in the first objective of its act, which is the guiding force for DSVV's research journey. The University is dedicated to research and development in Scientific spirituality through inter, multi- and trans-disciplinary works. Its diversified conventional and non-conventional academic departments focused on Indigenous knowledge with research through Master's, Ph.D. theses, along with dedicated research centers creating the research micro-environment as per the vision statement of the University. The selected thrust areas of research, as per the vision of Pandit Shriram Sharma Acharya, are - comprehensive and holistic development, traditional medicines, sustainability, and technological solutions for personal, familial and societal, ecological and universal welfare.

DSVV's Innovation Environment

The University aims and actively focuses to enhance skills and innovation potential of its students, faculty, and staff. The academic and research environment of the University aims for creating and transforming young minds for social entrepreneurship. Interaction of academia, research, and society is inherently woven in the University's foundation. The University connects research, innovations and indigenous knowledge skills for social welfare, in the form of seminars, workshops, programs, and extension activities, to visitors, participants, industry, villages, urban areas.

Department of Scientific Spirituality and Yagyavalkya Center for Yagya Research

- Vision Statement: Our vision is to conduct research, based on the vision and guidelines given in the Param Pujya Gurudev Pandit Shriram Sharma Acharya's Literature, to address the problems of society and individuals, for contributing to the Golden Era.

- Aim: Our aim is to conduct research on Chetana Vigyan (Science of Consciousness) and fundamentals given by Rishis, understand the science and mechanisms of spiritual practices for personality refinement (Vyashthi - Vyaktitva Parishkar - Chitta Shuddhi) and social-welfare (Samashthi), and to do research on ancient sciences to solve modern time's issues.
- Scope - Research Areas: Our research areas include Yagya Vigyan (Science of Yagya), Mantra Vigyan - Sadhana Vigyan, Ved Vigyan (Science in/of Vedas), Jyotirvigyan (Ancient Astronomy), among others.

PO (Program Outcomes) as Graduate Attributes

1. **Foundational and Advanced Knowledge (PO1)**
   Demonstrate a thorough understanding of herbal medicine, natural product chemistry, and their interdisciplinary connections, with a focus on bioactive compounds and phytochemistry.
2. **Research Competence (PO2)**
   Develop the ability to independently design, execute, and analyze high-quality research in herbal medicine, including isolation, characterization, and application of plant-based compounds.
3. **Innovative Problem Solving (PO3)**
   Apply advanced chemical and pharmacological techniques to address challenges in the development of herbal medicines, ensuring compliance with international standards.
4. **Analytical and Critical Thinking (PO4)**
   Exhibit critical thinking by evaluating scientific literature, analyzing experimental data, and synthesizing evidence-based conclusions in the field of herbal and natural products.
5. **Interdisciplinary Collaboration (PO5)**
   Work collaboratively across disciplines such as botany, pharmacology, Ayurveda, and analytical chemistry to advance research and development in herbal medicine.
6. **Ethical and Cultural Responsibility (PO6)**
   Conduct research with integrity, respecting indigenous knowledge systems, traditional practices, and intellectual property rights related to herbal medicine.
7. **Practical and Laboratory Skills (PO7)**
   Gain expertise in laboratory techniques such as solvent extraction, chromatography, spectrophotometry, and preparation of herbal formulations.
8. **Global and Societal Impact (PO8)**
   Understand and communicate the significance of herbal medicines in global healthcare, contributing to sustainable and inclusive medical practices.
9. **Effective Communication (PO9)**
   Articulate scientific findings effectively through publications, presentations, and discussions with diverse stakeholders, including academic, industrial, and regulatory bodies.
10. **Leadership and Lifelong Learning (PO10)**
    Develop leadership skills and a commitment to continuous learning in the evolving fields of natural product chemistry and herbal medicine.

PSO (Program Specific Outcomes)

1. **Mastery of Herbal Medicine and Natural Product Chemistry (PSO1)**
   Graduates will gain an in-depth understanding of the chemical properties, therapeutic potentials, and regulatory frameworks of natural products derived from plants.

2. **Hands-On Expertise in Phytochemical Techniques (PSO2)**
   Students will acquire practical skills in isolation, purification, and characterization of bioactive plant compounds using techniques like TLC, HPLC, and GCMS.

3. **Integration of Traditional and Modern Knowledge (PSO3)**
   Participants will bridge the gap between traditional medicinal practices and modern scientific validation, with a focus on therapies like Ayurveda and Yagya therapy.

4. **Ethics and Sustainable Practices (PSO4)**
   Graduates will practice ethical research methods, incorporating eco-friendly approaches and valuing traditional medicinal knowledge.

5. **Data-Driven Research and Development (PSO5)**
   Students will use advanced analytical tools and statistical methods to validate the bioactivity and therapeutic potential of herbal products.

6. **Innovative Herbal Formulation (PSO6)**
   Participants will design and develop innovative herbal formulations, focusing on quality, efficacy, and industrial applicability.

7. **Focus on Himalayan and Ayurvedic Herbs (PSO7)**
   Graduates will specialize in studying Himalayan herbs and Ayurvedic plants, contributing to research and product development.

8. **Industrial Collaboration and Field Research (PSO8)**
   Students will engage in industry-oriented research and participate in field studies to understand real-world applications of herbal medicine.

9. **Professional Communication and Advocacy (PSO9)**
   Graduates will effectively disseminate their findings to promote the integration of herbal medicine into mainstream healthcare systems.

10. **Leadership in Herbal Research and Development (PSO10)**
    Students will lead interdisciplinary research projects, contributing to global advancements in herbal medicine and natural product chemistry.

SYLLABUS

Semester - 1 / Course 1/ HMC501TPO

Thesis Phase 1

Credits (L+T+P): 20 (0+0+20)
Notional Learning Hours= 20*30=600 Hours (P=600 Hours + A=10 Hours)

The objective of **Thesis Phase 1** is to guide students in developing a comprehensive research proposal that focuses on integrating the Herbal Medicine and Natural Product Chemistry. Students will design their research methodology, conduct literature review, formulate a clear hypothesis, and address ethical considerations while preparing for further research / data collection.

Course Outcomes

1. Research Proposal Development (CO1):
   Formulate a research proposal with clear hypotheses and objectives focused on herbal medicine, natural product chemistry, and their therapeutic potential.

2. Literature Review (CO2):
   Conduct a comprehensive literature review of plant-based medicines, phytochemistry, and bioactivity, identifying gaps and opportunities for research.

3. Methodology Design (CO3):
   Develop robust experimental methodologies combining advanced phytochemical techniques, such as chromatography and spectroscopy, with traditional knowledge systems like Ayurveda and Yagya therapy.

4. Ethical Considerations (CO4):
   Analyze and address ethical issues related to intellectual property rights, indigenous knowledge, and sustainability in herbal research and product development.

5. Practical Application & Data Management (CO5):
   Conduct laboratory-based research to isolate, identify, and analyze bioactive compounds, ensuring proper data collection, analysis, and management adhering to global best practices.

6. Industrial Relevance & Field Application (CO6):
   Apply regulatory frameworks, such as GMP and WHO guidelines, for the production of safe and effective herbal products, integrating industry-relevant skills with research findings.

Assessment Criteria

Assessment Criteria are given in the Program Handbook in Annexure-1. Master's Research Committee (MRC) will review and grade the progress of the student's research every 3 months (quarterly).

Suggested Readings

1. The Ayurvedic Pharmacopoeia of India, Government of India, Ministry of AYUSH.
2. The Drugs and Cosmetics Act and Rules. Government of India, Ministry of Health and Family Welfare

3. Nadkarni, K.M. (1976). Indian Materia Medica. (3rd Edition). Bombay: Popular Prakashan.
4. Chopra, R.N., Nayar, S.L., & Chopra, I.C. (1956). Pharmacognosy of Indigenous Drugs. Calcutta: UN Dhur and Sons.
5. Acharya Charaka. (Reprint 2021). Charak Samhita. Translated by Sharma, P.V. Varanasi: Chaukhambha Orientalia.
6. Bhavamishra. (1998). Bhavprakash Nighantu. Edited and Translated by Chunekar, K.C. Varanasi: Chaukhambha Bharati Academy.
7. Harborne, J. B. (1984). Phytochemical methods: A guide to modern techniques of plant analysis (2nd ed.). Springer.
8. Methods in Plant Biochemistry, Book series, ScienceDirect

Semester - 2 / Course 1/ HMC551TPT
Thesis Phase 2

Credits (L+T+P): 20 (0+0+20)
Notional Learning Hours= 20*30=600 Hours (P=600 Hours + A=10 Hours)

The objective of **Thesis Phase 2** is for students to test their hypothesis by executing research that investigates Herbal Medicine and Natural Product Chemistry. Students will analyze and interpret their data, connect findings with modern scientific understanding, and prepare a well-documented thesis for defense, contributing to the integration of traditional health practices with Herbal Medicine and Natural Product Chemistry.

Course Outcomes

1. Data Analysis (CO1):
   Analyze and interpret experimental data using techniques like bioinformatics, chromatography, and spectroscopy to evaluate bioactive compounds in herbal products.

2. Hypothesis Testing (CO2):
   Develop and test hypotheses to study the chemical properties, bioactivities, and therapeutic potential of natural products derived from plants.

3. Results Synthesis (CO3):
   Synthesize research findings by integrating chemical, biological, and traditional knowledge systems, contributing to the scientific validation of herbal medicines.

4. Thesis Writing (CO4):
   Compose a detailed thesis documenting experimental designs, research methodologies, findings, and the implications of natural product research for healthcare and industry.

5. Presentation and Defense (CO5):
   Present and defend research outcomes effectively to an academic or professional audience, demonstrating a thorough understanding of the subject matter and research impact.

6. Contribution to Knowledge (CO6):
   Illustrate how research advances the field of herbal medicine and propose innovative applications for product development, quality control, or therapeutic solutions.

7. Critical Reflection (CO7):
   Reflect on research challenges, including the ethical and practical aspects of herbal studies, and suggest future directions for bridging traditional practices with modern science.

8. Industry Application (CO8):
   Demonstrate industry-relevant skills by designing herbal formulations, ensuring compliance with regulatory standards, and addressing market needs.

Assessment Criteria

Assessment Criteria are given in the Program Handbook in Annexure-1. Master's Research Committee (MRC) will review and grade the progress of the student's research every 3 months (quarterly).

Suggested Readings

1. The Ayurvedic Pharmacopoeia of India, Government of India, Ministry of AYUSH.
2. The Drugs and Cosmetics Act and Rules. Government of India, Ministry of Health and Family Welfare
3. Nadkarni, K.M. (1976). Indian Materia Medica. (3rd Edition). Bombay: Popular Prakashan.
4. Chopra, R.N., Nayar, S.L., & Chopra, I.C. (1956). Pharmacognosy of Indigenous Drugs. Calcutta: UN Dhur and Sons.
5. Acharya Charaka. (Reprint 2021). Charak Samhita. Translated by Sharma, P.V. Varanasi: Chaukhambha Orientalia.
6. Bhavamishra. (1998). Bhavprakash Nighantu. Edited and Translated by Chunekar, K.C. Varanasi: Chaukhambha Bharati Academy.
7. Harborne, J. B. (1984). Phytochemical methods: A guide to modern techniques of plant analysis (2nd ed.). Springer.
8. Methods in Plant Biochemistry, Book series, ScienceDirect

Annexure – 1

Program Handbook

Master of Science (M.Sc.)
in Herbal Medicine and Natural Product Chemistry
(One Year Program – Research Only)

1. Program Overview

The 1 year / 2 semester Master of Science by Research (MSc) is a research-oriented Master's program offered to students with research aptitude. This program involves a research work / project leading to the presentation of a thesis, having an academic weightage of 40 credits. The objective of this degree is to train the students in research methodology and techniques, appropriate to the field of study, by conducting an approved program of research, under appropriate supervision. The thesis will be based on original research of publishable quality. In certain disciplines, the thesis could be a creative production, installation, performance, etc. that is approved by the Masters Research Committee (MRC).

The students will be required to successfully complete 40 credits of research work. Besides this, students will have to complete a compulsory course on Life Management of 2 credits in the first semester, and another 2 credits in the second semesters. Students may be advised by their Research Supervisors to Enrol in various SWAYAM courses that may be beneficial for their research work.

2. Program Objectives

The objectives of the program are to enable post graduates to have the following knowledge and skills:

A body of knowledge that includes the understanding of recent developments in the field of study of the program

Knowledge of research principles and methods applicable to the field of work that the student chooses to pursue

Cognitive, technical and creative skills to investigate and analyze, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice

Cognitive and technical skills to design, use and evaluate research and research methods suitable for the student's area of study

Communication and technical skills to present a coherent and sustained argument, and to disseminate research results to specialist and non-specialist audience by publishing the thesis

Technical and communication skills to design, evaluate, implement, analyze, theorize and disseminate research that makes a contribution to knowledge

These knowledge and skills will be demonstrated through the planning and execution of an original piece of research work with creativity and initiative

With a good level of accountability, demonstrating needed judgments, adaptability and responsibility as a learner.

3. Operational Guidelines of the Program

Research must be focused on knowledge generation or dissemination or application related to the field of study.

A list of topics for thesis will be provided by the faculty members associated with the program. This list will be forwarded by the Head of the Department running the program, to the Dean Academics / Pro-Vice Chancellor / Vice Chancellor, upon whose approval the list will be displayed to the students. Students will specify their choice of topics from this list, in

order of preference (for this, the students may meet the respective faculty members to further understand the scope of the topic provided by them). Next, based on the merit of marks in the entrance examination of the program, the thesis topics will be allotted to the students. The Research Supervisor will be the faculty member who provided the allotted topic.

4. Admission

All applicants must have a capacity to carry out research.

4.1 Eligibility Criteria

The eligibility criteria for this 1-year/2-semester PG program, at level 6.5 on the NHEQF, are:

- 4 year bachelor's degree with Honours or Honours with Research with a minimum of 160 credits, in any field of study (passed with minimum 50% marks), or
- 4 year B.Tech., B.E., or any other professional degree, with a minimum of 160 credits (passed with minimum 50% marks), or
- Master's degree, at level 6.5 on the NHEQF, in any field of study (passed with minimum 50% marks)
- Age limit - 30 years [a relaxation of up to 10 years in age (i.e. up to the age of 40 years) may be given to those who have constantly been in some occupation, and can provide a proof of constantly being in job that made it difficult for them to apply earlier]

4.2 Entrance Examination

Applicants who fulfill the eligibility criteria for admission, will have to appear for a personal interview before a duly appointed admission committee.
Students recommended by the admission committee and approved by the Dean Academics / Pro-Vice Chancellor / Vice Chancellor will be offered admission in this M.Sc. Program.

4.3 Synopsis

(i) A synopsis of the proposed research, conforming to the guiding principle of this M.Sc. Program, as stated above, will be submitted to the MRC for approval.
(ii) MRC will review the synopsis against the guiding principles, before approving the synopsis.
(iii) The synopsis is recommended to be presented in A4 sized pages (single spacing, 12 point) and should not be more than 15 pages.
(iv) The synopsis should include:

- a. Introduction/Background including Review of Literature
- b. Hypothesis
- c. Statement of Objectives
- d. Justification and Likely Benefits
- e. Plan of Work and Methodology (study site, study design, field methods, type of data collected, proposed methods of analyses)
- f. Research infrastructure and facilities to be used and their availability
- g. References and Bibliography – arranged alphabetically by author.

(v) The research synopsis should be approved by the Research Supervisor and MRC prior to submitting it to the University.
(vi) The student will submit at least 3 (three) print copies of the synopsis and mail an electronic copy of the synopsis to the MRC and Registrar. A print copy signed by the student and research supervisor will be considered the original copy.
(vii) Change of synopsis: A change in the registered synopsis of Research may be permitted

for a Student provided it is recommended by the MRC and is approved by Dean Academics / Pro-Vice Chancellor / Vice Chancellor.

4.4 Duration of the Program

Program shall be for a minimum duration of one year, and a maximum of two years.

4.5 Progress Report

(i) The student will mandatorily be required to submit to MRC quarterly progress reports (every 3 months from the date of admission) duly signed by the Research Supervisor.
(ii) MRC will submit a quarterly report to the University that will include feedback on the research work done, recommendation if the students should continue, and any guidance that could help in the student's progress in research work.
(iii) If the quarterly report from the student is not received by the MRC, the M.Sc. Program administrator will notify the student and his/her Research Supervisor of the non-receipt of the report. In the event of non-submission of the report by the student within two weeks from the date of this notification, the MRC will be compelled to recommend suitable action to be taken by the University with regards the student's registration into this M.Sc. Program.

4.6 Cancellation of Registration

(i) Registration may be cancelled on the recommendation of MRC, based on the lack of progress and as recommended by the Research Supervisor, after giving the student an opportunity to defend his/her case to the MRC.
(ii) Registration will be cancelled by the University if the student fails to submit the thesis before the stipulated maximum time period for program completion.
(iii) Registration will be cancelled by the University if the student is found guilty of indiscipline by any of the University's Disciplinary or Academic committees.

5. Credits and Grading System

The minimum credits assigned to this 1 year / 2 semester M.Sc. Program (by research only) is 44 credits, out of which 40 credits are for thesis and 4 credits for Life Management courses.

Grading will be as per the June 2024 UGC Guidelines titled - Curriculum and Credit Framework for Postgraduate Programmes

6. Research Supervisor and MRC

6.1 Allocation of Research Supervisor

(i) The procedure for allocation of Research Supervisor has been described above in Point 3.
(ii) Research Supervisor will be an approved faculty member at the University, who meets the eligibility criteria stated in Section 6.2 given below.
(iii) Students can also have a Co-Supervisor who could be a faculty member from DSVV, or any external faculty member who meets the same eligibility criteria as applicable to the Research Supervisor.
(iv) In case the Research Supervisor leaves the University, the MRC will find an appropriate Research Supervisor from within DSVV.
(v) In the unexpected circumstances that the Research Supervisor or student do not want to continue their association, a letter justifying the reasons for the same should be submitted to the MRC. The MRC will seek to mediate between both parties, failing which the matter will be referred to Dean Academics for mediation, and if the matter is still not resolved, MRC will approve the discontinuing of the association between the Research Supervisor and the Student. In such a case, the student should find another Research Supervisor within 3 months

from the date of such approval, with the help from MRC.

6.2 Research Supervisor – Eligibility Criteria

(i) All faculty members of DSVV, with a Ph.D. qualification, with at least 3 (three) publications in reputed international/national journals, are eligible to guide the students of this M.Sc. Program as Research Supervisor.
(ii) All faculty members of DSVV, with a Master's degree (M.D./M.Tech./M.Sc., etc.) and UGC/CSIR NET qualification, with at least 3 (three) years of research work experience or clinical practice, and with at least 3 (three) publications in reputed international/national journals, and meeting with the preset quality standards set by MRC, are eligible to guide the students of this M.Sc. Program as Research Supervisor.
(iii) A Research Supervisor shall not normally supervise more than five students of this M.Sc. Program at any time at DSVV.
(iv) Notwithstanding what is stated above, the Pro-Vice Chancellor/ Vice Chancellor reserve the right to approve anyone as Research Supervisor, depending upon the merit of the case, which will be assessed / certified by a committee appointed by Pro-Vice Chancellor/ Vice Chancellor.

6.3 Master's Research Committee (MRC)

(i) The Master's Research Committee (MRC) may have a good mix of advisors or mentors from all the departments at DSVV.
(ii) The MRC may include eligible faculty from other institutions or industry experts as well.
(iii) The MRC shall be constituted by the Pro-Vice Chancellor/ Vice Chancellor for a period of 3 years, with a possibility of subsequent term renewal.
(iv) MRC will review and grade the progress of the student's research every 3 months (quarterly).

7. Thesis

7.1 Submission of thesis

(i) Each student for the award of the Degree of Master of Science for this program shall submit 3 (three) printed copies (including an electronic copy) of his/her thesis (in a prescribed format) to DSVV, not earlier than the prescribed minimum period and not later than the prescribed maximum period.
(ii) The student in consultation with his/her research supervisor will recommend a list of 3 potential examiners along with the submission of their thesis to the MRC. These 3 potential examiners shall be regular faculty members of DSVV, with at least 2 potential examiners from outside the department offering this M.Sc. Program.
(iii) MRC will identify 2 (two) examiners, along with the Research Supervisor, to constitute the 3 member "Board of Examiners", and then send them the thesis for evaluation.
(iv) The two examiners (chosen from the 3 potential examiners) will submit a detailed critique of the thesis. In the event of the examiner(s) are of the opinion that the thesis has failed to achieve the desired standard, and recommends that the thesis can be accepted only after a revision, the student shall re-submit the thesis incorporating the revisions, within a maximum period of three months from the date on which the student is informed.
(v) In case the thesis is completely rejected by an examiner, it will be referred to another examiner from the recommended panel. In case the thesis is approved by this examiner, it will be considered approved. In case the thesis is rejected by more than one examiner, it will stand rejected and shall not be referred to any other examiner(s).
(vi) Students have to submit 5 (five) printed copies of the final thesis along with a soft copy

as per the following guidelines, while submitting the thesis to DSVV for evaluation.
a. Please use the required formatting style
b. The soft copy should be in both PDF and Word formats
c. The entire thesis should be included in a single document
d. The soft copy can be submitted submitted through email attachment or a digital drop box facility to administrative office of MRC. It is the student's responsibility to ensure that the thesis has reached the administration and the document opens without any problems by the administration computers.

7.2 Thesis Defence

(i) The Student shall appear for a public defence of their thesis and oral examination only if the thesis is unanimously, or by consensus, approved by the "Board of Examiners", which includes the research supervisor, and at least one of the other examiners who has assessed the thesis.
(ii) The topic, date and time of the open defence of thesis will be notified well in advance. The open defence will be conducted by one of the examiners (different from Research Supervisor) selected by MRC.
(iii) At the oral examination, the response of the student to questions, criticism and suggestions offered by the audience in the open defence will be taken into consideration. However, the final decision will be solely that of the members of the "Board of Examiners".
(iv) Written approval of the examiner and research supervisor is required to be provided to MRC for the official notification of this M.Sc. degree.

7.3 Publication of Thesis

(i) "**Dev Sanskriti Vishwavidyalaya, Haridwar**" name must be cited in all publications of this research by the student.
(ii) DSVV name must be cited in the front page of the thesis.
(iii) It is desirable for the students of this program to publish one research paper in a peer reviewed journal during the program (in which Research Supervisor's name must be included in the author's list); but this is NOT a mandatory criteria.
(iv) Students of this program must make a conference presentation during the program (in which Research Supervisor's name must be included in the author's list).
(v) The full thesis shall not be published as a separate volume without the approval of the University. However, students are encouraged to submit individual chapters or parts thereof, individually or in combination, for publication in reputed peer reviewed journals (preferably UGC Care List Journals). In all such publications, Research Supervisor's name must be included in the author's list.
(vi) The University may grant permission for the publication of the full thesis as a separate volume, under such conditions as it may impose.
(vii) All Intellectual Property (IP) Rights issues will be discussed with DSVV for the student admitetd in this M.Sc. program. All IP related to the research work done during this program will belong to DSVV.
(viii) Students admitted to this M.Sc. Program, and receiving fellowships as a part of any funded project, will be required to execute a Confidentiality Agreement.

7.4 Award of Degree

(i) The Student shall be declared eligible for the award of this degree of "Master of Science", only on the recommendation of the members of the board of examiners after successfully completing the final public defence of thesis and oral examination.
(ii) In case the examiners are not satisfied with the performance of the student in the above

final defence, the student shall be required to reappear for another oral examination after a period of two months, provided such specific recommendation is made by the board of examiners.
(iii) Students who qualify for the M.Sc. Degree, shall be issued a provisional certificate of completion of this M.Sc. program. The award of the official degree under the seal of the University and signed by the University Administration shall be at any of the subsequent convocations held for conferring degrees.

7.5 Complaint Redressal

(i) Completing a Master's is a challenging task due to the short duration, and can often lead to tensions and occasionally friction between Research Supervisor and students, or between students and other faculty members. Students are encouraged to deal with such situations openly and politely, preferably by taking it up with the concerned faculty directly. They may also consult the MRC informally at any time.
(ii) If however, the matter does not get resolved informally, the student may submit a formal complaint to the MRC.
(iii) If the MRC finds prima facie merit in the complaint, it will refer it to a sub-committee for further investigation.
(iv) The sub-committee will investigate the matter, including giving the student and concerned faculty a proper hearing, and submit its report ordinarily within one month of the complaint being filed, and at the most 2 months.
(v) The MRC will take the final decision in the matter and recommend appropriate actions, if any.

7.6 Plagiarism

Plagiarism is a serious matter and DSVV will take strong exception towards any student indulging in acts of plagiarism.

8.0 Conforming to the DSVV's Regulation on NEP 2020 Implementation

Besides the above guidelines, all other processes of this M.Sc. Program, wherever applicable, will conform to the DSVV's Regulation on NEP 2020 Implementation (and its subsequent amendments), which is available at: https://dsvv.s3.ap-south-1.amazonaws.com/uploads/2024/09/Regulation-on-NEP2020-Implementation-at-DSVV-2024-07-18.pdf

9.0 Conforming to the June 2024 UGC Regulations

Besides the above guidelines, the various processes of this M.Sc. program will conform to the June 2024 UGC Guidelines titled - Curriculum and Credit Framework for Postgraduate Programmes (available from https://www.ugc.gov.in/pdfnews/4682468_Curriculum-and-Credit-Framework-for-Postgraduate-Programmes.pdf)