



Editorial

Careers after pharmacy graduation in India: Comprehensive view

Amit G. Nerkar ^{1,2,3*}

¹Dept. of Pharmacy, CAYMET's Siddhant College of Pharmacy, Pune, Maharashtra, India

²Founder & Director, Ateos Foundation of Science Education and Research, Pune, Maharashtra, India

³Founder & Director, Carolene Therapeutics Pvt. Ltd, Aurangabad, Maharashtra, India



ARTICLE INFO

Article history:

Received 28-08-2024

Accepted 03–09-2024

Available online 07-09-2024

Keywords:

Pharmacy

Graduation

B Pharm

Pharmaceutical Sciences

Career

Professional Pharmacist

ABSTRACT

There are plethora of courses to be studied for professional career after Pharmacy Graduation (B. Pharm). Some gain you clinical practice at rural sites while others gain you career path ahead to lead you to postgraduate life. Whether a diploma or a degree, courses done after graduation are called as postgraduate diplomas and degrees respectively. However we should have basic understanding of Pharmacy courses while adopting a professional career and of course a practice of profession whether in clinical set up at rural and urban areas or whether simply as a pharmacist at Hospital or Community Pharmacy setup. This comprehensive editorial describes the career options after graduation in pharmacy and legalities to practice whether a clinic or pharmacy or both in India.

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com

1. Introduction

According to Pharmacy Council of India the B.Pharm courses postgraduation, simply called as PG Entrance or specialization exam has been included and being conducted by NBEMS (National Board of Examination in Medical Sciences) from 2024, indirectly indicating that B.Pharm is Medical Science. What soever the inference may be the specialization and postgraduation whether diploma or degree is need of hour to practice profession. However after B.Pharm, graduation in Pharmacy in India one can take up several of the courses of his own choice in diverse areas of Biomedical, Paramedical, Medical, Pharmaceutical and other Sciences as exemplified here in this comprehensive review editorial with legalities to open and start clinical practice for some of the courses to be studied while other lead you a path ahead in Pharmaceutical Industry, Hospitals, Contract Research Organizations (CROs), Academics and

Teaching and other diverse interdisciplinary courses. However we are keeping our discussion confined over graduation courses and that too diplomas and degree courses only and not certificate courses of 1 year duration or less. So let us start our discussion:

2. Editorial

Specialities have been sub divided for the reader, for their convenience to follow the eligibility, whatsoever specialities and streams described here indicated that B.Pharm is eligible to study and pursue the course. Specialities are highlighted in bold with legalities of the same in India.

3. Medical Sciences

After B.Pharm one can pursue these following courses in Medical Sciences and after postgraduation can study culminating degree PhD in Medical Sciences.

* Corresponding author.

E-mail address: dragnerkar@gmail.com (A. G. Nerkar).

1. **M.Sc (Anatomy)** : Can serve Medical Colleges as Academician.
2. **M.Sc (Physiology)** : Can serve Medical College as Academician.
3. **M.Sc (Medical Biochemistry)** : Can start his Medical Biochemistry Lab as per norms of Biochemistry council with 3 years of experience followed by PhD in the same with same scope after the PhD.
4. **M.Sc (Medical Pharmacology)** : Can be called as Clinical / Medical Pharmacologist and finds scope in Multi-speciality Hospitals in India, prescribers, prescription auditors, clinical services auditors , Pharmacologists at Clinical Trials, Medical Writers etc.
5. **M.Sc (Medical Microbiology)** : Can be Called as Microbiologists and finds similar scope to clinical Microbiologists and finds scope to start Microbiological evaluation laboratories as per Norms in Microbiology Council and as per Government of India Norms. Academician at Medical College is another perspective.
6. **M.Sc (Medical Embryology):** Can work as Embryologist at Artificial Reproductive Centre (ART) . Further can culminate in PhD in the same to start ART center.
7. **M.Sc (Medical Genetics)** : Same scope as Embryologists including at Veterinary set up in India and abroad.
8. **M.Sc (Biotechnology / Medical Biotechnology):** As Biotechnologists as per norms in India.
9. **M.Sc (Molecular Medicine/ Medicine/ Nuclear Medicine):** Care givers at Hospital and also at Academic Level in Medical Colleges with culminating in PhD AS PER Indian Government Norms

Some Universities offer it as 3 year course, while some may offer its as 2 year course and minimum eligibility being B. Pharm with Qualified Graduate Pharmacy Aptitude Test (GPAT).

4. Paramedical Sciences

CMSED: Diploma in Community Medical Services and Essential Drugs, this is a post graduate diploma and after completing the same the persuer can start his clinic in rural and urban setup with rights to practice the World Health Organization (WHO) enlisted drugs. The diploma holders can write medical and death certificates and perform minor surgeries related to First Aid. As Hon. Supreme Court of India, this course from Universities is valid to practice medicine and eligibility being Pharmacy or B.Pharm, further can per persued to Bachelors and Masters.

This course may be considered as bridge course for clinical practice interested students.

5. AYUSH & Alternative Medicine post B. Pharm

1. **DNYS** : It is 2 Year Course, can practice Yoga and Natruopathy and Assistant Therapists. May open his own clinic. Pharmacy graduates are eligible to pursue the same.
2. **PGDNYS** : It is 1 Year Course, can practice Yoga and Natruopathy and Assistant Therapists. May open his own clinic. Pharmacy graduates are eligible to pursue the same.
3. **M.Sc (NYS)** It is 2 Year Course, can practice Yoga and Natruopathy and Assistant Therapists. May open his own clinic. Pharmacy graduates are eligible to pursue the same.
4. **M.Sc (Naturopathy)** : It is 2 Year Course, can practice Yoga and Natruopathy and Assistant Therapists. May open his own clinic. Pharmacy graduates are eligible to pursue the same.
5. **M.Sc (Ayurvedic Biology/ Ayurvedic Pharmacology)** : Finds scope in research and academia. Norms to practice and open clinic after this postgraduation after B. Pharm under progress.
6. **D.A.M.S** : Diploma in Alternative Medicine System: As discussed earlier in previous editorial Pharmacy graduate can persue, practice and open clinic as per Hon. Supreme Court Ruling of Oct 2023.
7. **M.D. (AM): Doctor of Medicine in Alternative Medicine in Naturopathy / Yoga / Alternative Medicine** As discussed earlier, no need to surrender Pharmacist registration and can start his own clinic. The practice is valid in India & also legal in India.

6. Biomedical Sciences

1. **MSc-PhD** : Can work as Biomedical Scientist at various government and non-government agencies.
2. **M.Sc** : Can Work as Biomedical Scientists at various government and non-government agencies.

6.1. Science education post B.Pharm

1. **M.Sc (Organic Chemistry)** : Can pursue and work as Organic chemist as well as scope in Product Development and Synthetic R& D.
2. **M.Sc (Biochemistry)** : However, this is not Medical Biochemistry, but it is non-clinical Biochemistry, but PhD in the same can start a Biochemistry laboratory as per its council notification and terms and conditions.
3. **M.Sc (Pharmacology and Toxicology)** : Can further specialize in PhD in Pharmacology and Toxicology and not from Faculty of Pharmaceutical Sciences but from Faculty of Science and Technology
4. **M.Sc (Biotechnology)** : Can pursue and play professional role of Biotechnologist and can study ahead for PhD program.

5. **M.Sc (Pharmaceutical Chemistry):** Can further specialize in PhD in Medicinal Chemistry and not from Faculty of Pharmaceutical Sciences but from Faculty of Science and Technology.

7. Technological Post-Graduate Education post

B.Pharm

Those candidates interested in Engineering and Technology side of the Pharmacy or Pharmaceutical Sciences can take up the following programs.

1. **M.Tech-PhD** : In Pharmaceutical Technology, courses are at IICT, UICT and other esteemed Central Government Institutes.
2. **M.Tech** : In Pharmaceutical Packaging/Pharmaceutics and Others
3. **M.Sc (Tech)** : In Pharmaceutical Chemistry and other courses.
4. **PhD (Tech)** : In Pharmaceutical Technology
5. **M. Tech (Biotechnology)** : Can find scope in Biotechnological Engineering and downstream processing.
6. **M.Tech (Pharma. Engg)** : Can work as Pharmaceutical Engineers in Pharmaceutical Industries culminating in PhD (Tech).

8. Pharmacy and Pharmaceutical Sciences Specializations

There are 17 specialization programs after Pharmacy Graduation these can be taken after proper entrance examinations at university or national level.

However to simply specify the specializations as Clinical and Non Clinical they are given as under, the specializations

may vary according to esteemed Pharmacy Council of India but adopted in whole world except India.

8.1. Clinical specializations: Master of pharmacy/ Pharmaceutical sciences in following:

Pharmaceutical Medicinal Chemistry, Pharmacology (&/Toxicology), Pharmacy Practice, Hospital and Clinical Pharmacy, Hospital Pharmacy, Pharmaceutics, Pharmacognosy, Herbal Drugs, Phytomedicine, Phytochemistry, Pharm D (Post Baccalaureate), Ayurveda, Homeopathy.

9. Non-Clinical Specializations


Quality Assurance (& / Tech), Drug Regulatory Affairs, and some new courses.

M.Pharm (Master of Pharmacy / Pharmaceutical Sciences), however without proper diplomas and postgraduate degrees cannot open clinic nor can write prescriptions nor can diagnose as per Pharmacy Council of India.

10. Conflict of Interest

None.

Author biography

Amit G. Nerkar, Professor (UG), Research Head & Advisory Member
 <https://orcid.org/0000-0002-1377-8466>

Cite this article: Nerkar AG. Careers after pharmacy graduation in India: Comprehensive view. *Curr Trends Pharm Pharm Chem* 2024;6(3):65-67.