Master of Sciences in Pharmacy at Qatar University: A World Class Program

Dr Feras Q. Alali

Associate Dean of Research and Graduate Studies, College of Pharmacy, Qatar University

GETEX 2014

Dubai, 9-11, April. 2014
QU Vision

• Qatar University shall be a model national university in the region, recognized for high-quality education and research and for being a leader of economic and social development.
• In 1973, Qatar’s first national College of Education was founded. The college admitted only 57 male and 93 female students in its first year.

• Today, Qatar University comprises seven colleges: Arts and Sciences; Business and Economics; Education; Engineering; Law; Pharmacy; and Sharia and Islamic Studies. Total of 60 undergraduate and graduate programs. It currently boasts a population of over 1000 faculty, 15,000 students and an alumni body of over 30,000.
• The Qatar University College of Pharmacy was established in 2007 to help meet the country’s growing demand for qualified pharmacists.

• Degrees offered:
  1) Bachelor of Science in Pharmacy (BSc (Pharm)) degree program; Canadian Council for Accreditation of Pharmacy Programs (CCAPP) fully accredited till 2018.

  2) Doctor of Pharmacy (PharmD) degree program (Sept. 2011) and the; Canadian Council for Accreditation of Pharmacy Programs CCAPP fully accredited till 2018.

  3) Master of Sciences in Pharmacy (MSc (Pharm)) program (Sept. 2011)
• **Vision**
  To be the leading pharmacy school in the Middle East region.

• **Mission**
  To prepare our students to provide optimal pharmaceutical care and advance health care outcomes, to promote research and scholarly activity, and to serve as a pharmacy resource for Qatar, the Middle East and the world.

*CSPH-QU has achieved the highest international standards in a record time*
• The MSc (Pharm) degree program is a two-year minimum 33 credit-hour post baccalaureate thesis-based research-oriented graduate study program designed to build on the undergraduate degree experience and further enhance critical thinking and research skills.
Educational Outcomes

• Provide an opportunity for students to advance their knowledge, skills and attitudes in specific areas of interest;

• Prepare students for research and academia positions requiring personnel with a strong background in specialty areas;

• Develop students with the research skills needed to carry out basic and applied studies.
Degree Requirements

• All national and international female and male applicants to the MSc (Pharm) degree program who holds a degree in pharmacy, chemistry, biology, biomedical sciences, human nutrition, chemical engineering or related field.

• The full-time study plan for the MSc (Pharm) degree program is open to BSc degree holders from accredited and or recognized domestic and international colleges and schools.
• Graduate students specialize in one of the pharmaceutical sciences research focus areas represented in our college including:

*Clinical Pharmacy and Pharmacy Practice*

*Pharmacology,*

*Pharmacokinetics,*

*Pharmaceutics,* and

*Pharmacognosy (Natural Products Chemistry), Medicinal chemistry,*
### FIRST SEMESTER (10 credit hours)

<table>
<thead>
<tr>
<th>Term</th>
<th>Course #</th>
<th>Course Title</th>
<th>Cr Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>PHAR620</td>
<td>Research Design, Ethics and Statistical methodology I</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHAR625</td>
<td>Life Cycle of Medication: From Discovery to Market Withdrawal</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHAR640</td>
<td>Graduate Seminar I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PHAR650</td>
<td>English-Based Communication Skills for Graduate Students</td>
<td>2</td>
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<tr>
<td></td>
<td>PHAR670</td>
<td>Advanced Topics in Pharmaceutical Sciences I</td>
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**Total:** 10

### SECOND SEMESTER (11 credit hours)

<table>
<thead>
<tr>
<th>Term</th>
<th>Course #</th>
<th>Course Title</th>
<th>Cr Hrs</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>PHAR621</td>
<td>Research Design, Ethics and Statistical Methodology II</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHAR642</td>
<td>Graduate Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>Sping</td>
<td>PHAR660</td>
<td>Directed Studies in Pharmaceutical Sciences</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHAR671</td>
<td>Advanced Topics in Pharmaceutical Sciences II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHAR680</td>
<td>Elective in Pharmaceutical Sciences</td>
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**Total:** 11

### THIRD SEMESTER (6 credit hours)

<table>
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<th>Term</th>
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<th>Course Title</th>
<th>Cr Hrs</th>
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<tbody>
<tr>
<td>Fall</td>
<td>PHAR642</td>
<td>Graduate Seminar III</td>
<td>1</td>
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<tr>
<td></td>
<td>PHAR690</td>
<td>MSc (Pharm) Thesis</td>
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**Total:** 6

### FOURTH SEMESTER (6 credit hours)

<table>
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<th>Term</th>
<th>Course #</th>
<th>Course Title</th>
<th>Cr Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHAR643</td>
<td>Graduate Seminar IV</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PHAR691</td>
<td>MSc (Pharm) Thesis</td>
<td>5</td>
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</tbody>
</table>

**Total:** 6

**Total=33 CrHrs**
• Research Design, Ethics and Statistical Methodology I, II (PHAR 620/621)

Descriptive and inferential statistics, SPSS, principles of research design and statistics, ethical guidelines and considerations in research
• Life cycle of a Medication: From Discovery to Market Withdrawal (PHAR 625)

Covers process of drug discovery and development from the identification of novel drug targets to the introduction of new drugs into clinical practice and eventual withdrawal.
• English-based Communication Skills for Graduate Students (PHAR 650)

Communication skills, oral and poster presentations, research article and grant writing, grant and systematic reviews, thesis writing, journal reviews.
Graduate Seminar I, II, III, IV (PHAR 640/1/2/3)

This graduate course aims to provide students with the opportunity to participate in the formal discussion of research topics in an interdisciplinary formal presentation environment involving other students, faculty and guests external to the college and campus.
• Directed Studies in Pharmaceutical Sciences (PHAR 660)

This graduate course aims to provide students with a closely supervised research experience and will involve the completion of a project under the supervision of the primary faculty supervisor or a designated faculty member.
Advanced Topics in Pharmaceutical Sciences (PHAR 670)

Advanced topics in medicinal chemistry, pharmacognosy, chromatography, pharmacokinetics, molecular biology, clinical pharmacy and pharmacy practice and pharmaceutical screening.
• Elective in Pharmaceutical Sciences (PHAR 680)

Intensive small group instruction coordinated by primary faculty supervisor
• Visiting scholars and Internship

2011-2014: 5 Msc students spent a summer research-intensive internship in host labs (Canada, Italy, UK)

2011-2014: 5 prominent scientists (Canada, Jordan, Italy, UK) spent a week at CPH (didactic, seminar and lab training)
Program Learning Outcomes

- Scholar
- Knowledgeable
- Ethical
- Communicator
- Professional
- Competent
- Advocate
### PLOA Rubric for Professional Learning Outcome - MSc Pharmaceutical Sciences

<table>
<thead>
<tr>
<th>Domain</th>
<th>(4) Advanced</th>
<th>(3) Proficient</th>
<th>(2) Developing</th>
<th>(1) Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competence 4.1</strong></td>
<td>Student demonstrates <strong>advanced</strong> understanding and knowledge in areas specific to their discipline and research focus.</td>
<td>Student demonstrates <strong>adequate</strong> understanding and knowledge in areas specific to their discipline and research focus.</td>
<td>Student demonstrates <strong>some basic but incomplete</strong> level of understanding and knowledge in areas specific to their discipline and research focus.</td>
<td>Student <strong>does not demonstrate</strong> understanding and knowledge in areas specific to their discipline and research focus.</td>
</tr>
<tr>
<td><strong>Reliability 4.2</strong></td>
<td>Student is <strong>always</strong> punctual and completes all the assigned tasks and assignments on time <strong>fully</strong> and with <strong>excellent</strong> quality.</td>
<td>Student is <strong>usually</strong> punctual and completes <strong>most</strong> of the assigned tasks and assignments on time <strong>fully</strong> and with <strong>acceptable</strong> quality.</td>
<td>Student is <strong>rarely</strong> punctual and <strong>barely</strong> completes the assigned tasks and assignments on time and with <strong>limited</strong> quality.</td>
<td>Student is <strong>unpunctual</strong> and <strong>fails</strong> to complete the assigned tasks and assignments on time and with <strong>unacceptable</strong> quality.</td>
</tr>
<tr>
<td><strong>Motivation 4.3</strong></td>
<td>Student <strong>always</strong> takes responsibility and seeks for opportunities to improve his/her knowledge, productivity and quality of research; <strong>always</strong> responds positively to challenges, and <strong>actively</strong> troubleshoots problems encountered in research.</td>
<td>Student <strong>usually</strong> takes responsibility and seeks for opportunities to improve his/her knowledge, productivity and quality of research; <strong>usually</strong> responds positively to challenges, and <strong>usually</strong> troubleshoots problems encountered in research.</td>
<td>Student <strong>rarely</strong> takes responsibility and seeks for opportunities to improve his/her knowledge, productivity and quality of research; <strong>rarely</strong> responds to challenges and <strong>seldom</strong> troubleshoots problems encountered in research.</td>
<td>Student <strong>fails</strong> to take responsibility and <strong>never</strong> seeks for opportunities to improve his/her knowledge, productivity and quality of research; <strong>never</strong> responds positively to challenges, and <strong>fails</strong> to troubleshoot problems encountered in research.</td>
</tr>
</tbody>
</table>
### PLOA – Communicator – Rubric for Scientific Proposal Writing - MSc Pharmaceutical Sciences

<table>
<thead>
<tr>
<th>Criterion</th>
<th>(4) Insightful</th>
<th>(3) Proficient</th>
<th>(2) Developing</th>
<th>(1) Emerging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content</strong></td>
<td>a) The introduction was highly effective in describing the research problem.</td>
<td>a) The introduction was effective in describing the research problem.</td>
<td>a) The introduction was minimally effective in describing the research problem.</td>
<td>a) The introduction was unrelated to the research problem.</td>
</tr>
<tr>
<td></td>
<td>b) The hypothesis was insightfully linked to the research problem and insightfully supported by evidence.</td>
<td>b) The hypothesis was appropriately linked to the research problem and adequately supported by evidence.</td>
<td>b) The hypothesis was loosely linked to the research problem and minimally supported by evidence.</td>
<td>b) The hypothesis was not placed in context with the research problem and lacks evidence.</td>
</tr>
<tr>
<td></td>
<td>c) The outcomes were interpreted in a highly objective and scientific manner.</td>
<td>c) The outcomes were interpreted in an objective and scientific manner.</td>
<td>c) The outcomes were interpreted in a subjective and unscientific manner.</td>
<td>c) The outcomes were interpreted in a subjective and unscientific manner.</td>
</tr>
<tr>
<td></td>
<td>d) The potential pitfalls were identified insightfully and addressed thoroughly.</td>
<td>d) The potential pitfalls were identified clearly and addressed appropriately.</td>
<td>d) The potential pitfalls were not completely identified and/or addressed appropriately.</td>
<td>d) The potential pitfalls were neither identified nor addressed.</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>a) Ideas were coherently linked with smooth and effective transitions.</td>
<td>a) Ideas were linked with smooth and effective transitions.</td>
<td>a) Ideas were linked with vague and minimally effective transitions.</td>
<td>a) Ideas were linked with disjointed and ineffective transitions.</td>
</tr>
<tr>
<td></td>
<td>b) Data formats (figures and tables) were most appropriate, clear and self-explanatory.</td>
<td>b) Data formats (figures and tables) were adequately clear and easy to follow.</td>
<td>b) Data formats (figures and tables) were not always clear and easy to follow.</td>
<td>b) Data formats (figures and tables) were unclear and impossible to follow.</td>
</tr>
</tbody>
</table>
The Overall Study Plan (min. of 2 years)

• Compulsory courses
• Discipline-specific courses (depending upon the specialty the student has chosen)
• Elective
• Comprehensive Oral Examination (CEO) in the 3rd semester (Graduate Student Supervisory Committee + External Examiners)
• Proposal presentation
• Research and Thesis
• Thesis defense
OGS Support

- Seven of the current 8 Msc students at CPH have a GTA
Research areas and grants

• Various areas of focus (cardiovascular, diabetic, neuroscience, tissue engineering, drug discovery)

• Internal and Students (QU) and external grants (Qatar National Research Foundation www.qnrf.org NPRP Grants $ 900 K /per year for 3 years)
Future Planning

- recruit high calibre candidates,
- open to non-Pharmacy degree but relevant,
- tie with national research institution relationship Qatar Anti-doping Lab, QBRI, Qatar Pharma..etc
- tie with international schools (Bristol, Paria, Alberta,..etc)
- more scholarship for international candidates
- expand specialty disciplines to include CPP
References

• MSc Program Catalogue
  – Website:
    http://www.qu.edu.qa/pharmacy/program/MSc_Program.php

• QU Graduate handbook 2011/12
  – http://www.qu.edu.qa/students/handbook.php
Invitation

1st Class MSc in Pharmacy

Imran Abdelazziz

Master of Science in Pharmacy (MSc (Pharm))

Public Thesis Presentation

November 24, 2013

Engineering Building, Female Campus

Atrium Hall 114

10am - 1pm

Program

Opening Address: Dr. Firas Asal, Professor and Dean of Research and Graduate Studies

Introduction of the MSc Student: Dr. Fatima Marks, Assistant Professor and MSc Primary Supervisor


Question & Answer Period
www.qu.edu.qa

May, 15th Deadline for submission
TOFEL/IELTS
GRE (optional)
Thank you