Program Specification
Master Degree

(Anatomy & Embryology)
PROGRAM SPECIFICATIONS

University: Benha
Faculty: Veterinary Medicine

A Administrative Information

1. Program title: master degree in veterinary science (Anatomy)
2. Award/degree: master Degree
3. Department(s) responsible: Anatomy and Embryology
4. Coordinator: Prof. Dr / Hatem Bahgat Houssainy
5. External evaluator(s) Not Applicable
6. Date of most recent approval of program specification by the Faculty Council: 13 / 1 / 2012

B Professional Information

1. Program aims:
   * Create new knowledge and understanding through the process of research & inquiry.
   * Provide graduates the opportunity to develop communication & teaching skills.
   * Enable graduates to achieve competency in modern laboratory technology.
   * Demonstrate an awareness of the connections between disciplines.
   * To allow graduates to develop practical skills in anatomical science.
   * To develop the ability of graduate to engage critically review and present their own research data.
   * Application of applied courses and their uses in the field of anatomy.
   * Graduate programs are aimed at educating graduates to be able to advance anatomical science through original researches.
   * Develop academically and professionally and be capable of continuous learning.

2. Academic standards

2a-The faculty mission, vision and strategic objectives are conformed to the academic standards. The learning outcomes are inline with the department and the faculty mission.
2b- the faculty adopts the general guidelines of the national authority for quality assurance and accreditation in higher education.

Academic reference standards (ARS) adopted by the faculty committee No 353 (13-2-2013)

3. **Intended learning outcomes (ILOs) for program:**

**A- Knowledge and understanding:**

*On successful completion of this program the graduate will be able to:*

A 1 - Describe advanced research techniques used in the field of Anatomy and the related fields.

A 2 - Critically applies their knowledge of Anatomy research methods by evaluating the utility of those techniques to specific research questions.

A 3 - Apply their knowledge and understanding of Anatomy to the critical analysis and discussion of the scientific literature.

A 4 - Scientific development in the field of anatomy.

A 5 - Apply the principals of scientific research.

A 6 - Define the different scientific bases in histology and histochemistry of the integument of different animals especially the hoof and claw

A 7 - Define the different scientific terms in Biological fluids.

A 8 – Illustrate the basic knowledge about their Biochemical composition.

A 9 - Illustrate the basic knowledge about their Radiographical and Ultrasonographical appearance of each structure in his study.

A 10 - Define the different scientific terms and structures in Radiographical and Ultrasonographical pictures

**B-Intellectual skills**

*On successful completion of this program the graduate will be able to:*

B 1 - Identify, conceptualize and analyze the anatomical information and interpret the research results.

B 2 - Evaluate own research data and develop new approach for solving their research questions and technical problems.

B 3 - Identify, summarize and evaluate prior researches for finding the needing data in own research.

B 4 - connection between the different knowledgement for resolving professional problems.

B 5 - Identify areas where further researches necessary and be aware of any which would be beyond current ethical codes.

B 6 - Planning for improvement of continuous advanced learning in anatomical science.
B 7 – Estimate, Identify and evaluate the articles and collected research papers in histology and histochemistry of the hoof and integument in different animals.

B 8 - Estimate, Identify and evaluate the articles and collected research paper in Biochemistry of Body fluids and tissues

B 9 - Criticize and Assess own research data regarding the research area.

B10 - Estimate, Identify and evaluate the articles and collected research paper in Radiographical and Ultrasonographical study.

B11 - Planning for improvement of continuous advanced learning in diagnostic Imaging.

C- Professional and practical skills:-

On successful completion of this program the graduate will be able to:-

C 1 - Apply the principles and improvement of professional skills and analysis to their own anatomical research.

C 2 - Perform essential laboratory skills and techniques associated with Anatomy research.

C 3 - Writing and evaluating the professional reports.

C 4 - Evaluate the methods and the tools that used in anatomical research.

C 5 – Perform relevant statistical analysis on data obtained from own research which support his practical skills.

C 6 - Write correctly the report of the Biochemical reactions that have been tested.

C 7 - Perform relevant statistical analysis on data obtained from own research which support his Biochemical skills

C 8 – Can prepare the histological specimens independently and perfectly examined it under the microscope.

C 9 - Write correctly the report of the Radiographical and Ultrasonographical images

D – General and transferable skills

On successful completion of this program the graduate will be able to:-

D 1 - self learning continuously.

D 2 - Self evaluation and determination of his personal learning needs.

D 3 - Demonstrate interpersonal skills and team working ability by the successful completion of collaborative learn assignment and the honors researches projects

D 4 - Using the information technology in learning of the anatomical science (e.g., power point, word, excel and data base).

D 5 - Using of different sources for obtaining the information and knowledge.
D 6 - Identify principals and indications for evaluation of performance of others.
D 7 - Working in team and leading the teams in different professional performance.
D 8 - Manage the time perfectly.
D 9 - Information technology skill
D 10 - Focus in his role in community development
D 11 - Be a successful member chemist.
D 12 - Illustrate a scientific study in the Biochemistry laboratories.
D 13 - Set the basis of the scientific chemists' terms.

E- Attitude
E 1 - Scientific Integrity.
E 2 - Knowledge of the rules of the scientific researches.
E 3 - Respect his profession and encourage cooperation with colleagues.
E 4 - Be kind with animals during experimentation and scarification.

4. Curriculum Structure and Contents

4. a Program duration (years): master degree from 2 – 4 years

<table>
<thead>
<tr>
<th>Program structure:</th>
<th>Lecture</th>
<th>Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principle Courses</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Research Methodology</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>curriculum</th>
<th>Theoretical hours</th>
<th>Practical hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy and embryology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1- applied anatomy</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2- anatomical techniques and surface anatomy</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3- Osteology and Arthrology</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4- comparative digestive system</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5- comparative uro-genital system</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6-comparative respiratory system</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>7- comparative cardiovascular system</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
5. Program – Course ILO Matrix:

<table>
<thead>
<tr>
<th>Course title</th>
<th>A (K&amp;U)</th>
<th>B (I.S)</th>
<th>C (P&amp;P.S)</th>
<th>D (G&amp;T.S)</th>
<th>E (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>anatomy</td>
<td>A1, A2, A3, A4, A5</td>
<td>B1, B2, B3, B4, B5, B6, B9</td>
<td>C1, C2, C3, C4, C5</td>
<td>D1, D2, D3, D4, D5, D6, D7, D8, D9, D10</td>
<td>E1, E2, E3, E4</td>
</tr>
<tr>
<td>Histology of Skin, Skin appendages, hoof and claws</td>
<td>A5, A6</td>
<td>B2, B3, B4, B5, B7, B9</td>
<td>C3, C5, C6, C7, C8</td>
<td>D1, D2, D3, D4, D5, D6, D7, D8, D9, D10</td>
<td>E1, E2, E3, E4</td>
</tr>
<tr>
<td>Biochemistry of body fluids</td>
<td>A5, A7, A8</td>
<td>B2, B3, B4, B5, B8, B9</td>
<td>C3, C5, C6, C7</td>
<td>D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13</td>
<td>E1, E2, E3, E4</td>
</tr>
<tr>
<td>Diagnostic imaging</td>
<td>A5, A9, A10</td>
<td>B2, B3, B4, B5, B9, B10, B11</td>
<td>C3, C5, C6, C9</td>
<td>D1, D2, D3, D4, D5, D6, D7, D8, D9, D10</td>
<td>E1, E2, E3, E4</td>
</tr>
</tbody>
</table>

6. Program admission requirements

1- Obtaining a bachelor degree in veterinary medical sciences from one of the Egyptian universities or equivalent degree from another recognized scientific institute with a minimum final grade Good and a Very Good in the branch of specialization.

2- Obtaining a higher education diploma in one of the branches of specialization with a final grade Good and a Very Good in estimated rule specialization that not less than 3 hours theoretical and practical / week.

3- The bachelor degree must be obtained at least one year prior to registration.

7. Regulations for progression and program

1. Registration period for the master degree. in veterinary medical science calendar at the last 2 years after the approval date by the faculty council and it should not exceed a period of four years, an extension could be approved by the faculty council depending on the supervisor report that approved by the department council and postgraduate and research committee taking into account the provisions of the universities regulation law.

2. the applicant should conduct the supplementary study proposed by both department council and approved by postgraduate and research committee and faculty council and it include:
• Specialization course: 3 hours theoretical and 4 hours practical / week.

• Research methodology curriculums: 1 hour theoretical and 3 hours practical / week.

• 3-5 curriculums of the postgraduates curriculums stated in article (29) according to the proposed research (10-12h/w)

3. The applicant should pass written, practical and oral exams successfully in all courses, and the grade will be estimated according to one of the estimates stated in the article (34c).

• Failure or depriving from entering one or more course did not require reexamination of successful passed courses.

4. The Faculty council has the right to deprive the applicant from entering the exam if this attendance courses is less than 75%.

5. The specialization and the title of the thesis will be shown in the master degree certificate.

6. The applicant take the master degree after he published one scientific paper from his thesis which be accepted in any scientific journal or conference

- Registration will be during March and September of each year.

The applicant should submit a request enrolment for the dean who forwards it to the concerned department council to determine the research subject and the study program and then take calendar after complete documentation on the faculty council for approval.

The thesis title should be identified before being submitted at least 2 months and the judging committee has the right to amend the title without prejudice the subject of research.

The Faculty council has the right to suspend the student enrolment for a certain period if he has acceptable excuse preventing him from continuing his study or research, and his period will not counted within the period stated in article 16 and 20.

**Registration will be cancelled in one of the following cases:**

1- If the supervisor's report during the registration period is unsatisfactory (2 reports).

2- If he did not submit his thesis before the end of registration period.

3- If the judging committee rejected the thesis twice.

The applicant should submit 10 copies of the thesis after its validity approved by the judging committee to be distributed to the committee members and faculty library, and the judging committee can decide the exchange of the thesis with other universities or printing at the expense of the university.

**System Of Examination For Postgraduate Studies As Follow:**
- Time of written ex, 3 hours for each curriculum have 3 hours or more for theoretical / practical hours/week. If the curriculum less than 3 hours/week, the time of ex. is 2 hours only.

- The final degree of each curriculum which have 3 hours (theoretical & practical) per week is 100 & less than 3 hours 50 degrees & divided into 50% for written ex. and 50% for practical and oral ex.

**Grades of graduation are as follow:-**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Mark Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>≥ 90</td>
</tr>
<tr>
<td>Very Good</td>
<td>≥ 80</td>
</tr>
<tr>
<td>Pass</td>
<td>≥ 70</td>
</tr>
<tr>
<td>Failed</td>
<td>45 to less than 60 weak</td>
</tr>
<tr>
<td></td>
<td>Less than 45 very weak</td>
</tr>
</tbody>
</table>

**8- Student Assessment Methods**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 seminar &amp; researches</td>
<td>to assess student ability discussion his attendants</td>
</tr>
<tr>
<td>8.2 oral examination</td>
<td>to assess ability to demonstrate his knowledge</td>
</tr>
<tr>
<td>8.3 practical exam</td>
<td>to assess practical skills</td>
</tr>
<tr>
<td>8.4 final exam</td>
<td>to assess different skills</td>
</tr>
</tbody>
</table>

**Assessment Schedule**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>7th</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>Week 14th</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>Week 21th</td>
</tr>
<tr>
<td>Assessment 4</td>
<td>Week 28th</td>
</tr>
</tbody>
</table>

**Weighting of Assessments**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Term Examination</td>
<td>10%</td>
</tr>
<tr>
<td>Final-term Examination</td>
<td>50%</td>
</tr>
<tr>
<td>Oral Examination</td>
<td>10%</td>
</tr>
<tr>
<td>Practical Examination</td>
<td>20%</td>
</tr>
<tr>
<td>seminar &amp; researches</td>
<td>10%</td>
</tr>
<tr>
<td>Other types of assessment</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
We certify that all of the information required to deliver this program is contained in the above specification and will be implemented. All course specification for this program is in place.

Program coordinator:

Name: Prof. Dr / Hatem Bahgat Houssainy  Signature:

Dean:

Name: Prof. Dr. Gamal Abd El Rehim Sosa  Signature:

Head of Quality Assurance Unit:

Name: Dr.  Signature: