February 9, 2015

From: Dr. Ralph Turingan, Professor, Department of Biological Sciences

To: The Undergraduate Curriculum Committee, Florida Institute of Technology

Through:

Dr. Richard Aronson, Head, Department of Biological Sciences

Dr. Hamid Rassoul, Dean, College of Science

I would like to request for your approval of the proposed two-semester courses in Anatomy and Physiology (BIO 3201 Anatomy and Physiology 1, and BIO 3202 Anatomy and Physiology 2) to be offered in the Department of Biological Sciences. These courses are necessary for enhancing the Biomedical Sciences and Biomedical Engineering programs at Florida Institute of Technology.

Attached are the relevant application forms and the course syllabus for each of these proposed courses.

Thank you very much.
Adding a new course to the curriculum

This is a request for reactivation of a course in the system. □ Yes □ No

New courses are available beginning with the fall term in which they appear in the University Catalog.

Subject: BIO 3201
Credit Hours: 4
Academic Year to be added to the file: Fall 2016

Class Hours: 75/semester
Lecture Hours: 45/semester
Lab Hours: 30/semester
Contact Hours (CEU only): 4.5

Department: Biological Sciences
Schedule Type: Lecture/Lab (C)

Catalog Title: Anatomy and Physiology 1

Catalog Description of Course: Restricted to 350 characters, including spaces. Explores the structure and function of human body systems. Examines cells, tissues, and systems used for movement and communication (integumentary, skeletal, muscular, nervous, endocrine). Includes lab with appropriate experiments and critical thinking exercises. First of a two-course sequence.

In addition, please attach a course syllabus and/or more detailed description.

Restrictions:
- Prerequisite BIO 1010 & 1020
- Prerequisite BIO 2801
- Prerequisite MTH 2401 or cont'd

Grades to be Issued:
- A, B, C, D, F
- A, B, C, D, F, CEU/Audit
- CEU
- S, U
- P, F
- Other

Additional restrictions:
- Major, Class Level, Department Head Approval

If this course replaces a course currently offered in BANNER, please indicate old course information and the date/term the course may be removed from the system.

Subject Alpha Prefix (e.g., CSE)_________ Course No. (e.g., 1301)_________ Term to Inactivate

□ Yes □ No  Will this course be used to measure program-level student learning outcomes? If yes, review and signature required.

□ Yes □ No  Will this course be used to satisfy the scholarly inquiry requirement? If yes, attach "Q" materials for review.

□ Yes □ No  Will this course impact any existing programs? If yes, attach "Changing Graduation Requirements" form for each program that is impacted.

Approvals:
- On completion of description and course number verification, affix appropriate signatures as indicated, and submit completed form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval.

Chair, Graduate Council
Date

Chair, Undergraduate Curriculum Committee
Date

Catalog & Curriculum Manager
Date

Registrar's Use Only

SCACSE
SCADTL
SCAPREQ
SCABASE
SCARRES
Operator Init.
Date

Catalog & Curriculum Manager
Date

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7827

ROR: 218-3114
BIO 3201 (Anatomy and Physiology I) Syllabus

Nature of the Course. This is a 4-credit course that includes three 50-minute lecture sessions and one 4-hour laboratory. We will examine the form and function of the human body. Lectures will include discussions of the relationships among human-body systems including the integumentary, skeletal, muscular, nervous, and endocrine systems. The anatomy and physiology laboratory gives students the opportunity to apply concepts discussed in the lectures through appropriate hands-on and critical thinking exercises. Several laboratory exercises require experimental design as well as data analysis and interpretation, thus, students must have statistical skills before taking this course.


IMPORTANT POLICIES

1. Attendance in both lecture and laboratory is required.

2. Cheating and plagiarism are not tolerated.

3. Make-up examinations are given only to those who have legitimate excuses for not taking the examinations as scheduled. Make-up lecture examinations include only essay questions. Laboratory make-up examinations are oral.

GRADING

3 lecture examinations @ 150 points each --------------------------------- 450 pts

Laboratory (See laboratory schedule for breakdown.) --------------------- 450 pts

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TOTAL 900 pts

A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F < 60%

ADVICE

This course covers a lot of materials, so study hard. Read the designated chapters in the textbook before coming to class. Don’t miss any lecture and laboratory meetings.
<table>
<thead>
<tr>
<th>Schedule</th>
<th>Topics</th>
<th>Lecture Book Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Orientation, Chemistry, and Cells</td>
<td>1-3</td>
</tr>
<tr>
<td>Week 2</td>
<td>Tissue and Integumentary System</td>
<td>4-5</td>
</tr>
<tr>
<td>Week 3</td>
<td>Tissue and Integumentary System</td>
<td>4-5</td>
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<tr>
<td>Week 4</td>
<td>Skeletal System</td>
<td>6-8</td>
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<td>Week 5</td>
<td>Skeletal System</td>
<td>6-8</td>
</tr>
<tr>
<td>Week 6</td>
<td>Muscular System</td>
<td>9-10</td>
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<td>Week 7</td>
<td>Muscular System</td>
<td>9-10</td>
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<td>Week 8</td>
<td>Muscular System</td>
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<td>Week 9</td>
<td>Nervous System</td>
<td>11-15</td>
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<td>Week 10</td>
<td>Nervous System</td>
<td>11-15</td>
</tr>
<tr>
<td>Week 11</td>
<td>Nervous System</td>
<td>11-15</td>
</tr>
<tr>
<td>Week 12</td>
<td>Autonomic Nervous System and Special Senses</td>
<td>11-15</td>
</tr>
<tr>
<td>Week 13</td>
<td>Endocrine System</td>
<td>16</td>
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<tr>
<td>Week 14</td>
<td>Endocrine System</td>
<td>16</td>
</tr>
<tr>
<td>Week 15</td>
<td>Endocrine System</td>
<td>16</td>
</tr>
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</table>
BIO 3201 (Anatomy and Physiology I) Laboratory

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Topics</th>
<th>Lab Manual Exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Anatomical Terms, Body Cavities</td>
<td>1-2</td>
</tr>
<tr>
<td>Week 2</td>
<td>Microscopy, Cell Structure, Mitosis</td>
<td>3-4</td>
</tr>
<tr>
<td>Week 3</td>
<td>Quantitative Analysis of Osmosis, pH, Buffers</td>
<td>5</td>
</tr>
<tr>
<td>Week 4</td>
<td>Tissues and Integument</td>
<td>6-7</td>
</tr>
<tr>
<td>Week 5</td>
<td>Bone and Skeleton: Skull</td>
<td>8-9</td>
</tr>
<tr>
<td>Week 6</td>
<td>Bone and Skeleton: Joints</td>
<td>10-11</td>
</tr>
<tr>
<td>Week 7</td>
<td>Muscle Physiology</td>
<td>12-13</td>
</tr>
<tr>
<td>Week 8</td>
<td>Quantitative Analysis of Muscle Physiology</td>
<td>14</td>
</tr>
<tr>
<td>Week 9</td>
<td>Nervous System Histology</td>
<td>15, 19</td>
</tr>
<tr>
<td>Week 10</td>
<td>Nervous System Anatomy and Physiology</td>
<td>17-18</td>
</tr>
<tr>
<td>Week 11</td>
<td>Quantitative Analysis of Reflexes and Reaction Time</td>
<td>20-21</td>
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<tr>
<td>Week 12</td>
<td>Quantitative Analysis of Reflexes and Reaction Time</td>
<td>20-21</td>
</tr>
<tr>
<td>Week 13</td>
<td>Somatic and Special Senses (Eye and Ear)</td>
<td>23-25</td>
</tr>
<tr>
<td>Week 14</td>
<td>Somatic and Special Senses (Other Senses)</td>
<td>22-26</td>
</tr>
<tr>
<td>Week 15</td>
<td>Endocrine Glands</td>
<td>27</td>
</tr>
</tbody>
</table>

Graded Requirements:                                          Total Points

3 Laboratory Practical Examinations @ 100 points each          300
5 Quizzes @ 10 points each                                    50
5 Descriptive Laboratory Exercises @ 10 points each           50
5 Quantitative Laboratory Exercises at 20 points each         100

=------------------=

450 points
Florida Institute of Technology

ADDING A NEW COURSE TO THE CURRICULUM

This is a request for reactivation of a course in the system.  □ Yes  □ No

New courses are available beginning with the fall term in which they appear in the University Catalog.

SUBJECT  B  I  O
(e.g., CSE)

COURSE NO.*  3 2 0 2
(e.g., 1301)

*Justify level if 1000 level+ and no co- or prerequisites.

CREDIT HOURS  4

ACADEMIC YEAR TO BE ADDED TO THE FILE Fall 2016
(e.g, Fall 2010)

CLASS HOURS  90/semester
LECTURE HOURS  45/semester
LAB HOURS  30/semester
CONTACT HOURS (CEU ONLY) 45

DEPARTMENT  Biological Sciences
(e.g., Computer Sciences)

SCHEDULE TYPE  Lecture/Lab (C)
(e.g, Lecture, Lab or Special Topics/Project)

☐ COLLEGE OF AERONAUTICS - 23
☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS - 25
☐ NATHAN M. BISK COLLEGE OF BUSINESS - 24
☐ COLLEGE OF SCIENCE - 26
☐ COLLEGE OF ENGINEERING - 1
☐ EXTENDED STUDIES / NATHAN M. BISK COLLEGE OF BUSINESS - 90

COMPUTER TITLE  Restricted to 25 characters, including spaces  Anatomy and Physiology 2  Dual-Prefix ☐  Bi-Level ☐  Full-Load ☐

CATALOG TITLE  Anatomy and Physiology 2

CATALOG DESCRIPTION OF COURSE  Restricted to 350 characters, including spaces
Explores the structure and function of human body systems used for the transport of nutrients and system maintenance. Covers the examination of circulatory, immune, respiratory, digestive, urinary and reproductive systems. Includes lab with appropriate experiments and critical thinking exercises. Second of a two-semester sequence.

This description has been approved by the catalog office

Catalog & Curriculum Manager

[Signature] 12/2/2014

In addition, please attach a course syllabus and/or more detailed description.

RESTRICTIONS  ☐ Prerequisite BIO 3201
Course Number

☐ Corequisite Course Number

☐ and or

GRADES TO BE ISSUED

☐ A, B, C, D, F

☐ A, B, C, D, F, CEU/Audit

☐ CEU

☐ S, U

☐ P, F

☐ Other

ADDITIONAL RESTRICTION

(e.g., Major, Class Level, Department Head Approval)

If this course replaces a course currently offered in BANNER, please indicate old course information and the date/term the course may be removed from the system.

SUBJECT  Alpha Prefix (e.g., CSE)  

COURSE NO. (e.g., 1301)  

TERM TO INACTIVATE  

☐ Yes  ☐ No Will this course be used to measure program-level student learning outcomes? If yes, review and signature required.**

☐ Yes  ☐ No Will this course be used to satisfy the scholarly inquiry requirement? If yes, attach "Q" materials for review.

☐ Yes  ☐ No Will this course impact any existing programs? If yes, attach "Changing Graduation Requirements" form for each program that is impacted.

APPROVALS: On completion of description and course number verification, affix appropriate signatures as indicated, and submit completed form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval.

Origination

Richard B. Ahrens

Department Head/Program Chair

Date  2/19/16

Dean or Associate Dean

Date  2/23/15

Chair, Graduate Council

Date

Chair, Undergraduate Curriculum Committee

Date

**Vice President for Institutional Effectiveness

Date

CATALOG & CURRICULUM MANAGER

These changes/additions have been made for the University Catalog and entered into the BANNER term named above.

Catalog & Curriculum Manager

Date

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R3R-218-1114
BIO 3202 (Anatomy and Physiology II) Syllabus

Nature of the Course. This is a 4-credit course that includes three 50-minute lecture sessions and one 4-hour laboratory per week. We will examine the form and function of the human body. Lectures will include discussions of the relationships among human-body systems including the circulatory, immune, respiratory, digestive, urinary, and reproductive systems. The anatomy and physiology laboratory gives students the opportunity to apply concepts discussed in the lectures through appropriate hands-on and critical thinking exercises. Several laboratory exercises require experimental design as well as data analysis and interpretation, thus, students must have statistical skills before taking this course.


IMPORTANT POLICIES

1. Attendance in both lecture and laboratory is required.

2. Cheating and plagiarism are not tolerated.

3. Make-up examinations are given only to those who have legitimate excuses for not taking the examinations as scheduled. Make-up lecture examinations include only essay questions. Laboratory make-up examinations are oral.

GRADING

3 lecture examinations @ 150 points each ------------------------------- 450 pts
Laboratory (See laboratory schedule for breakdown.) ----------------- 450 pts

TOTAL 900 pts

A = 90-100%, B = 80-85%, C = 70-79%, D = 60-69%, F < 60%

ADVICE

This course covers a lot of materials, so study hard. Read the designated chapters in the textbook before coming to class. Don’t miss any lecture and laboratory meetings.
<table>
<thead>
<tr>
<th>Schedule</th>
<th>Topics</th>
<th>Lecture Book Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Circulatory System</td>
<td>17-21</td>
</tr>
<tr>
<td>Week 2</td>
<td>Circulatory System</td>
<td>17-21</td>
</tr>
<tr>
<td>Week 3</td>
<td>Circulatory System</td>
<td>17-21</td>
</tr>
<tr>
<td>Week 4</td>
<td>Respiratory System</td>
<td>22</td>
</tr>
<tr>
<td>Week 5</td>
<td>Respiratory System</td>
<td>22</td>
</tr>
<tr>
<td>Week 6</td>
<td>Respiratory System</td>
<td>22</td>
</tr>
<tr>
<td>Week 7</td>
<td>Digestive System</td>
<td>23, 24</td>
</tr>
<tr>
<td>Week 8</td>
<td>Digestive System</td>
<td>23, 24</td>
</tr>
<tr>
<td>Week 9</td>
<td>Digestive System</td>
<td>23, 24</td>
</tr>
<tr>
<td>Week 10</td>
<td>Urinary System</td>
<td>25, 26</td>
</tr>
<tr>
<td>Week 11</td>
<td>Urinary System</td>
<td>25, 26</td>
</tr>
<tr>
<td>Week 12</td>
<td>Urinary System</td>
<td>25, 26</td>
</tr>
<tr>
<td>Week 13</td>
<td>Reproductive System</td>
<td>27-29</td>
</tr>
<tr>
<td>Week 14</td>
<td>Reproductive System</td>
<td>27-29</td>
</tr>
<tr>
<td>Week 15</td>
<td>Reproductive System</td>
<td>27-29</td>
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</tbody>
</table>
### BIO 3202 (Anatomy and Physiology II) Laboratory

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Topics</th>
<th>Lab Manual Exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Blood, Cardiac Anatomy and Function</td>
<td>29-31</td>
</tr>
<tr>
<td>Week 2</td>
<td>Quantitative Analyses of Blood Pressure</td>
<td>33</td>
</tr>
<tr>
<td>Week 3</td>
<td>Lymphatic System</td>
<td>32</td>
</tr>
<tr>
<td>Week 4</td>
<td>Respiratory System Anatomy and Histology</td>
<td>36</td>
</tr>
<tr>
<td>Week 5</td>
<td>Quantitative Analysis of Respiratory Function</td>
<td>36-37</td>
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<tr>
<td>Week 6</td>
<td>Quantitative Analysis of Respiratory Function</td>
<td>36-37</td>
</tr>
<tr>
<td>Week 7</td>
<td>Digestive System Anatomy and Histology</td>
<td>39</td>
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<tr>
<td>Week 8</td>
<td>Quantitative Analysis of Hydrolysis</td>
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<td>Week 9</td>
<td>Quantitative Analysis of Metabolism</td>
<td>39</td>
</tr>
<tr>
<td>Week 10</td>
<td>Urinary System Form and Function</td>
<td>40</td>
</tr>
<tr>
<td>Week 11</td>
<td>Quantitative Analysis of Urine Composition and Tests</td>
<td>41</td>
</tr>
<tr>
<td>Week 12</td>
<td>Quantitative Analysis of Urine Composition and Tests</td>
<td>41</td>
</tr>
<tr>
<td>Week 13</td>
<td>Reproductive System Form and Function</td>
<td>42-43</td>
</tr>
<tr>
<td>Week 14</td>
<td>Quantitative Analysis of Human Genetics and Development</td>
<td>44-45</td>
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<tr>
<td>Week 15</td>
<td>Quantitative Analysis of Human Genetics and Development</td>
<td>44-45</td>
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**Graded Requirements:**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Laboratory Practical Examinations @ 100 points each</td>
<td>300</td>
</tr>
<tr>
<td>5 Quizzes @ 10 points each</td>
<td>50</td>
</tr>
<tr>
<td>5 Descriptive Laboratory Exercises @ 10 points each</td>
<td>50</td>
</tr>
<tr>
<td>5 Quantitative Laboratory Exercises at 20 points each</td>
<td>100</td>
</tr>
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**Total Points:**

450 points