# Cover Sheet: Request 10109

**Principles of Evidenced Based Practice**

**Info**

| | |
|---|---|
| Process | Course\|New\|Ugrad/Pro |
| Status | Pending |
| Submitter | Beck,Diane Elizabeth beck@cop.ufl.edu |
| Created | 2/26/2015 8:46:10 PM |
| Updated | 2/27/2015 9:23:17 AM |
| Description | This course is offered in Year 1 - Spring Semester |

**Actions**

| Step | Status | Group | User | Comment | Updated |
|---|---|---|---|---|---|
| Department | Approved | COP - Interdisciplinary Studies | Whalen, Karen | | 2/27/2015 |
| College | Approved | COP - College of Pharmacy | Beck, Diane Elizabeth | | 2/27/2015 |
| University Curriculum Committee | Pending | PV - University Curriculum Committee (UCC) | | | 2/27/2015 |
| Statewide Course Numbering System | | | | | |
| Office of the Registrar | | | | | |
| Student Academic Support System | | | | | |
| Catalog | | | | | |
| College Notified | | | | | |

# UCC1: New Course Transmittal Form

**Recommended SCNS Course Identification**

1. Prefix   PHA          2. Level   5          3. Number   XXX          4. Lab Code   None

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5. Course Title   Principles of Evidence Based Practice

6. Transcript Title (21 character maximum)   Prin Evid Based Prac

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7. Effective Term   Spring          8. Effective Year   2016          9. Rotating Topic?   No

10. Amount of Credit   3          11. If variable, # minimum and # maximum credits per semester.

12. Repeatable credit?   No          13. If yes, total repeatable credit allowed   #

14. S/U Only?   No          15. Contact Type   Regularly Scheduled [base hr]

16. Degree Type   Professional          17. If other, please specify:   Click here to enter text.

18. Category of Instruction   Introductory

19. Course Description (50 words maximum)

Introduces methods and tools to evaluate and select drugs and other medical technologies for evidence-based care.  Four components of the course are: formulating questions, searching available resources, critical literature appraisal, and effectively presenting evidence to prescribers and patients.

20. Prerequisites

PHA XXXX Principles of Patient Centered Care
PHA XXXX Personal and Professional Development I
PHA 5433 Principles of Medicinal Chemistry and Pharmacology I
PHA 5515 Principles of Medicinal Chemistry and Pharmacology II
PHA 5100 Drug Delivery Systems
PHA XXXX Drug Therapy Individualization

21. Co-requisites

PHA 5781 Patient Care I
PHA 5727 Principles of Systems Based Practice

22. Rationale and Placement in Curriculum

The first year of the Pharm.D. curriculum introduces principles and concepts.  These are applied during years 2 and 3 as students complete a series of body-system courses.

23. Complete the syllabus checklist on the next page of this form.

**Syllabus Requirements Checklist**
   The University's complete Syllabus Policy can be found at:
   http://www.aa.ufl.edu/Data/Sites/18/media/policies/syllabi_policy.pdf

The syllabus of the proposed course **must** include the following:

☒ Course title

☒ Instructor contact information (if applicable, TA information may be listed as TBA)

☒ Office hours during which students may meet with the instructor and TA (if applicable)

☒ Course objectives and/or goals

☒ A weekly course schedule of topics and assignments.

☒ Methods by which students will be evaluated and their grades determined

☒ Information on current UF grading policies for assigning grade points. This may be achieved by including a link to the appropriate undergraduate catalog web page: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.

☒ List of all required and recommended textbooks

☒ Materials and Supplies Fees, if any

☒ A statement related to class attendance, make-up exams and other work such as: *"Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx."*

☒ A statement related to accommodations for students with disabilities such as: *"Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation."*

☒ A statement informing students of the online course evaluation process such as: *"Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results."*

It is **recommended** that the syllabus contain the following:

☒ Critical dates for exams or other work

☒ Class demeanor expected by the professor (e.g. tardiness, cell phone usage)

☒ The university's honesty policy regarding cheating, plagiarism, etc.

*Suggested wording: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.*

☒ Contact information for the Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies

# PHA#### Principles of Evidence-Based Practice
## Spring 2016 Semester, Block 4 (8 weeks)
## 3 Credit Hours

## Course Purpose:

The goal of the course is to familiarize students with methods and tools to evaluate and select drugs and other medical technologies for evidence-based patient care.  It has four components: formulating questions, searching available resources, critical appraisal of pharmaceutical and medical literature, and effectively presenting evidence to prescribers and patients.

## Course Faculty and Office Hours
## (See Appendix A for Who to Contact)

*Teaching Partnership Leader:*
Randy Hatton, BPharm, PharmD, FCCP, BCPS      Email: rhatton@cop.ufl.edu
Office: HPNP2331                                Phone: 352.294.5785
Office Hours: By appointment only. Please email to schedule an appointment.

*Teaching Partner:*
Almut Winterstein, RPh, PhD, FISPE

*Academic Coordinator*
Christine Salama, M.A.      Email: csalama@ufl.edu
Office: HPNP 4312        Phone: 352-273-5617
Office Hours: by email and appointment

## *Entrustable Practice Activities (EPAs):*

This course will prepare students to perform the following activities, which the public entrusts a pharmacist to perform:

EPA A3. Formulate evidence-based care plans.

EPA B1. Form clinical/practice-related questions and retrieve evidence to advance patient care.

## Course Objectives

Upon completion of the course students will be able to:

1. Define all key elements of the question that guides the successful search and appraisal of evidence to answer a given patient care problem.
2. Identify appropriate resources and search strategies to answer a specific patient care question.
3. Describe core elements of scientific reasoning and the research process in this context, and apply principles of study design, measurement, and biostatistics in the evaluation of published research studies.
4. Assess benefits and risk of therapeutic alternatives and formulate evidence-based recommendations for healthcare providers and/or patients.
5. Describe how clinical findings are summarized in evidence reports and apply them appropriately in clinical decision-making.
6. Translate evidence into information for patients that enhances comprehension of risk benefit and allows informed decision-making

## Pre-Requisite Knowledge and Skills

The ability to apply foundational knowledge from a required pre-pharmacy statistics class (e.g., STA 2023) is needed.

PHA XXXX Principles of Patient Centered Care
PHA XXXX Personal and Professional Development I
PHA 5433 Principles of Medicinal Chemistry and Pharmacology I
PHA 5515 Principles of Medicinal Chemistry and Pharmacology II
PHA 5100 Drug Delivery Systems
PHA XXXX Drug Therapy Individualization

## Course Structure and Outline

The course is split into several components following the philosophy of evidence-based medicine: definition of the core features of the question that needs to be answered, proper selection of evidence sources and conduct of an effective and efficient evidence search, critical literature appraisal, and effective translation of appraisal findings for informed provider and/or patient decision-making. New content will be presented in lectures, online tutorials, and assigned readings. Content will be applied in problem-solving exercises in small group sessions that will meet asynchronously on each campus for a 2-hour time periods, approximately 2 times per week, for a total of 16 meetings during the course. Exercises and exams will include assessments of defining pharmacotherapy questions, searching the literature, evaluating published evidence, and presenting benefits and risks orally and in written reports.

**Weekly course schedule of topics (modules), assignments, exams, and other activities**

| Week | Instructor | Related Learning Objectives | Topic/Learning Activities | Instructor Contact Hours |
|---|---|---|---|---|
| 1 | | 1,2 | **Module 1: Evidence-based Medicine Drug Information**<br><br>**Online/Individual Study (Lectures, Tutorials, Readings)**<br>Principles of EBM<br>1. Drug information resources<br>2. Effective search strategies<br>3. PubMed tutorial (optional)<br>4. Formulating effective questions<br>5. Evaluation of websites & gray literature<br>6. Drug labeling<br><br>**In-class Learning Activities**<br>1. Online Quiz 1/ Searching the literature exercises<br>2. Online Quiz 2/Drug-drug interaction case | 3 hr<br><br><br><br><br><br><br><br><br><br>3 hr |
| 2 | | 3 | **Module 2: Uncontrolled studies Adverse reactions**<br><br>**Online/Individual Study (Lectures, Tutorials, Readings)**<br>Hierarchy of evidence in the literature<br>1. Primary literature/Research reports<br>2. Principles of causal inference<br>3. Drug safety<br><br>**In-class Learning Activities**<br>1. Online Quiz 3/Adverse drug reaction case #1<br>2. Online Quiz 4/Adverse drug reaction case #2 | 3 hr<br><br><br><br><br><br>3 hr |
| 3 | | 3 | **Module 3: General principles of study appraisal**<br><br>**Online/Individual Study (Lectures, Tutorials, Readings)**<br>1. Drug literature evaluation template<br>2. Anatomy of a research paper<br>3. Patient selection<br>4. Noncomparative experimental studies | 3 hr |

| | | | In-class Learning Activities | |
|---|---|---|---|---|
| | | | 1. Online Quiz 5/Bioavailability case<br>2. Online Quiz 6/Template exercises | 3 hr |
| 4 | | 3 | **Module 4: Experimental studies** | |
| | | | **Online/Individual Study**<br>**(Lectures, Tutorials, Readings)**<br>1. Randomized clinical trials<br>2. Measurement<br>3. Random error and applying statistics<br>4. Statistical vs clinical significance | 3 hr |
| | | | **In-class Learning Activities**<br>1. Online Quiz 7/Case series case<br>2. Online Quiz 8/Small randomized controlled trial case | 3 hr |
| 5 | | 3 | **Module 5: Observational Studies** | |
| | | | **Online/Individual Study**<br>**(Lectures, Tutorials, Readings)**<br>1. Cohort studies<br>2. Confounding and bias<br>3. Examples of systematic error<br>4. Methodological approaches to control systematic error<br>5. Evaluating observational data | 3 hr |
| | | | **In-class Learning Activities**<br>1. Online Quiz 9/Cohort study<br>2. Midterm exam | 3 hr |
| 6 | | 3 | **Module 6: Systematic Reviews** | |
| | | | **Online/Individual Study**<br>**(Lectures, Tutorials, Readings)**<br>1. Systematic reviews<br>2. Meta-analyses<br>3. Evaluating a meta-analysis<br>4. Guidelines and levels of evidence | 3 hr |
| | | | **In-class Learning Activities**<br>1. Online Quiz 10/Meta-analysis case<br>2. Online Quiz 11/Guidelines case | 3 hr |
| 7 | | 4,5,6 | **Module 7: Presenting Evidence** | |
| | | | **Online/Individual Study** | 3 hr |

| | | | (Lectures, Tutorials, Readings) | |
|---|---|---|---|---|
| | | | 1. Relative vs absolute differences | |
| | | | 2. Rating the quality of studies | |
| | | | 3. Presenting the answer to a question or problem | |
| | | | 4. Using evidence to make informed decisions | |
| | | | 5. Conflicts of interest | |
| | | | **In-class Learning Activities** | 3 hr |
| | | | 1. Online Quiz 12/Large randomized controlled trial case | |
| | | | 2. Online Quiz 13/Exercises presenting evidence to patients and prescribers | |
| 8 | | | **Final Exam** | 4 hr |

## Textbooks

**The primary textbook for this class is available via the Health Science Center Library's eBooks (http://library.health.ufl.edu/find/ebooks/),** *Access Pharmacy***, and is:**

*Patrick M. Malone, PharmD, FASHP, Karen L. Kier, PhD, MSc, RPh, BCPS, BCACP, John E. Stanovich, RPh, Meghan J. Malone, PharmD, BCPS, CACP. Drug Information: A Guide for Pharmacists, 5th edition, McGraw-Hill Medical, ISBN-10: 007180434X; ISBN-13:978-0071804349.*

Additional required and supplemental readings will be posted online.

**Supplemental texts that may be helpful include:**

*Abate MA, Blommel ML. Drug Information and Literature Evaluation. Pharmaceutical Press; London, UK. 2013.*

*Guyatt G, et al. Users' Guide to the Medical Literature: A Manual for Evidence-based Clinical Practice. 2nd Edition. McGraw-Hill Professional Publishing; New York, NY. 2008.* [Available as an eBook via the Health Science Center Library.]

*Straus SE, Glasziou P, Richardson WS, Haynes RB. Evidence-based Medicine: How to practice and teach it. 4th ed. Churchill Livingstone Elsevier; New York, NY. 2011.*

*Woloshin S, Schwartz LM, Welch HG. Know Your Chances: Understanding Health Statistics. 1st ed. University of California Press; Berkeley, CA. 2008.*

## Student Evaluation & Grading
### Evaluation methods and how grades are determined

This class uses multi-faceted, active-learning teaching strategies, which consists of active learning based on **cases** and **assignments** that require the student to prepare before class and are discussed in small group sessions (1.5 hours, two days a week). Recorded video lectures are pre-recorded reviews that lay

a foundation for and help students grasp complex concepts.  The in-class cases and assignments will re-enforce and/or expand on this content.

Cases focus on the retrieval, critical appraisal of selected published evidence, and communication of benefits and risk to prescribers and patients.  Cases will be completed by students in self-study.  Successful completion of the cases is evaluated through online quizzes and the "questions of the day." Students are allowed to discuss the cases, but they are responsible for presenting their own original work during the quizzes and small group sessions.

Cases will be posted online periodically and will be used for class participation grades, online quizzes, and the questions of the day.  When there is no case, the quiz will cover other assignments, the lectures, and required readings.

***Class participation.*** Students are expected to be prepared for and to participate during classes.  Students will begin the semester with 10% of their grade from participation; points will be deducted when students are not prepared for class.  Extra credit can be awarded for exemplary class participation.  Participation will be determined based on whether case notes are brought to class and/or if the assignment was completed prior to class.  Looking up the answer during class is insufficient to receive participation credit.

Description of In-Class Sessions

- ***Online quizzes.*** Assignments and case readiness will be evaluated using online quizzes at the beginning of each class.  There will be 13 quizzes, and the three lowest quiz grades will be dropped. These dropped quizzes are intended to compensate for technical problems and/or excused absences. There will be 4 multiple-choice questions. Students will have 10 minutes to complete the quiz.
- ***Question of the day:*** For the last 10 minutes of each small group session, students will answer a straightforward, short-answer, essay question based on the lectures, readings, and case from that week. There will be 13 questions of the day quizzes. Students will receive either full, half, or no credit.  Students must have a pen ready for each small group session.  Paper will be provided.  These questions should be able to be answered by paying attention and preparing for the in-class exercises and will assess comprehension of concepts.

**Exams.** Exams include a midterm assessing basic understand of foundations concepts and a final exam assessing the ability to critique a study, apply the skills covered, and demonstrate an understanding of course materials.

***Written critical literature appraisal (final exam).*** Students will be asked to evaluate an article, which could include any type of study design or analysis that was covered in class. The exam will be completed in class and students are allowed to bring notes (i.e., open notes), but there will be no access to

textbooks, phones, calculators, the Internet, or any communication device. The final exam will be a short-answer/essay exam using a short answer format (ExamSoft®).

## Assignment Deadlines

Assignments will be posted with explicit due dates in the course calendar.  Students are responsible for complying with these deadlines.  Late assignments will not be graded (0 points).  Delays due to unforeseen and/or distressing events will be treated on a case-by-case basis by the academic coordinator.

**Assessment Activities**

| Assessment Item | Percentage of Grade |
|---|---|
| Written clinical literature appraisal (**Final**) | 40% |
| Multiple-choice Midterm Exam (ExamSoft) | 20.5% |
| In-Class Participation (N=13) | 13% |
| Online quizzes (10 of 13 highest grades will be used to compute final grade) | 20% |
| Questions of the day (13 questions during the course; each worth 0.5%) | 6.5% |

## Grading Scale

| | |
|---|---|
| > 92.5% | A |
| 89.5-92.4% | A- |
| 86.5-89.4% | B+ |
| 82.5-86.4% | B |
| 79.5-82.4% | B- |
| 76.5-79.4% | C+ |
| 72.5-76.4% | C |
| 69.5-72.4% | C- |
| 66.5-69.4% | D+ |
| 62.5-66.4% | D |
| 59.5-62.4% | D- |
| < 59.4% | E |

**Rounding of grades:** Final course grade will only be rounded up if the decimal is 0.5 or higher.  The Grading Scale above reflects this 0.5-point rounding policy.

## Educational Technology Use

The following technology below will be used during the course and the student must have the appropriate technology and software.  **Appendix A** outlines who to contact if you have questions about technology.

1. Canvas Learning Management System
2. Top Hat® – polling and assessment software

3. ExamSoft®

## Class Attendance Policy

**Policy Across All 1PD-3PD courses:**
Class attendance is mandatory for active learning sessions such as problem-solving sessions, case discussions, and laboratory sessions.  Student attendance may be excused by the Teaching Partnership Leader in the following situations: documented illness, family emergencies, religious holidays, and other reasons of a serious nature.  Conflict with work schedules is an unexcused absence.

Requests for excused absences MUST be made by an email to the Academic Coordinator and the course facilitator prior to the scheduled session.  The student is responsible for follow up and confirming whether the absence is excused or unexcused. The Teaching Partnership Leader and your campus specific director must be CCD in this communication. The following format is recommended:

> **To:** Academic Coordinator and Campus Course Facilitator
> **CC:** Teaching Partnership Leader and your specific campus director
> **Subject:** PHA XXXX – Excused Absence request
> Dear Prof. _____,
> Professionally and politely request an excused absence.
> Explain the nature of conflict and rationale for receiving an excused absence.
> Thank the faculty member for their consideration of your special request.
> Salutation,
> Type in your full name and last 4 digits of UF-ID #, and Campus Name

Failing to follow this policy will render the absence not excusable.   A request for an "excused absence" does not guarantee acceptance. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

Makeup assignment(s) will be made for any excused absence(s) and must be submitted ***within one-week of the missed session(s)***.  If the situation leads to missing multiple class sessions and makeup becomes difficult, the student and Teaching Partnership Leader will meet with the Associate Dean of Student Affairs to explore options such as a remediation plan or course withdrawal.

Class attendance requires full engagement of activities and discussions.  The following are unacceptable during class: 1) reading non-course related materials that are either in hard-copy or web-based, 2) studying for other courses, 3) using a laptop for activities that are not course-related.   Class participation will be reduced in such situations.

Please refer to the University Attendance Policy at
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

**Additional Policy Specific to This Course:**
For the in-class case discussion and assignment sessions, attendance is mandatory

## Quiz/Exam Policy
**Policy across All 1PD-3PD courses:**

1. <u>Students must arrive and be seated promptly </u>to be eligible to take the exam. <u>Students who arrive late for the exam will not be allowed to start the exam if they are more than 30 minutes late</u>.
2. No talking or other disruptive behavior during the distribution or taking of the exam.
3. Calculators must meet the following requirements:  Only nonprogrammable calculators are allowed during exams for this course.
4. If you encounter calculator problems (e.g., dead battery), contact the Proctor.
5. Nonessential materials are NOT allowed at the student's desk during examination periods. Please leave all nonessential materials outside of or in the front of the examination room.
6. Other exam rules may be instituted during the progression of the course.
7. <u>Once the exam commences, students may not leave the room without first turning in the exam</u>. Once the exam is turned in, the examination period for the student is <u>considered complete </u>and the student must leave the examination room. If there is urgent need to use the restroom, the Proctor will provide guidance.

*Failure to follow exam rules may be considered as evidence of <u>academic dishonesty.</u>*

Additional Policy Specific to This Course:
<u>Penalties for tardiness:</u>   Students who arrive more than 10 minutes late to a quiz are not eligible to take the in-class quizzes.

## Make-up Quiz/Exam Policy

**Policy across All 1PD-3PD courses:**
Makeup exams are given only under special circumstances. If the student is unable to take a scheduled examination, the Teaching Partnership Leader and Academic Coordinator must be notified before the examination. In addition, a written letter of explanation, requesting that the absence from the exam be excused, must be presented before the exam or immediately afterwards. An excused absence is allowable when: 1) the student is hospitalized and/or has been advised by a licensed medical practitioner or hospital not to attend the exam, or 2) if there is a documented death of an immediate family member. All excused absences will be considered on an individual basis by the Teaching Partnership Leader. For unusual situations (e.g., wedding that was planned before admission), the faculty member will communicate with student affairs.

Depending on the decision, a comprehensive exam may be given, which will contain material from all previous exams. The questions on the makeup exam may be in the form of essay, short answer, or multiple-choice. With the exception of highly extenuating circumstances, failure to follow the prescribed procedures or failure to attend the announced comprehensive examination will result in a grade of zero for that exam. A request for an "excused absence" does not guarantee acceptance. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

The makeup exam must be taken ***within one-week of the missed exam***.  In extenuating circumstances (e.g., hospitalization, faculty availability), the instructor may arrange an alternate deadline for the exam.

The student may contact the instructor to obtain details about why points were deducted.  The student has two weeks following the return of the Exam to clarify any questions and appeal any possible grading errors.  Any appeals on the final examination must be made in writing and submitted to your facilitator.  ***When an appeal is made to re-grade an Exam, the entire Exam will be reevaluated and scored.***

## Additional Policy Specific to this Course:
Make-up quizzes are not offered. An alternate make-up exam can be made available for students with

excused absences or extenuating circumstances at the discretion of course faculty.

## Policy on Old Quizzes and Assignments
Old quizzes and assignments are not provided.

## General College of Pharmacy Course Policies
The College of Pharmacy has a website that lists course policies that are common to all courses. This website covers the following:

1. Class Attendance, Make-up Exams and Other Work
2. University Grading Policies for Assigning Grade Points
3. Concerns, Appeals, and Complaints
4. Academic Integrity Policy
5. How to request learning accommodations
6. Faculty and course evaluations
7. Computer and Other Technology Requirements
8. Student expectations in class
9. Discussion board policy
10. Email communications
11. Religious holidays
12. How to Contact Counseling & student health Services
13. How to access services for student success
14. Faculty Lectures/Presentations Download Policy

Please see the following URL for this information:
http://www.cop.ufl.edu/wp-content/uploads/dept/studaff/policies/General%20COP%20Course%20Policies.pdf

## Appendix A.   Faculty and Staff: Who to Contact

**Academic Coordinator:**
1. Questions about dates, deadlines, meeting place
2. Availability of handouts and other course materials
3. Assignment directions
4. Questions about grade entries gradebook (missing grades, wrong grade)
5. Assistance with ExamSoft®

**Teaching Partnership Leaders**
1. Issues related to course policies  (absences, make up exams, missed attendance)
2. Questions about grades
3. Concerns about performance
4. Guidance when there are performance problems (failing grades)
5. General questions about content

**Other Teaching Partnership Faculty Members**
1. Questions about specific content

**Technical Support:**
Contact the College of Pharmacy MediaHelp Desk for assistance with course-related technical issues (e.g., Canvas access, video access, printing of documents).  The MediaHelp Desk may be reached via the following:

> **Phone:** 352-273-6281 (9am-4PM ET)
> **Email:** mediahelp@cop.ufl.edu (response is delayed outside of M-F 9AM-4PM ET)

Contact the University of Florida Computing Help Desk for addresses issues related to:
1. Gatorlink accounts,
2. Gatorlink email,
3. myUFL, and
4. ISIS.

> **Phone:** (352)-392-4357