

Candidate Information Bulletin

2020 Edition

Updated 5/11/20

CANDIDATE SUPPORT AND RESOURCES

Biotility Contact Information

Phone: 386.462.3181 Option #1

Email: BACE@research.ufl.edu

Hours: Monday – Friday, 8AM – 5PM EST

BACE Candidate Website: <http://biotility.research.ufl.edu/bace/candidate-resources>

UF QuickReg Login Page: <https://reg.distance.ufl.edu/reg/Lms/Login>

Honorlock Contact Information

Phone: 844-243-2500

Email: Support@Honorlock.com

Hours: Sunday – Saturday, 24hrs a day

Honorlock Candidate Support Website: <https://honorlock.com/support>

Need help during an exam?



Look for the Honorlock Chat Icon to talk to a representative anytime.

TABLE OF CONTENTS

Candidate Support and Resources.....	2
Biotility Contact Information.....	2
Honorlock Contact Information	2
Introduction to BACE	4
Exam Registration.....	4
How Your Score is Calculated.....	4
Exam Attempts and Retake Policy	5
Obtaining Credential Certificates and Records.....	5
Accommodating persons with disabilities/IEP.....	5
Academic Honesty Policy	5
Remote Testing.....	6
Testing Requirements	6
Exam Rules	7
Preparing for the BACE	9
Recommended Study References.....	9
Online Practice Exams	9
Additional Study Resources.....	9
Exam Specifications	10
Detail of Exam Categories	10
UF QUICK REGISTRATION SYSTEM.....	14
QuickReg Account Creation Overview	14
QuickReg Account Creation Process	14
Digital Credentials.....	17
Sharing Your Credential.....	17
Your Future in Biotech	18

INTRODUCTION TO BACE

Earning your Biotechnician Assistant Credential demonstrates a sound foundation in the knowledge and skills needed in today's biotech workforce. Whether your objective is to work in academia or private industry, this credential proves to your future employers that you have dedicated time and effort to become the best in your field.

The Biotechnician Assistant Credential is an industry-recognized credential designed to verify that a candidate (which is you) has mastered the foundational concepts and skills identified by the bioscience industry as valuable in a workplace setting. To earn the credential, you must demonstrate proficiency in biotechnology theory and techniques by passing the Biotechnician Assistant Credentialing Exam (BACE). The BACE is offered through Biotility at the University of Florida's Center of Excellence for Regenerative Health Biotechnology (UF CERHB).

The BACE is actually two separate exams, which may or may not be taken on the same day (your educational institution will decide). The BACE Knowledge and Practical Exam are administered as online assessments delivered on the University of Florida's education platform, UF e-Learning. Each exam is remotely monitored through Honorlock.

Exam Registration

Exam registration is managed through your educational institution. They will email you the BACE Exam Enrollment Link, which will walk you through creating a UF Login and signing into UF e-Learning. Please note **you must have a Google, Facebook, or LinkedIn account to complete the registration process**. For full instructions on this process see [QuickReg Account Creation](#) section provided in this document.

How Your Score is Calculated

To pass the BACE and earn your Biotechnician Assistant Credential, you must achieve an overall score of 80%. The score is determined by averaging the highest grade on the Knowledge Exam and the highest grade on the Practical Exam. Your educational institution will notify you of your score.

Traditionally, the BACE includes both a knowledge examination and a practical skills evaluation; however due to the government restrictions implemented to protect the health and safety of the community during the COVID-19 outbreak, the format for the practical skills evaluation has been temporarily adjusted to an online format until December 31st, 2020. During this window, candidates will be permitted to take both the Knowledge and Practical portions of the BACE from their home or any other location of their choice.

Exam Attempts and Retake Policy

Your BACE Administrator will schedule your exam and any retakes if needed. You are permitted to take either portion of the exam a maximum of three times per calendar year. Be sure to check with your administrator, as there may be extra fees for additional attempts. All ordered exams and retakes must be completed by the end of the calendar year.

Obtaining Credential Certificates and Records

Upon passing the BACE, electronic credentials are issued immediately. Electronic credentials are issued as a digital certification and a badge from Accredible. These credentials may be displayed on Facebook or LinkedIn, and digitally verified online by anyone. For more information, review the Digital Credentials section of this module.

Accommodating persons with disabilities/IEP

Candidates with disabilities or an Individualized Education Program (IEP) are eligible for exam accommodations; however, all accommodations must be coordinated prior to the testing date. If you need exam accommodations, please inform your educational institution immediately.

Academic Honesty Policy

BACE Candidates are expected to behave ethically and honorably. Academic dishonesty includes any action (received or given) that creates an unfair advantage on the exam.

Examples of academic dishonesty include, but are not limited to:

- Accepting or giving assistance to another candidate during the exam
- Discussing specific exam questions with another candidate or individual
- Copying, photographing, recording, posting, or reproducing exam content in any fixed medium
- Using stolen exam content to prepare for the exam

Academic dishonesty may be reported to the candidate's parent institution. To report academic dishonesty, contact Biotility at 386-462-3181 or BACE@research.ufl.edu.

Ensuring Credential Validity: Biotility protects the validity of its credentials by protecting the content of its exams. The Biotechnician Assistant Credentialing Exam (BACE) is the intellectual property of Biotility and the University of Florida, and copyrighted under the laws of the United States. Biotility uses advanced test security techniques and procedures to actively defend its intellectual property. In addition to invalidating or withhold exam results, Biotility reserves the right to pursue all available civil and criminal remedies if its intellectual property rights are violated.

REMOTE TESTING

Remote or “At Home” testing for the BACE was made possible because the University of Florida contracted with Honorlock to serve as remote monitors. The BACE must be monitored by a proctor to ensure the validity of the BACE and the Biotechnician Credential. Candidates unable to use Honorlock will need to contact their educational institution to inquiry about the next available traditional administration date.

Honorlock does NOT evaluate candidate performance or grade exams. They serve as monitors for your exam and are only able to monitor you during the exam. For a demonstration of the Honorlock remote testing experience, please view this video: [HOW TO USE HONORLOCK \(STUDENT GUIDE\)](#).

Please be aware that remote monitoring will require you to:

1. Use a computer with a camera and microphone
2. Download the Honorlock Google Chrome extension
3. Present a government or school issued photo ID

This technology may bring up security and privacy concerns for you. For more information on privacy concerns, please visit <https://honorlock.com/student-privacy-statement>.

To download the Honorlock Google Chrome extension prior to the exam, visit the [Chrome App Store](#).

Testing Requirements

You will need to make the following preparations to take your exam. Please complete the entire checklist to ensure that you have the best possible testing experience and that Honorlock can properly monitor the test. All items are required unless noted.

Registration and Identity Authorization

- Enroll in the BACE using the BACE Enrollment Link emailed to you from your educational institution.
- Obtain a government- or school-issued photo ID.

Computer Testing Station

Select a desktop or laptop computer. If you select a laptop, connect it to a power source. This requirement is for your own benefit to ensure that your battery does not run out before the end of your exam. Your computer must have the following capabilities:

- Computer
 - 12” Monitor or larger. (Dual monitors are NOT permitted.)
 - Mouse or touchpad
 - Keyboard
 - Camera and microphone.
- Operating System - Windows 8 or 10; MacOSX 10.11 and higher; or ChromeOS
- Browser - Google Chrome (minimum version 79)

- Internet
 - Stable internet connection.
 - Speed: 1.5 Mbps download, 750 Kbps upload

Exam Environment

During the test, the online testing environment should mimic an “in-class” testing environment. When you start your exam, you will be prompted to do a room scan. The process requires a complete 360-degree rotation around your testing room and your workspace. To view a demonstration of a proper room scan, please review this video from Honorlock, [ROOM SCAN DEMONSTRATION](#).

The testing room must meet the following standards:

- Your computer testing station must be at a desk or table (not on a bed or couch).
- The desk or table must be cleared of all other materials.
- There cannot be writing visible on the desk or walls.
- Make sure music/televisions are not playing in the background.
- No other persons aside from the test-taker should be in the room during testing.
- The lighting in the room must be “daylight” quality. If there is not enough light for your camera see your face and the testing room, Honorlock cannot monitor the exam remotely.

Tips for a successful testing experience:

1. Prior to testing, visit <https://honorlock.com/support> to perform a system check.
2. Coordinate with all individuals in the household to ensure you are not disrupted and have full access to the resources you need.
3. Avoid testing at peak internet usage periods. Internet traffic is lowest at 6AM and steadily increases throughout the day, peaking between 5 PM and 7 PM.
4. Test at the beginning of your testing window to guarantee you have time to contact Biotility or Honorlock Support if needed.

Exam Rules

Read the following rules and policies carefully. Violations of the following standards will result in the invalidation of your exam scores. The following rules must be observed at all times during the exam session.

- You are not permitted to communicate with anyone other than your Honorlock Proctor during the exam.

- This is a CLOSED note exam. You are not permitted to search external references for answers during the exam. External references include, but are not limited to:
 - Books and e-books
 - Notebooks
 - Internet Websites
- You must remain in front of your computer for the duration of the exam. Restroom breaks are NOT permitted.
- Personal items are NOT permitted at your desk. Examples of personal items include, but are not limited to:
 - Electronic devices such as cellphones, smart watches, or calculators
 - Food and/or drink
 - Calculators
- You are permitted to have two pencils and a single piece of scratch paper. An online calculator will be available inside the exam.

PREPARING FOR THE BACE

Recommended Study References

There are multiple resources available to help you prepare for the examination. So that you are not overwhelmed, we encourage you to prepare a study plan with your educational institution. The suggested study references are listed below.

- Brown, J. Kirk. Biotechnology: A Laboratory Skills Course (Second Ed.). Hercules, CA: Bio-Rad Laboratories, Inc., 2018.
- Daugherty, Ellyn. Biotechnology: Laboratory Manual (Second Ed.). St. Paul, MN: Paradigm Publishing, Inc., 2017.
- Daugherty, Ellyn. Biotechnology: Science for the New Millennium (Second Ed.). St. Paul, MN: Paradigm Publishing, Inc., 2017.

Online Practice Exams

You are encouraged to take the two Online Practice Exams prior to your scheduled exam date. The Online Practice Exams are an excellent representation of the content you will encounter during the actual exam. You can take the practice exams multiple times. At the end of each quiz, the correct answers will be revealed for your review. If you need assistance gaining access to this free study resource, please email BACE@research.ufl.edu.

Additional Practice for 6.0 Applied Mathematics in Biotechnology

BACE Category 6.0 (Applied Mathematics in Biotechnology) covers some of the most rigorous content on the exam including scientific notation, significant digits, correct use of decimals, serial dilutions, solution ratios, conversions, solution calculations, and dilution factor calculations. Additional practice questions are available to help you prepare and build your confidence.

Additional Study Resources

Biotility has created or selected additional free study resources for your use. They are located in this course as a module, but can also be found at <http://biotility.research.ufl.edu/student-training/#bace>.

EXAM SPECIFICATIONS

The BACE consists of nine categories. For a full list of categories and subcategories, please review the Detail of Exam Categories below. The following descriptions of the Knowledge Exam and the Practical Exam include the exam duration, number of questions per exam, subjects covered, number of questions per subject, and references used for exam development.

BACE 2020 Knowledge Exam

Format:	Closed Book
Exam Duration:	3 Hours

BACE 2020 Practical Exam

Format:	Closed Book
Exam Duration:	4 Hours

Subject	# of Q.	Points
General Topics in Biotechnology	21	23.5
Laboratory Skills/Applications	28	32
Biochemistry/Chemistry	10	11.5
Biological Systems	10	10
Research & Scientific Method	10	10
Total	79	87

Subject	# of Q.	Points
Biotechnology Skills	18	40
Applied Mathematics	12	22
Laboratory Equipment	9	13
Workplace Safety & Behavior	8	12
Total	44	87

Detail of Exam Categories

The following is a list of Knowledge and Practical Exam Subjects and their individual topics.

Knowledge Exam Categories

GENERAL TOPICS IN BIOTECHNOLOGY

Knowledge Exam

- Discuss current techniques used in biotechnology, and their applications
- Demonstrate knowledge of regulatory agencies governing the manufacture and distribution of biotechnology-derived products
- Outline the development and the regulatory approval process of biopharmaceuticals
- Illustrate examples of the benefits to society of biotechnological advances
- Understand the purpose of Good Laboratory Practices (GLPs) in product testing
- Understand the purpose of Good Clinical Practices (GCPs) in clinical trials Discuss the role and identify types of documents used in cGMP compliant industries
- Understand the purpose of current Good Manufacturing Practices (cGMPs)
- Outline the role of various departments in a company, including Research and Development, Quality Assurance, Quality Control, and Manufacturing
- Identify proper workplace safety behaviors
- Describe appropriate workplace behaviors
- Outline the manufacturing process of biopharmaceuticals
- Describe Environmental Monitoring in a controlled space
- Discuss ethics and bioethics in the workplace and society
- Describe careers in the biotechnology field
- Describe historical applications of biotechnology

LABORATORY SKILLS/APPLICATIONS

Knowledge Exam

- Describe the process of culturing microorganisms and tissues using aseptic technique
- Discuss the differences between sterilization, decontamination, and disinfection
- Describe the proper use of microscopes
- Understand the principle by which a pH meter works
- Discuss methods of chromosomal and plasmid DNA isolation, purification, and quantification
- Contrast agarose gel electrophoresis and polyacrylamide gel electrophoresis (PAGE)
- Understand how restriction enzymes are used
- Describe recombinant DNA and cloning techniques
- Discuss the transformation or transfection of model organisms
- Describe the mechanism of Polymerase Chain Reaction (PCR)
- Discuss protein expression in model organisms
- Discuss methods of molecule/protein isolation, purification, and quantification
- Understand Western blotting, ELISA, and other immunoassays
- Explain the principles of spectrophotometry
- Demonstrate knowledge of laboratory equipment calibration and validation
- Use scientific notation correctly
- Use significant digits correctly
- Use decimals correctly

BIOCHEMISTRY/CHEMISTRY

Knowledge Exam

- Compare and contrast types of chemical bonds
- Understand the chemistry of molecules and macromolecules
- Discuss the differences between aerobic and anaerobic respiration
- Demonstrate knowledge of enzymes and reaction rates
- Describe DNA structure and function
- Describe transcription
- Describe protein structure and function
- Describe translation and gene expression
- Differentiate between homogeneous and heterogeneous mixtures

BIOLOGICAL SYSTEMS

Knowledge Exam

- Explain cell theory
- Understand the general physiology of cells
- Explain the interaction between cells, and between cells and their environment
- Describe cell division (meiosis and mitosis)
- Discuss cell staining, and distinguish between Gram positive/negative cells
- Demonstrate an understanding of the immune system
- Understand the genetics of model organisms
- Describe the “central dogma of molecular biology”

RESEARCH & SCIENTIFIC METHOD

Knowledge Exam

- Discuss good experimental design, including the proper use of controls
- Explain the scientific method
- Analyze and interpret data, including the use of statistical analysis

- Explain how to maintain a laboratory notebook
- Discuss various ways of communicating scientific research, including peer-reviewed journals, and presenting posters or talks at meetings

Practical Exam Categories

BIOTECHNOLOGY SKILLS

Practical Exam

- Accurately measure liquids using micropipets and serological pipets
- Accurately measure mass using electronic balances
- Demonstrate proper aseptic/sterile technique
- Demonstrate proper culturing of microorganisms
- Demonstrate proper use of electrophoresis equipment
- Properly measure and adjust the pH of a solution with a pH meter
- Properly prepare solutions, buffers, and media
- Properly perform a serial dilution
- Describe the applications and proper use of a spectrophotometer
- Describe the proper use of a centrifuge
- Use 24-hour time correctly

APPLIED MATHEMATICS IN BIOTECHNOLOGY

Practical Exam

- Use scientific notation correctly
- Use significant digits correctly
- Use decimals correctly
- Perform calculations for serial dilutions
- Perform calculations using dilution ratios
- Make conversions within the metric system, and use metric measurements
- Solution preparation:
 - Solve Volume/Volume (V/V) solution calculations
 - Solve Weight/Volume (W/V) solution calculations
 - Solve Molarity solution calculations
 - Solve Dilution Factor calculations
- Generate a graph using collected data:
 - Apply Beer's Law
 - Generate a standard curve
 - Properly plot data
 - Interpret data

LABORATORY EQUIPMENT

Practical Exam

- Identify laboratory glassware and equipment
 - Demonstrate proper and safe use of equipment (including, but not limited to):
 - Fume hoods
 - Biosafety cabinets
 - Microscopes
 - Electrophoresis equipment
 - Spectrophotometers
 - Micropipets & serological pipets
 - Electronic balances
-

- pH meters
- Incubators
- Centrifuges
- Water baths
- Stirrers/shakers
- Vortexers
- Autoclaves

WORKPLACE SAFETY & BEHAVIOR

Practical Exam

- Identify Safety Symbols
- Exercise proper laboratory safety protocols
- Describe proper handling of biological and hazardous waste
- Identify and properly use Personal Protective Equipment (PPE)
- Derive information from Safety Data Sheets (SDS)
- Follow practices associated with regulatory compliance
- Demonstrate good documentation practices, including following Standard Operating Procedures (SOPs)
- Properly label items including solutions, buffers, Petri plates, samples, and products
- Identify acceptable work habits

UF QUICK REGISTRATION SYSTEM

All users must have an account in order to access the BACE content in UF e-Learning (UFEL). The UF Quick Registration system (QuickReg) is an automated online application that allows candidates to enroll in Biotility courses at their convenience.

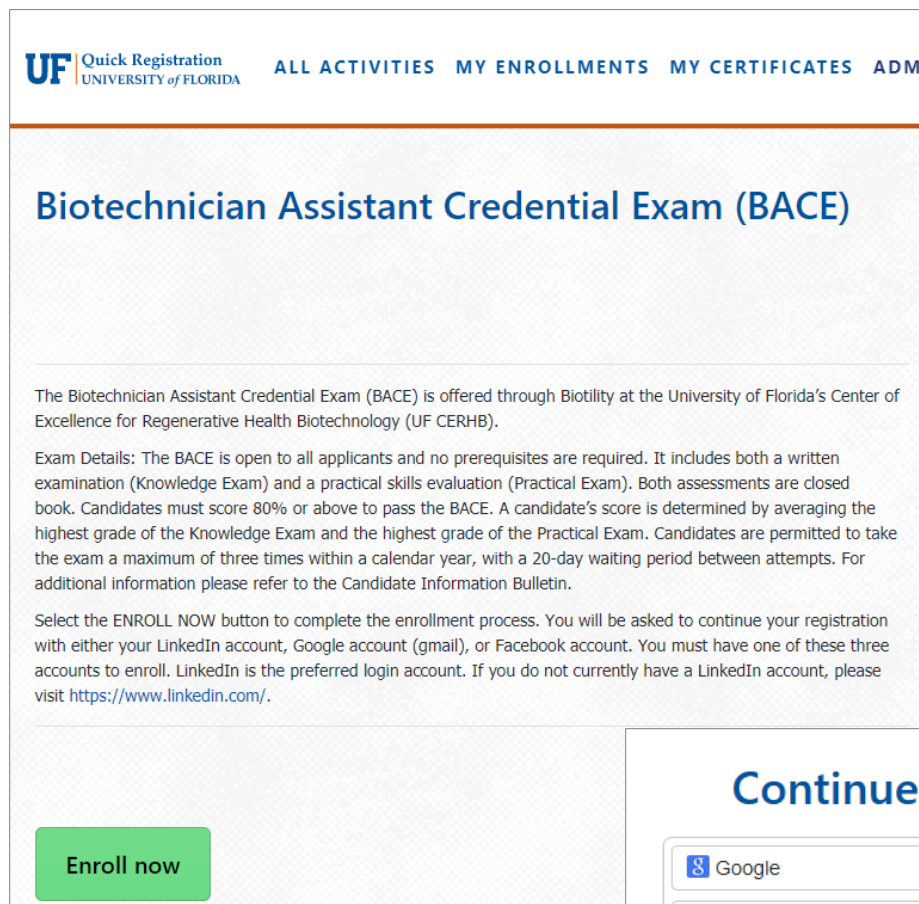
QuickReg Account Creation Overview

Biotility will email the Site Coordinator an invitation containing a unique Enrollment Link to distribute to their candidates. To create an account candidates are asked to:

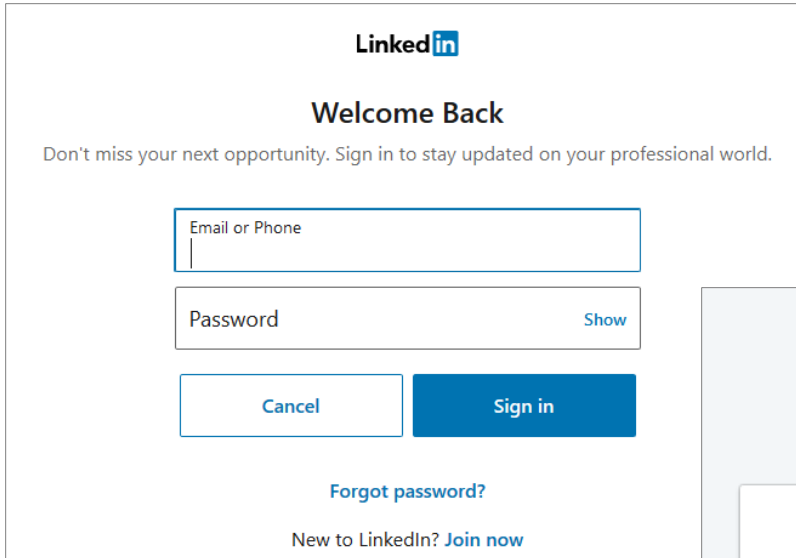
- Complete the registration with an external identity (**Preferably an existing LinkedIn account**)
- Provide requested registration information including name, birthdate, email address, and phone number
- Verify their email address

QuickReg Account Creation Process

1. Candidates should click on the green “Enroll Now” button.



2. The candidate should continue their registration with either their Google account (gmail), their LinkedIn account, or their Facebook account.



LinkedIn

Welcome Back

Don't miss your next opportunity. Sign in to stay updated on your professional world.

Email or Phone

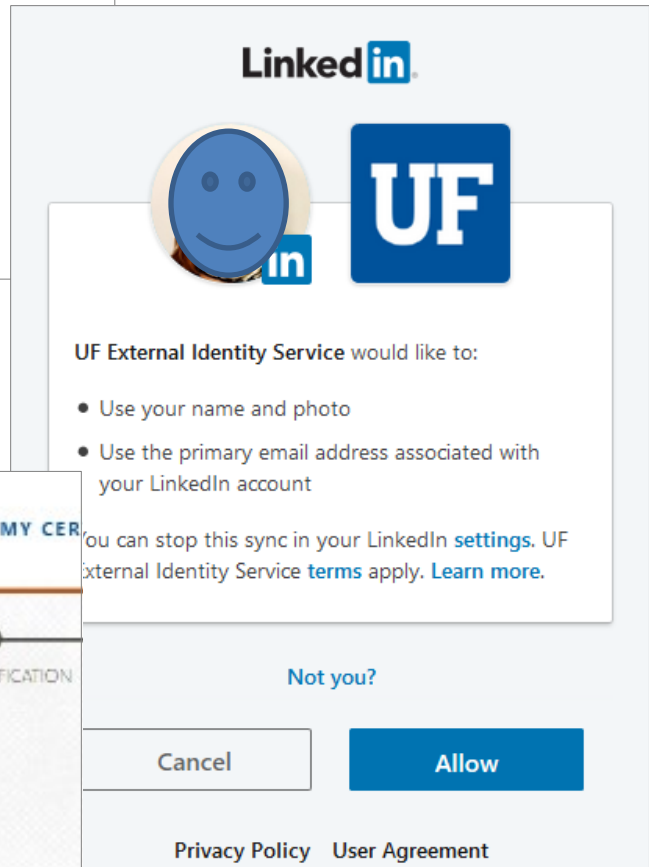
Password Show

Cancel
Sign in

[Forgot password?](#)
 New to LinkedIn? [Join now](#)

3. If the candidate uses LinkedIn to register, they will see the screen below. Note: If the candidate does not have a LinkedIn account they may click the “Join Now” link.

4. The candidate will be asked to permit LinkedIn to share their email address and photo with UF. This is required to proceed.



LinkedIn

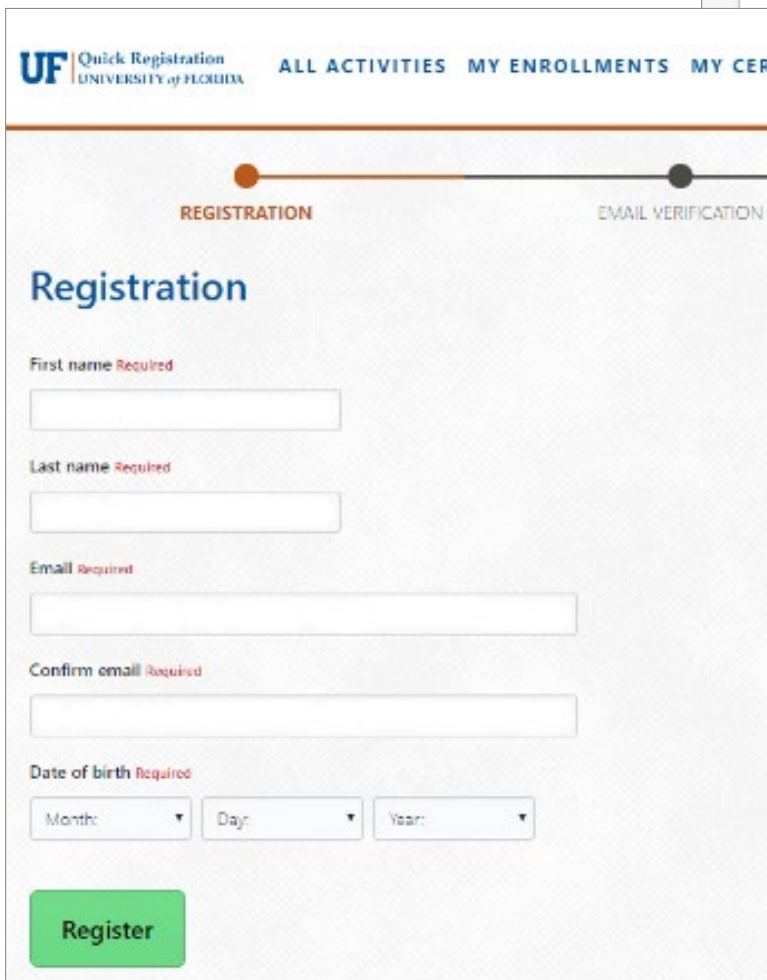
UF External Identity Service would like to:

- Use your name and photo
- Use the primary email address associated with your LinkedIn account

You can stop this sync in your LinkedIn [settings](#). UF External Identity Service [terms](#) apply. [Learn more](#).

Cancel
Allow

[Privacy Policy](#) [User Agreement](#)



UF Quick Registration UNIVERSITY OF FLORIDA

ALL ACTIVITIES MY ENROLLMENTS MY CERTIFICATES

REGISTRATION
EMAIL VERIFICATION

Registration

First name Required

Last name Required

Email Required

Confirm email Required

Date of birth Required

Month: ▾

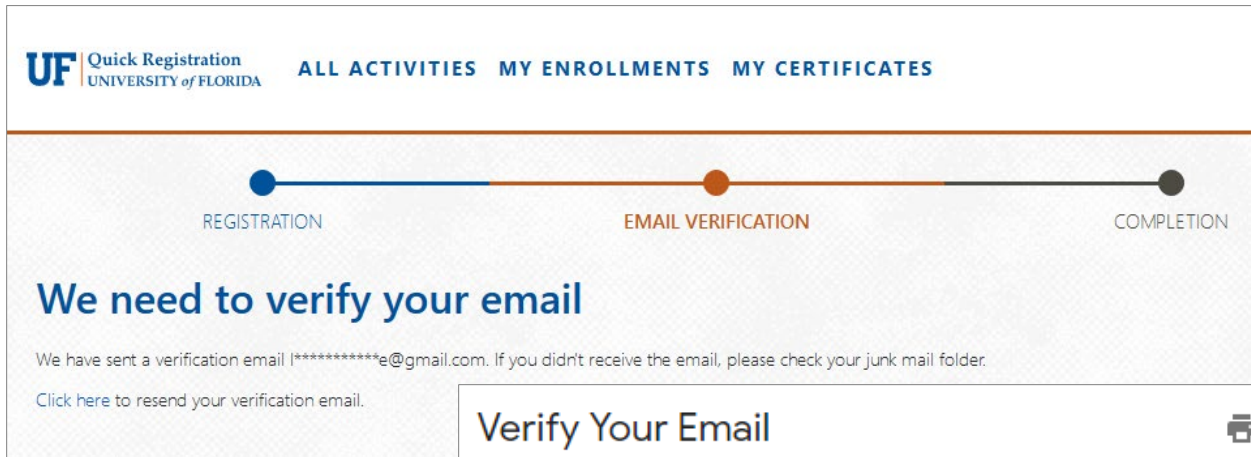
Day: ▾

Year: ▾

Register

5. Once the candidate signs on with either LinkedIn, Google, or Facebook they will then enter their name and date of birth.

6. After the candidate clicks on the green “Register” button, they will receive a verification email.



UF Quick Registration
UNIVERSITY of FLORIDA

ALL ACTIVITIES MY ENROLLMENTS MY CERTIFICATES

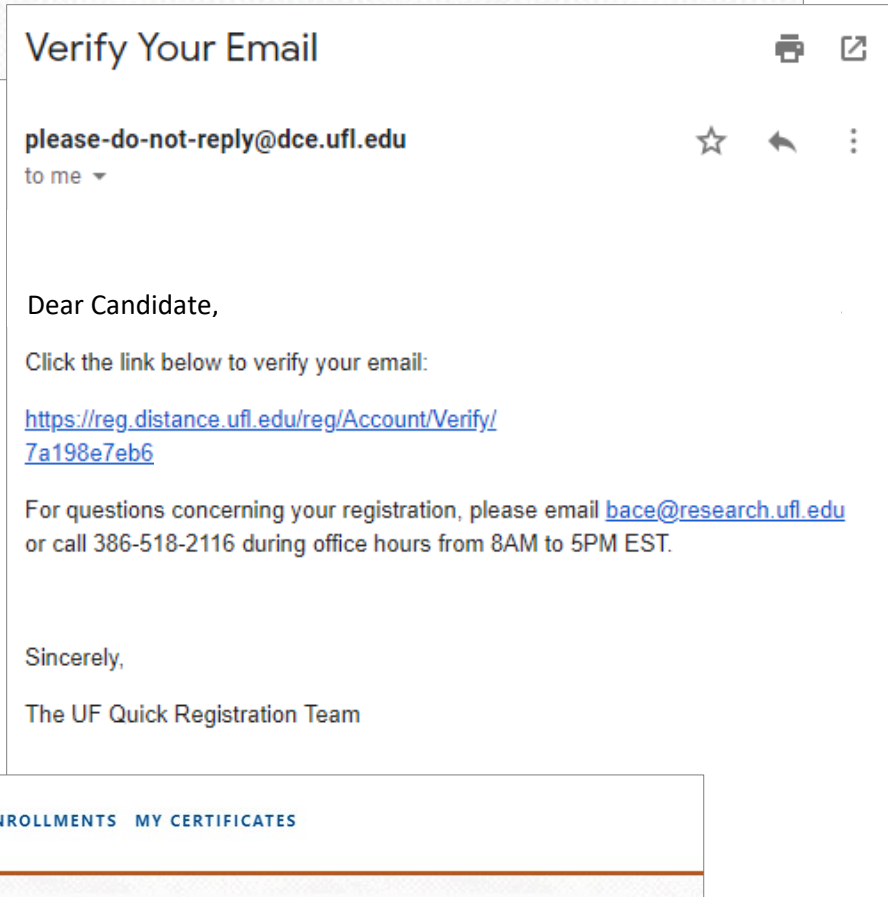
REGISTRATION EMAIL VERIFICATION COMPLETION

We need to verify your email

We have sent a verification email |*****e@gmail.com. If you didn't receive the email, please check your junk mail folder.
Click here to resend your verification email.

7. The verification email is shown below. It contains a verification link the candidate must click on in order to continue their registration.

8. Once the candidate is enrolled they will see the “successful enrollment” screen as shown, and receive another email with a link to their course in UF e-Learning.



Verify Your Email

please-do-not-reply@dce.ufl.edu
to me ▾

Dear Candidate,

Click the link below to verify your email:

<https://reg.distance.ufl.edu/reg/Account/Verify/7a198e7eb6>

For questions concerning your registration, please email bace@research.ufl.edu or call 386-518-2116 during office hours from 8AM to 5PM EST.

Sincerely,
The UF Quick Registration Team



UF Quick Registration
UNIVERSITY of FLORIDA

ALL ACTIVITIES MY ENROLLMENTS MY CERTIFICATES

You have been successfully enrolled in the Biotechnician Assistant Credentialing Exam (BACE)!

[Log in](#)

Or to see all of your enrollments visit the link below.
<http://reg.distance.ufl.edu/reg/Enrollments>

DIGITAL CREDENTIALS

Sharing Your Credential

Once you have earned your credential, Biotility will issue you a digital certification and badge via Accredible. Within two weeks of passing the BACE, you will received an email from Biotility with detailed instructions on how to engage with and share your digital certification and badge. Using tools accessible in Accredible, you may place the credential's unique URL in a large variety of places, including:

- Social Media Profiles
- Websites and Blogs
- Digital Resumes
- Email Signatures

While you are provided multiple options for sharing their digital credential, this manual will only cover one. For details on all options available please visit Accredible's recipient knowledge base at <https://help.accreditable.com/recipients>.

Sharing Digital Credentials through LinkedIn

If you have not created a LinkedIn account, you will be prompted to do so when you attempt to add the credential to a LinkedIn profile. A bare-bones LinkedIn account can be created within ten minutes. As a BACE candidate, you have free access to a professional development module through the BACE Practice Exam Course, which focuses on creating a professional LinkedIn profile and using LinkedIn to find career opportunities in the biotechnology industry.

By adding the digital credential to LinkedIn, the credential will appear on your LinkedIn profile. Stakeholders, such as admissions officers or potential employers who click on the link will be taken straight to a credential view, where it can be verified. They can also see more information about what your achievement entails and thereby have a better understanding of the rigor of the credential you earned.

How to add your digital credential to LinkedIn:

1. Receive and open your credential notification email from BACE@research.ufl.edu
2. From inside the email, click on 'View My Credential'
3. Find the 'More' option located under the credential window, then from the pop-up menu that appears, click 'Add to LinkedIn Profile'
4. A pop-up window will appear with all the relevant information you will need to copy and paste across to your LinkedIn profile.
5. At the bottom of the pop-up that appears, click on 'Open LinkedIn' to open the correct form that this information needs to be entered into.
6. Copy and paste the relevant information from the Accredible pop-up window to the LinkedIn form.
7. Once all the information has been copied across you can save and close the LinkedIn form.

YOUR FUTURE IN BIOTECH

We at Biotility are invested in seeing you succeed. Whether or not you pass the BACE, we have resources that can help you progress through your academic and career paths. At the end of the exam you will be asked to complete a survey - please be sure to enter an email address at which we may contact you at in the future, and do not hesitate to reach out to us at any time!