

BACE

Biotechnician
Assistant
Credentialing
Exam

AY 23-24

PPT

EXAM SITE PERSONNEL FAQ FOR PAPER & PENCIL TESTING

1. How do I register as an Exam Site for the BACE?

Educational institutions and companies who wish to deliver the BACE must become an approved Exam Site by completing the Exam Site Registration Form on the [BACE Registration and Ordering](#) website. On the form, you may register as an Exam Site and designate your testing personnel. Please review the [Exam Site Registration Process for the Paper & Pencil Testing Option](#) for a complete description of the process and requirements.

2. When should I register as an Exam Site?

Biotility requires the Exam Site Registration Form to be completed annually. Most Exam Sites register 4 to 6 months in advance of testing to ensure their candidates have sufficient time to use the Practice Exam Course to prepare. The minimum time frame is six (6) weeks in advance of the testing date.

3. Do I need to earn the Biotechnician Assistant Credential in order to administer the BACE?

Biotility does NOT require Exam Site Personnel to earn the Biotechnician Assistant Credential. However, we encourage you to check with your administration to ensure you meet local or state requirements. Educators and Exam Site Personnel are only permitted to take the BACE directly through Biotility. To register to take the BACE, visit the [BACE Individual Registration Form](#).

4. How do I become qualified to administer the BACE?

Within one (1) week of completing the Exam Site Registration Form, each individual designated to serve as Exam Site Personnel is emailed an invitation to enroll in the *BACE Exam Site Personnel Certification Course* in UF e-Learning. This course must be completed annually and at least two weeks prior to a testing event. Please review the [BACE Personnel Certification Process](#) for a complete description of the process and requirements.

5. What is the structure of the BACE when administered through the Paper & Pencil Testing Option?

The BACE is one exam that consists of a Practical portion and a Knowledge portion. Candidates take both portions in one session. The assessment is closed book and administered by a Biotility-Certified Exam Proctor via paper and pencil. The exam also requires a Biotility-Certified Skills Evaluator. Please review the [BACE Exam Specifications](#) and the [BACE Administration Procedures for the Paper & Pencil Testing Option](#) for a complete description of the exam and administration process.

6. What does the cost of the exam include?

The exam fee is \$185 per candidate. The fee includes:

- Access to the online Practice Exam Course
- A first and second attempt of the exam
- A digital credential upon passing

7. What payment methods are accepted?

Exam Sites may choose between three payment methods: credit card, P-card, or check. If you pay by credit card or P-card, the Site Administrator and Billing Contact will receive an email with a link to make the payment. Exam Sites paying by check may submit it to:

University of Florida
14193 NW 119th Terrace
Suite 20
Alachua, FL 32615
FEID 59-6002052

Please review the [BACE Ordering Process and Policies](#) for a complete description of the payment options and deadlines.

8. How is each portion of the exam scored?

To pass the BACE and earn the Biotechnician Assistant Credential, candidates must achieve an overall score of 80%. Exam Sites must return the exam to Biotility to be scored. Score Reports are sent to the Site Administrator within two (2) weeks of processing. Candidates who pass the BACE will be issued a Biotechnician Assistant Credential from Biotility.

9. Are candidates permitted to retake the exam?

Candidates may retake the exam once at no additional cost. To schedule a second attempt, the Exam Site Administrator must complete the [Second Attempt Scheduling Form](#). Candidates are permitted to take the exam a maximum of three times per year. To order and schedule a third attempt, go to the [BACE Registration and Ordering](#) website and complete the Order Form a second time.

10. How frequently may a candidate take the exam?

There is a 20-day waiting period between attempts. While 20 days is the minimum waiting period, Exam Sites are encouraged to schedule four to six weeks between exam attempts to provide adequate time for candidates to study and improve their overall score.

11. What items are permitted during the exam?

Candidates are not permitted to bring **any** items into Exam Rooms except their identification. The proctor must provide a pencil and a basic non-programmable calculator. Proctors may not provide scratch paper. Candidate workspace is available in exam booklets.

12. How much time is allotted for the exam?

Candidates have four hours in which to complete the exam.

13. What are the recommended Study References?

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.
- Seidman, Lisa. *Basic Laboratory Methods for Biotechnology: Textbook and Laboratory Reference (Third Ed.)*. Boca Raton, FL: CRC Press, 2021.

Additionally, the online Practice Exam Course is an excellent representation of the content candidates will encounter during the actual exam, as well as home to supplemental study resources and materials. Many of the study materials within the Practice Exam Course are also available publicly on the [Candidate Resources](#) page.

14. What are the computer requirements for the Practice Exam Course?

For an Exam Site's technical staff who are supporting candidate access to the BACE's online Practice Exam Course, which is housed at UF e-Learning (UFEL), see the [UFEL Technical Guide](#) for a detailed list of computer requirements.

15. What is a candidate's username and password for UF e-Learning?

All users must have an account in order to access the BACE content in UF e-Learning (UFEL). Biotility will email the Site Administrator an invitation containing a unique **Enrollment Link** to distribute to their candidates. To create an account, candidates are asked to:

- Select the Enrollment Link.
- Complete the registration with an external identity (Google, LinkedIn, or Microsoft).
- Provide requested registration information including name, birthdate, email address, and phone number.
- Verify their account by opening and responding to the account confirmation email.

Please review [Accessing UF e-Learning](#) for a complete description of the account creation and enrollment process.

16. How do candidates prepare for the day of the exam?

Candidates should read the [BACE Candidate Information Bulletin \(CIB\) for Paper & Pencil Testing](#) prior to testing. The CIB includes contact numbers, resource links, a detailed exam description, technical requirements, and exam policies.

17. What subjects are covered on the Knowledge portion of the BACE?

General topics for the Knowledge portion include General Topics in Biotechnology, Technical Skills and Applications, Chemistry and Biochemistry, Biological Systems, and Workplace Safety and Behavior. See the [Knowledge Portion Categories and Subcategories](#) for a detailed list.

18. What subjects are covered on the Practical portion of the BACE?

General topics for the Practical portion include Biotechnology Skills, Applied Mathematics, Laboratory Equipment, and Research and Scientific Method. See the [Practical Portion Categories and Subcategories](#) for a detailed list.

19. Why are significant figures NOT required in all of the calculations on the BACE?

In order to maintain accuracy when making calculations for solutions, a question may ask for significant figures, for a number with a specified amount of decimals, or for a whole number. It is important for candidates to remember to use significant figures *only* when the question specifically asks for them. Otherwise, they must follow the directions in each question. For example, a candidate may see a question similar to the following:

“Calculate the volume in mL of 20X TAE Buffer required to make 1500 mL of 1X TAE Buffer. On your answer grid, record the correct amount.”

$$C_1V_1 = C_2V_2$$

$$(1X \text{ TAE}) (1500 \text{ mL}) = (20X \text{ TAE}) (V_2)$$

$$V_2 = 1500 \text{ mL} / 20X \text{ TAE}$$

$$V_2 = 75 \text{ mL}$$

If you were to follow significant digit rules, the answer would be 80 mL of 20X TAE stock buffer. However if you plug this answer back into the equation, you get a value of 0.9375X TAE buffer for C_2 , which is *incorrect*.

$$C_1V_1 = C_2 V_2$$

$$(20X \text{ TAE}) (80 \text{ mL}) = (C_2) (1500 \text{ mL})$$

$$C_2 = 1500 \text{ mL} / 1600 \text{ mL}$$

$$C_2 = 0.9375X \text{ TAE}$$

Please follow the directions in each question.

20. What is the “Simple Dilution Method”?

Unlike chemistry labs, molecular biology labs use the “Simple Dilution” method. A *simple dilution* is one in which a unit volume of a *solute* (the material to be diluted) is combined with the appropriate unit volume of a *solvent* (the substance in which the solute is dissolved) to achieve the specified concentration. The *dilution factor* is the total number of unit volumes in which your solute will be dissolved. Mix the diluted solute thoroughly to achieve the dilution.

A 1:6 dilution (verbalized as "1 to 6" dilution) requires combining one unit volume of **solute** (the material to be diluted) + six unit volumes of the **solvent**.

For example, you may see a question similar to the following:

"Using the simple dilution method, calculate the volume in μL of 6X loading dye required to run a 20 μL DNA sample on an agarose gel. On your answer grid, record the correct amount rounded to one decimal place."

$$\frac{1}{6} = \frac{x}{20 \mu\text{L}} \quad X = 3.3 \mu\text{L}$$

21. How do candidates receive their digital credential?

Upon passing the BACE, electronic credentials are sent directly to the candidate using the email address they provide on their exam booklet. Electronic credentials are issued through Accredible. Candidates are provided multiple options for sharing their digital credential. Please refer to the [Candidate Information Bulletin](#) or the [Digital Credentials](#) document for the most common method. For details on all options available, please visit [Accredible's Recipient Knowledge Base](#).

22. How do employers verify the credential?

To verify a BACE Credential online please visit Accredible's [Verification Tool](#) and use this to ascertain whether a digital credential has been legitimately published from our system. There are three verification methods.

- **Credential Link** - If you know the URL of the credential you would like to verify, input this in the field shown and select **Verify**.
- **Credential ID No.** - If you know the ID No. of the credential you would like to verify, input this in the field shown and select **Verify**.
- **Open Badge Image Upload / How to Verify a Badge** - If you have seen an open badge that you want to check is real, you may copy and upload that badge to Accredible's Verification Tool. It will read the meta-data in that badge image and be able to tell you if it is genuine.

23. How many FTE credits are earned?

In Florida, each candidate who successfully challenges the BACE will earn 0.3 FTE funding that goes directly back into the program. Exam Sites outside of Florida should check with their state CTE director to determine the number of FTE credits earned.