# ABT Certification Handbook

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>About ABT</td>
<td>4</td>
</tr>
<tr>
<td>What is Certification?</td>
<td>4</td>
</tr>
<tr>
<td>Benefits of Certification</td>
<td>4</td>
</tr>
<tr>
<td>Benefits to Toxicologists</td>
<td>5</td>
</tr>
<tr>
<td>Benefits to Employers</td>
<td>5</td>
</tr>
<tr>
<td>Benefits to Society</td>
<td>5</td>
</tr>
<tr>
<td>Certification Process</td>
<td>6</td>
</tr>
<tr>
<td>Contacting the ABT office</td>
<td>6</td>
</tr>
<tr>
<td>Quick Reference for Requirements and Deadlines</td>
<td>7</td>
</tr>
<tr>
<td>ELIGIBILITY REQUIREMENTS</td>
<td>7</td>
</tr>
<tr>
<td>Education and Experience Requirements</td>
<td>7</td>
</tr>
<tr>
<td>Work Experience</td>
<td>8</td>
</tr>
<tr>
<td>Eligibility Periods</td>
<td>10</td>
</tr>
<tr>
<td>Eligibility Extensions</td>
<td>10</td>
</tr>
<tr>
<td>APPLICATION PROCEDURES</td>
<td>11</td>
</tr>
<tr>
<td>Application Deadlines and Fees</td>
<td>11</td>
</tr>
<tr>
<td>Documentation Required with Online Application</td>
<td>11</td>
</tr>
<tr>
<td>Suggestions</td>
<td>11</td>
</tr>
<tr>
<td>Documentation Required Outside of Online Application</td>
<td>12</td>
</tr>
<tr>
<td>Verification of Academic Education</td>
<td>12</td>
</tr>
<tr>
<td>Verification of Work Experience</td>
<td>13</td>
</tr>
<tr>
<td>Statement of Understanding</td>
<td>13</td>
</tr>
<tr>
<td>Applicants with a Disability</td>
<td>14</td>
</tr>
<tr>
<td>Application Withdrawal/Refunds</td>
<td>15</td>
</tr>
<tr>
<td>APPLICATION PROCESSING</td>
<td>15</td>
</tr>
</tbody>
</table>
FREQUENTLY AFTERTHE EXAM

EXAM SCHEDULING AND ADMINISTRATION

AFTER THE EXAMINATION

FREQUENTLY ASKED QUESTIONS REGARDING THE APPLICATION AND EXAM PROCESS
6. I need to make a change to my application, how do I do this? .......................................................... 22
7. Do you accept electronic transcripts? ........................................................................................................ 22
8. My supervisor sent the recommendation letter directly to me. Can I forward it to you? .................. 22
9. The Committee said I am ineligible. How can I appeal? ........................................................................ 22
10. I paid the exam fee, but I can’t sit the exam this year. Can I have a refund, or transfer the fee to next year’s exam? ......................................................................................................................... 22
11. Can I have a refund? .................................................................................................................................. 22
12. When will I be notified that I passed the examination? ........................................................................... 23
13. How do I find out my scores? .................................................................................................................... 23
14. What if I pass the first session of the exam, but not the second? ............................................................. 23

OVERVIEW OF ABT EXAMINATION CONTENT OUTLINE ............................................................................. 23
Domain I. Design, Execute, and Interpret Toxicology Studies ................................................................. 24
Domain II. Descriptive Toxicology: Environmental, Clinical, Non-clinical, and Forensic Investigations . 24
Domain III. Mechanistic Toxicology ......................................................................................................... 25
Domain IV. Risk Assessment ....................................................................................................................... 25
  A. Hazard Identification .............................................................................................................................. 25
  B. Exposure Assessment ............................................................................................................................. 26
  C. Dose Response Assessment .................................................................................................................. 26
  D. Risk Characterization and Management .............................................................................................. 26
Domain V. Applied Toxicology: Public, Environmental, and Occupational Health .............................. 27
Introduction

About ABT
The American Board of Toxicology, Inc. was incorporated in the District of Columbia on April 17, 1979, as a self-sustaining not-for-profit corporation. The purpose of the ABT is:

- to encourage the study of the science of toxicology,
- to stimulate its advancement by establishing standards for professional practice,
- to prepare and administer procedures including tests for the implementation of such standards, and
- to confer recognition by certificates or otherwise upon those members of the profession who, measured against such standards, demonstrate competence.

The Board awards certificates to persons who have met the eligibility requirements for admission to the Certification Examination and who have met the Certification Examination requirements within a three year period of eligibility.

What is Certification?
Certification is the process by which an organization grants recognition to and validates the qualifications and competence of individuals meeting predetermined criteria.

The ABT Certification examination is based on a practice analysis study of the knowledge required for general toxicology.\(^1\) A profile of the domains and tasks used in toxicology practice was developed by subject-matter experts and an on-line survey of toxicologists confirmed the delineation. The exam questions test the knowledge and/or skills needed to perform these tasks. The domains and tasks are provided at the end of this manual, along with the percentage of questions devoted to each domain.

Benefits of Certification
The following benefits of ABT certification should be considered by all toxicologists and their employers.
Benefits to Toxicologists

- Certification recognizes broad expertise in general toxicology for those with formal training in toxicology, as well as those trained in related disciplines.
- ABT certification provides personal satisfaction and intellectual stimulation.
- ABT certification often offers an advantage in the job market and career development, and has been associated with higher levels of compensation. ABT certification enhances credibility in consulting and legal testimony.
- Diplomates have access to a job listing service via the Diplomate area of the ABT website.

Benefits to Employers

- ABT certification provides an objective demonstration of a toxicologist's breadth and currency of knowledge and supports scientific credibility.
- Certification by the ABT facilitates access to other certified colleagues who can provide expertise in diverse areas.
- ABT certification is recognized by the national registries in several European countries, and thus, by the EuroTox.
- ABT offers a job listing service whereby employers can advertise openings to all Diplomates via the Diplomate portion of the ABT website.

Benefits to Society

- The ABT certification is recognized as the standard for competence in general toxicology based on demonstration of appropriate educational background, active practice of toxicology and examination.
- ABT Diplomates are required to demonstrate currency with respect to new developments in toxicology through recertification at 5-year intervals, thus, providing timeliness in the assessment of toxicological issues of concern to society.
- The ABT's certification process is recognized world-wide, thus providing a consistent international standard of competence and expertise on toxicology issues.
Certification Process

- Determine if you meet the eligibility requirements
- Submit the online application and fee by April 30
- Arrange for necessary documentation of education and experience to be sent to ABT office
- Receive notice of eligibility
- Pay the exam fee by August 31 of any year of eligibility that you wish to take the exam
- Take the exam
- Receive notification of pass/fail status, and information on maintenance of certification, if applicable
- Successful candidates will receive their certificates by March 31 of the following year
- Begin certification renewal activities

Contacting the ABT office
Candidate inquiries are handled by the ABT office located in Raleigh, North Carolina. Inquiries can be made via telephone, mail, or email, though the best method is via email. The ABT office contact details are below.

American Board of Toxicology, Inc.
P.O. Box 97786
Raleigh, NC 27624
(919) 841-5022
info@abtox.org
Website: www.abtox.org
Quick Reference for Requirements and Deadlines

This is an overview of the items necessary for application, the fees and the deadlines associated with each. For complete details, please see the sections below regarding each item.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Application completed</td>
<td>April 30th</td>
</tr>
<tr>
<td>Application fee due ($300)</td>
<td>April 30th</td>
</tr>
<tr>
<td>Confirmation of degree (transcripts) sent to ABT office by institution</td>
<td>May 31st</td>
</tr>
<tr>
<td>Confirmation of professional work experience (supervisor letters) sent to ABT office directly from supervisor via email or post</td>
<td>May 31st</td>
</tr>
<tr>
<td>Application Withdrawal for $275 refund</td>
<td>June 1st</td>
</tr>
<tr>
<td>Exam Fee Due from eligible candidates ($275)</td>
<td>August 31st</td>
</tr>
</tbody>
</table>

ELIGIBILITY REQUIREMENTS

Education and Experience Requirements
One of the following three combinations of education and experience are necessary to meet the eligibility requirements for admission to the Certification Examination.

1. An applicant must possess an earned doctoral degree in toxicology or related field and have at least three (3) years of full-time professional post-doctoral experience (or part-time equivalent thereof) in toxicology after official conferral of the doctoral degree. The three years of experience must be after the date on which the doctoral degree was awarded officially. Having completed all requirements for the degree, but not having received the degree will NOT suffice.
2. An applicant must possess an earned master’s degree in an appropriate field and have at least seven (7) years of full-time professional post-baccalaureate experience (or part-time equivalent thereof) in toxicology.

3. An applicant must possess an earned bachelor’s degree in an appropriate field and have at least ten (10) years of full-time professional post-baccalaureate experience (or part-time equivalent thereof) in toxicology.

Years of experience shall be determined using the actual date the applicable academic degree is awarded and not the date degree requirements were completed. The degree must have been awarded at least 3, 7, or 10 years prior to June 30 of the year of application.

The following is a quick summary of the combination of degree and work experience necessary and the documentation required pertaining to the verification of the degree.

<table>
<thead>
<tr>
<th>Degree conferred by June 30</th>
<th>Number of years Professional Experience as of June 30 in the year of application</th>
<th>Documentation required to confirm degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelors</td>
<td>10 years full-time or part-time equivalent*</td>
<td>Transcript of Bachelor’s degree sent directly from institution</td>
</tr>
<tr>
<td>Masters</td>
<td>7 years of full-time or part-time equivalent post-baccalaureate experience (work between Bachelors and Masters can be counted)*</td>
<td>-If only using post-Master’s degree experience, then only transcript of Master’s degree sent directly from institution. -If using post-baccalaureate experience, then both Masters and Bachelor’s degree transcripts are necessary.</td>
</tr>
<tr>
<td>Doctorate</td>
<td>3 years full-time or part-time equivalent*</td>
<td>Transcript of Doctorate degree sent directly from institution*</td>
</tr>
</tbody>
</table>

* 3, 7 or 10 years prior to year of application

**Work Experience**

The applicant must have full-time involvement in the practice of toxicology within the year immediately prior to the date of application. Experience must have been earned as of June 30 of the year of application.

Scholastic work towards a higher degree is not considered to be professional level experience. Individuals working toward a higher degree while employed full-time in the practice of toxicology will receive credit for the employment as years of experience if full time employment can be documented, but this experience will be applied to the eligibility requirements for the lower degree.
• With respect to experience in the practice of toxicology, a candidate should have carried out one of the following functions: designed and managed toxicological experiments, interpreted results and translated them to identify and solve human, animal and environmental health problems. It is not sufficient that the candidate work with or for toxicologists. The applicant must be responsible for the professional toxicological work conducted. These experiences should account for the majority of "time in professional practice" used to support the application.

• A candidate need not necessarily actually produce or develop the data that is used in assessing and evaluating toxicity. With an appropriate educational background and/or previous toxicology experience, a candidate may be engaged in interpreting data generated by others and then may use this data and information to synthesize a comprehensive toxicity assessment. With sufficient documentation of educational training and/or specific experience, such a candidate could be eligible to take the examination. Likewise, because of the broad scope of toxicology, it should not be expected that all qualified candidates be engaged in the design, conduct, evaluation and interpretation of toxicity studies. Sufficient evidence should be provided that there is an understanding of such studies, the best evidence being a prior history of having been personally engaged in the conduct of toxicity studies.

• Being engaged in activities such as environmental monitoring, exposure monitoring, biological monitoring, monitoring of workers, etc., in and of itself does not constitute the practice of toxicology. If the results from these activities are utilized by the candidate in a broader context of assessing toxicity and if the candidate's educational background and/or previous experience indicates appropriate training in toxicology, monitoring activities and application of their results may constitute the practice of toxicology.

• For a candidate engaged in data reviews of existing toxicity information, identification of toxicity data gaps, identification of structure-activity relationships of potentially toxic chemicals, maintaining data bases, development of risk assessment methodologies, preparation of health assessment documents, etc., the application must unequivocally document that the candidate utilizes the information in an integrative fashion in the broad context of a comprehensive toxicology evaluation. Reviewing data and simply preparing warning labels for a product using a "by the numbers" approach does not constitute the practice of toxicology, nor does simply maintaining a data base and publishing the results. Developing risk assessment methodologies by applying the data
and then adjusting the mathematical model parameters without demonstrated understanding of the data or the broader aspects of toxicology does not constitute the practice of toxicology.

- Providing managerial guidance or consulting support for specific clients or for purposes of litigation could include defining toxicity, hazard and risk, dose-response evaluation, duration of exposure and evaluation of toxicity data to assess the likelihood of adverse effects associated with exposure to potential toxicants. In these cases, appropriate educational training and/or experience in previous or other job activities may provide the necessary link to judge that the applicant is engaged in the active practice of toxicology. Merely translating the jargon of the various sciences into layman’s terminology does not constitute the practice of toxicology.

- Conducting microbiological assays or other *in vitro* laboratory work as a course of regular operations in itself does not constitute the practice of toxicology. However, using such methods in the interpretation of adverse effects as it relates to exposure does.

- Histopathological evaluation of tissues from organisms exposed to substances does not in itself constitute the practice of toxicology; however, contributions to study design, protocol development, and/or interpretation of histological evaluation with other lines of evidence (e.g. clinical chemistry data, gross findings, behavioral changes) related to exposure does.

**Eligibility Periods**
Each period of eligibility to take the examination is of three years duration. An individual who is found by the Board to have adequate credentials may take up to three examinations within that period of eligibility.

Eligible candidates who fail to appear for an examination will lose that year of eligibility. If the applicant does not pass the examination within the period of eligibility, reapplication with forms, fees and supporting documentation is necessary before eligibility can be reestablished.

**Eligibility Extensions**
Eligibility extensions will not be granted for any reason during any eligibility period. The only exception is in the third year of eligibility, when an extension MAY be granted by the Board of Directors only because of a medical condition that prevents a candidate from taking the
examination, or due to death or serious illness of an immediate family member. Requests for extension must be made in writing and be received by the ABT office either before or within 10 business days after the missed examination. Appropriate corroborating documentation (doctor’s letter or copy of a death certificate) must accompany all such requests or they will not be considered. If an extension is granted, the candidate must take the examination in the following year but will not have to pay an additional Application Fee or Examination Fee.

**APPLICATION PROCEDURES**

**Application Deadlines and Fees**

<table>
<thead>
<tr>
<th>Fee Due</th>
<th>Deadline</th>
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<tbody>
<tr>
<td>$300 Application fee</td>
<td>April 30</td>
</tr>
<tr>
<td>$275 Exam fee</td>
<td>August 31</td>
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</table>

Applications are only accepted online via the ABT website at [www.abtox.org](http://www.abtox.org). Complete the information required and pay the Application fee of three-hundred ($300) U.S. dollars. Fees may be paid online via credit card, or a check may be mailed to the ABT office. All fees and costs related to conversion of foreign currency to U.S. dollars are the responsibility of the applicant. The application and fee must be submitted to the ABT Office no later than April 30 of the year in which the applicant first wishes to take the examination. There will be a $30.00 processing fee charged for returned checks.

**Documentation Required with Online Application**
The Eligibility Committee of the ABT must have a complete dossier to review. The applicant must describe his/her experience as a toxicologist, including full job description(s) and bibliography that includes a list of publications with full bibliographic citations. A full curriculum vitae is required. A listing of related toxicology activities can also be included on the CV. To aid in the preparation of complete documentation describing the applicant's experience in toxicology, several suggestions are listed below. These suggestions should be regarded as guidelines. The applicant may wish to provide additional relevant information.

**Suggestions**
- Simply providing the job title will not suffice. Duties and responsibilities can be described in terms of time allocated to specific activities, types of studies or functions performed, reporting relationships, toxicology personnel supervised, students or postdoctoral fellows trained, numbers and types of technical reports
prepared and role played in the preparation of such reports, etc. Thoroughness is essential. Provide specific and detailed descriptions of each aspect of present and past employment activities in toxicology.

- Many scientists with newly acquired degrees have a training period for the conduct of toxicological studies, or apply a previously acquired skill as a part of an overall team effort to toxicological studies. At what point within their scientific contribution and growth has "skilled technical work" changed to "full-time professional experience in toxicology"? For purposes of defining eligibility criteria, “full-time professional experience in toxicology" will begin when the individual has demonstrated the capability to conduct a toxicological study in an independent manner, to prepare a valid report of the results and to understand the interpretation of a toxicological study for professional use.

- This definition will apply to post-doctoral as well as post-baccalaureate experience in toxicology. It will be incumbent upon the applicant, and particularly upon the sponsors of applicants, to provide adequate documentation to satisfy the definition.

- A formal position description may be attached, but may not be sufficient by itself.

- List the name(s) of the supervisor(s) who will provide a supporting letter and the time periods they are covering in the online application.

- If several positions have been held at the same employer, each position should be listed separately in the online application, and with the duties of each position listed separately.

Documentation Required Outside of Online Application
All documentation outlined below must be received by May 31 in the year of application.

Verification of Academic Education
Applicants must arrange for an official transcript of the degree used as the basis for qualification to be forwarded directly from the granting institution to the ABT Office. Please note that couriers such as FedEx, UPS, and DHL will not deliver to the ABT post office box. If you wish to utilize one of these courier services, please contact the ABT office for further instruction.

Outside of the United States
If it is not possible to obtain official transcripts from non-U.S. colleges or universities, applicants must provide certified copies of their diplomas and a listing of courses passed. For candidates claiming earned doctoral degree status,
the course listing must permit a determination of educational equivalence to a doctoral degree. If certified copies of diplomas or course listings are not provided, the applicant must satisfactorily explain their omission and provide an alternate method for determining educational status (e.g., recognition of the educational program by the Educational Commission on Foreign Veterinary Graduates).

**Verification of Work Experience**
Applicants must arrange for letters from present and former supervisors to be sent to the ABT Office. For self-employed applicants, letters from clients or employers may substitute if acceptable to the ABT Eligibility Committee. These letters must explicitly specify the time period of the position, and must accurately and fully document the applicant's duties, responsibilities and full-time professional experience in toxicology. The supervisor should review the above section on experience in toxicology before preparing the support letter. The supporting letters must cover the entire period of experience required with the actual degree conferral date used as the basis for qualification. The letters may contain other information as deemed appropriate by the supervisor or employer. This information will be disclosed to the applicant upon request so that accuracy can be assured.

**Please note that supervisor letters must be sent to the ABT office by the supervisor. Letters forwarded by the candidate will not be accepted.** There is a form letter for supervisors available on the website, it is strongly encouraged that supervisors use this form when completing work verifications. To access the letter, please click [here](#).

Applicants submitting part-time equivalent as job experience will be considered on a case-by-case basis by the Eligibility Committee.

**Statement of Understanding**
All candidates will be required to agree to the following prior to submitting an application via the ABT website. Agreement will be made via the website.

I hereby apply for certification as a Diplomate of the American Board of Toxicology, Inc. I understand the information obtained from me and others on my behalf as part of the certification process may be used for statistical purposes, and for the evaluation of the program. I understand the information in my records will be treated confidentially except as otherwise provided by law. If I am certified, I consent to my name being released to publicly identify me as a Diplomate of the American Board of Toxicology®. I understand that ABT releases of its list of Diplomates will not include addresses or other contact information. I understand that ABT does list Diplomate names, addresses and
other contact information on the non-public password-protected Diplomate area of the ABT website for the purpose of enabling Diplomates to more easily contact each other. If I desire that my name not be included in public releases, or my contact information not be on the password-protected Diplomate portion of the website, I will inform the ABT office of that choice in writing and in a timely manner.

Note: Attainment of Diplomate status entitles the bearer to represent him/herself as a “Diplomate of the American Board of Toxicology”® (DABT). Initial certification as a DABT shall be granted by the Board of Directors based upon acceptability of the applicant’s qualifications and successful completion of a written examination. To maintain certification, a Diplomate must successfully complete a recertification process every five years. Diplomate status and all entitlements therein, including the use of the designators ABT and DABT, shall cease upon failure to complete the recertification process within established deadlines.

If I am accepted to take the examination, I understand that I will be informed only of whether I have passed or failed the examination. I understand the examination questions and the answer sheets are not available afterward to me and at all times are the property of the American Board of Toxicology, Inc. If I do not pass the examination, I understand that I may ask for a committee of the Board of Directors to review my examination answers (without identifying me), and that there is no other appeal from the result of my examination answers.

I understand that the American Board of Toxicology reserves the right to withhold or cancel my scores or revoke certification if there is any cheating, improper conduct, or other irregularities associated with the submission of my examination or candidacy. I certify that I have read and will abide by the above statements and that all of the information I have provided on this application is true, complete and correct to the best of my knowledge. I understand that the use of false or misleading information may result in a finding of ineligibility or a rescinding of certification by the Board of Directors.

Applicants with a Disability
Reasonable testing accommodations will be provided for candidates with documented disabilities as recognized under the Americans with Disabilities Act [ADA].

Candidates must request consideration for reasonable testing accommodations at the time of exam eligibility application. Requests must be made in writing or via email to info@abtox.org by the application deadline date of that year. Exceptions may be permitted for unexpected health-related needs, which arose after the candidate initially applied for the exam. If the exam
is not passed in full in the first year and the candidate must request reasonable testing accommodations upon future testing, this request must be writing or via email to info@abtox.org by the next year’s eligibility deadline. Score reports will not reflect whether a test was taken with accommodations.

Application Withdrawal/Refunds
If a candidate withdraws his/her application by June 1 in the year of applying for eligibility, $275 of the application fee will be refunded. The fee is non-refundable in any other circumstance. Withdrawals must be made in writing; email is acceptable. All forms, fees, supporting documentation and other materials submitted to the American Board of Toxicology become the property of the Board and will be maintained in confidentiality solely for evaluation of the candidate’s eligibility to take the certification examination.

APPLICATION PROCESSING

Status of Submitted Documentation
It is the responsibility of the applicant to assure timely receipt of the required documentation. Incomplete or late documentation will result in an ineligible status. An applicant should not assume that transcripts or letters of verification requested from a third party have been sent to the ABT Office. If unsure, an applicant may check the status by logging into their online account. If still unsure, they may call or e-mail the ABT Office to confirm receipt of requested documentation.

Confidentiality
All applicant information is kept confidential. Any inquiries regarding an application and/or eligibility must be made by the applicant. Information will not be released to other parties.

Determination of Eligibility and Notification
Applicants will be notified of their eligibility by August 15th. All eligibility decisions are at the discretion of the Board of Directors. All applicants are urged to initiate their preparation for the examination well before the notification date. The Examination usually is given in October. Exact dates are available on the ABT website.

Ineligibility and Appeals Process
If an applicant is found ineligible to take the certification examination, the applicant will be informed of that fact and of the reasons for the determination in sufficient detail to allow the preparation of a petition for reconsideration. Any petition and evidence or documentation in
support of the petition must be submitted in writing to the ABT office prior to the date specified in the notification letter. Any petition or supporting materials received after the specified date will not be considered. After the deadline for providing supplemental information, the application will be reviewed again. All decisions regarding eligibility appeals are final.

PREPARING FOR THE EXAM

The ABT exam is challenging! It is important to develop a study plan. Different methods work better for different applicants, but here are some options to consider. **Note:** The American Board of Toxicology, Inc. does not sponsor or endorse any review courses. This includes courses that are advertised as ABT examination preparation.

- **Review the content outline in this manual.**
- **Determine your strengths and weaknesses from the outline.** This allows you to determine which areas you need to focus on the most.
- **Get advice from previous candidates.** Ask current Diplomates and former candidates how they prepared. What worked for them? What didn't?
- **Form a study group.** Many candidates form groups that meet weekly. This can be in person or virtually.
- **Allow time to prepare.** Many candidates begin preparing up to a year in advance.
- **Purchase the ABT Practice app.** The Board has released hundreds of previous exam questions in the form of a practice app available for Android and iOS devices. While the exam has been updated, the app still is a valuable resource in determining areas of strengths and weaknesses. The app is available on iTunes and Google Play.
- **Study List.** The Board has prepared a study list, below, of references that can be used to study for the examination. Please note that the references cited provide a general survey of the science of toxicology and its sub-disciplines. Utilization of these references should in no way be construed to guarantee that all topics contained in the examination are covered or that successful completion of the examination will result. Familiarity with the current literature in toxicology is recommended also. This list is to be used as a guideline only and does not mean that other texts or journals cannot be used.
Toxicology References

Core References

- ICH Guidelines - Safety (S) and Multidisciplinary 3 (M3). (http://www.ich.org/products/guidelines.html)

Supplemental References

- USFDA, USEPA (OPPTS), and OECD guidance and reference materials from their websites
EXAM SCHEDULING AND ADMINISTRATION

The ABT exam is held once per year at several locations. Beginning with the 2017 administration, the exam will 6 hours in length and consist of 200 questions delivered in two, 3-hour segments with an interim break. The exam will be scored as a single part. An applicant may take the exam in any of the three years of eligibility. In order to become certified, applicants must pass the entire exam in one of those years.

Exam Location and Date Notification
In July, eligible applicants will be notified via email of the exact time and locations of the examination to be held in October. Applicants will be assigned to a location based on proximity to their address. If an applicant wishes to take the exam at one of the other locations, they must inform the ABT office at the time they make the exam payment. It is the responsibility of the applicant to ensure that their email and mailing address remains current in the online system.

Exam Locations
Each year, the geographical exam locations will be posted on the ABT website by January 1.

The exam is currently administered in the following locations. Please note these are subject to change each year.

- Research Triangle Park, NC
- Santa Clara, California
- Edinburgh, Scotland
- Chennai, India
- Seoul, South Korea

Exam Fee and Payment Deadline
In order to take the examination in any year of eligibility, the candidate must submit a non-refundable two hundred seventy-five ($275) U.S. dollar Examination Fee by August 31st of that year. All fees and costs related to conversion of foreign currency to U.S. dollars are the responsibility of the applicant. If the applicant does not appear for the examination, this fee is forfeited and must be paid again to take the examination in subsequent years of eligibility. A link to pay the fee online will be made available in July of the examination year.

Test Day
Be at the assigned room 15 minutes before the actual starting time but do not enter until permitted by the proctors. If a candidate is late, they may be allowed to take the examination,
but will be required to finish at the scheduled time. Examinations will start and end promptly at the scheduled times.

The examination will be conducted under the supervision of the Board’s proctors. The proctors will be introduced at each session. Any question or problem should be directed to the proctors only. The proctors may not define technical terms or answer any inquiry about any question on the examination other than printing errors.

Bathroom visitation or any request to leave the room must be approved by the proctor. Generally, one candidate per escort (a proctor) is allowed.

Do not start work until the proctor has given instructions and permission. Time remaining will be announced at regular intervals. Work must end at the announced end of the session.

What to Bring to the Test

- Photo ID: Entrance to each session of the examination will require that the examinee present a government-issued photo ID. If you do not resemble the photograph you will not be admitted.
- Food/Beverages: In general, food is not allowed in the exam room. A power bar, small candies, gum, or cough drops are acceptable but must be placed on the table in front of the examinee prior to the start of the exam. Water will be provided in the examination room. A small juice bottle or energy drink is acceptable but must be placed on the table in front of the examinee prior to the start of the exam.
- A small number of tissues may be placed on the table in front of examinees
- Bring several #2 or HB pencils with an eraser and a pencil sharpener.

What NOT to Bring to the Test

- Electronic Devices: All electronic devices (e.g., cell phones, iPads, Blackberry, iPhone, etc.) must be turned OFF and placed in the front of the room in plain view with your other personal items. Electronic devices are not allowed in restrooms.
- Noise making devices, paging devices or alarm watches that will produce an audible signal will not be permitted.
- Paper or notepads: Candidates may write in the exam booklet if needed
- Calculators
- Bookbags or luggage. If brought, these will need to be put at the front of the room
AFTER THE EXAMINATION

Examination Scoring
The exam is scored by machine after all answer cards are received from all locations after the examination.

Notification of Exam Results
Examination results are typically available about six weeks after the testing date. This allows time for scoring, Board review of exam and setting of passing grade, and preparation of results letters. Letters will be sent via mail to the mailing address provided by the candidate in the online system. Results will also be available via the ABT website by logging into your account. Once results are released, those who passed will see themselves listed as "Diplomate" upon logging into the ABT site. Scores and results will not be released via email or telephone. Candidates are requested not to contact the ABT office to ask about when results will be released.

Verification of Exam Score Request
Unsuccessful candidates may ask for a committee of the Board of Directors to review their examination answers. There is no other appeal from the result of any such review.

DABT Recognition
A list of new Diplomates is published to the ABT website. The list may also be released to other professional organizations. Any request to have your name withheld from this list must be made in writing (email is acceptable) to the ABT office within 2 weeks of results being released to individuals. New Diplomates will also be listed in the searchable, online Diplomate directory. This Directory is accessible only by Diplomates.

Use of the DABT Designation
Those who have successfully passed the ABT examination are permitted to use the acronym "DABT" after their name as long as they continue to successfully recertify. If a Diplomate’s certification lapses, one is only allowed to use "DABT" if followed by the years they were certified, i.e., John Doe, DABT 2012-2017.

Retaking the Exam
If a candidate is unsuccessful, they are automatically eligible to take the exam if they have remaining years of eligibility. Candidates will be notified via email of the exam location in July of the following year, and given instructions. The $275 exam fee is due again by August 31 of any year that the exam is taken. If there are no years of Eligibility remaining, the candidate will need to reapply for eligibility.
Receipt of Certificate
New Diplomates will be sent a certificate acknowledging their accomplishment. Certificates are prepared by a professional calligrapher, and then signed by the Board Secretary and President. Due to the length of this process, certificates may not be received until the month of March following the examination. It is the responsibility of the candidate to ensure their mailing address is correct.

Length of Certification
Certification is good for five years. The first year the exam is passed does not count as one of the five years. For example, if a candidate passes the exam in 2017, their certification is good until December 31, 2022. In order to maintain certification, Diplomates must complete the recertification process every five years. Recertification begins in fourth year of the cycle. So, Diplomates passing the exam in 2017 would have to apply for recertification by March 31, 2021.

FREQUENTLY ASKED QUESTIONS REGARDING THE APPLICATION AND EXAM PROCESS

1. Where and when is the examination given?
   By January 1 each year, the geographical locations and date of the examination will be posted on the ABT website. The locations of the exam are subject to change each year. In 2016, it was given on the east and west coast of the US, Europe, and two locations in Asia.

2. Do you accept credit cards?
   We accept MasterCard, Visa, and American Express.

3. What is a "certified true copy" of a transcript?
   A certified true copy is a photocopy of your original document signed and certified to be the same as the original by someone authorized to do so. Notary publics are often authorized to do this. However, if a notary simply notarizes the candidate's attestation and signature that the copy is official, this is not a certified true copy.

4. Is a CV required? How do I submit it?
   Yes, a current CV is required. This can be uploaded under the current work history where it says "upload job description." If you are unable to locate this, an electronic copy can be emailed to the ABT office at info@abtox.org.
5. Should I send follow up materials via postal mail, such as journal articles and training certificates?
   No, this is not necessary or recommended. All applications are reviewed electronically, so no papers other than transcripts need to be sent to the ABT office. All publications and training details can be listed on your CV.

6. I need to make a change to my application, how do I do this?
   You can only make changes to your application before you hit the final "submit" button. Once the application is formally completed and submitted online, changes cannot be made. If you need something changed or added, please contact the ABT office at info@abtox.org for assistance.

7. Do you accept electronic transcripts?
   Many institutions now offer secure links to download transcripts online. These are official transcripts and are acceptable. Emailed photocopies, however, are not.

8. My supervisor sent the recommendation letter directly to me. Can I forward it to you?
   Unfortunately, no. All supervisor letters need to be sent to the ABT office directly from the supervisor. The supervisor can submit via email, and are strongly encouraged to use the available online form, available here.

9. The Committee said I am ineligible. How can I appeal?
   A petition for reconsideration may be submitted in writing by the date specified in the letter of ineligibility. The petition must be submitted in writing. The Board will make the final decision at their summer meeting. Please refer to the section in this manual.

10. I paid the exam fee, but I can’t sit the exam this year. Can I have a refund, or transfer the fee to next year’s exam?
    The exam fee is non-refundable and non-transferable to future years. By the time the fee is paid, we have already contracted for the exam site based on the number of expected applicants.

11. Can I have a refund?
    If a candidate requests withdrawal of their application in writing by June 1, a refund less a $25 administrative fee will be given. After that date, no refunds are given.
12. When will I be notified that I passed the examination?

Notifications are typically sent out before the end of November. Results will be posted on a candidate's online account, as well as sent out via postal mail. Results will not be released via email or telephone.

13. How do I find out my scores?

It is Board policy not to release scores under any circumstances.

14. What if I pass the first session of the exam, but not the second?

While there will be two sessions to the exam of 3 hours each, all questions will be graded as a whole, for one grade.

OVERVIEW OF ABT EXAMINATION CONTENT OUTLINE

<table>
<thead>
<tr>
<th>Domain/Sub-domain</th>
<th>% of Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Design, Execute, and Interpret Toxicology Studies</td>
<td>31</td>
</tr>
<tr>
<td>II. Descriptive Toxicology: Environmental, Clinical, Non-clinical, and Forensic Investigations</td>
<td>13</td>
</tr>
<tr>
<td>III. Mechanistic Toxicology</td>
<td>9</td>
</tr>
<tr>
<td>IV. Risk Assessment (Total, A through D)</td>
<td>38</td>
</tr>
<tr>
<td>A. Hazard Identification</td>
<td>13</td>
</tr>
<tr>
<td>B. Exposure Assessment</td>
<td>8</td>
</tr>
<tr>
<td>C. Dose Response Assessment</td>
<td>9</td>
</tr>
<tr>
<td>D. Risk Characterization and Management</td>
<td>8</td>
</tr>
<tr>
<td>V. Applied Toxicology: Public, Environmental, and Occupational Health</td>
<td>9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
</tr>
</tbody>
</table>
Domain I. Design, Execute, and Interpret Toxicology Studies

1. Design scientifically valid studies to answer questions or address defined hypotheses.
2. Comply with applicable regulations and guidelines specific to the agent under study.
3. Select and characterize the chemical and physical identity of the test agent.
7. Characterize toxicological effects in a field or clinical setting.
8. Develop, qualify, and validate new testing methods and techniques.
9. Analyze test results and integrate existing data using informatics, statistics, and modeling.
10. Interpret and integrate study results into a scientifically cogent narrative to develop conclusions and/or inform next steps.
11. Prepare research report or summary that is fit for purpose.

Domain II. Descriptive Toxicology: Environmental, Clinical, Non-clinical, and Forensic Investigations

1. Analyze and integrate toxicology data obtained from diverse sources to identify toxicological patterns of concern (molecules, cells, tissues, target organs, individuals, populations, communities, ecosystems).
2. Identify hazards, risks, and putative mechanisms.
3. Develop strategies to test hypotheses.
4. Perform weight of evidence analyses.
5. Develop strategies to mitigate toxicity.
6. Translate results of descriptive toxicological investigations between species.
Domain III. Mechanistic Toxicology

1. Develop mechanistic hypotheses.
2. Assess role of toxicokinetics in mechanism of toxicity.
3. Assess role of toxicodynamics in mechanism of toxicity.
4. Identify susceptibility factors.
5. Distinguish direct and indirect action.
6. Use differential mechanistic information to develop products.
7. Translate results between mechanistic studies and toxicological outcomes, prevention, and clarification of risk (human, environmental, animal).
8. Develop and apply mechanistic information to disease models.
9. Apply principles of systems toxicology.

Domain IV. Risk Assessment

A. Hazard Identification

1. Characterize, describe and interpret effects and test system endpoints of toxicological concern - including but not limited to acute and repeat dose toxicity, reproductive effects, genotoxicity, carcinogenicity, local effects/tolerance, and ecotoxicology.
2. Apply appropriate test systems and study types for safety evaluation.
3. Identify systemic effects and/or target organs, dose response, and thresholds of effect.
4. Assess mechanisms of action and relevance to humans or other target species, including sensitive sub-populations and individuals.
5. Identify toxicological endpoints using the actual route, or appropriate surrogate of primary exposure.
B. Exposure Assessment

6. Select appropriate endpoints with which to document exposure to toxicants in test systems and populations.

7. Assess toxicant exposure in the general public, occupationally exposed individuals, populations, and the environment using appropriate technologies (including but not limited to analytical, bioassay, biomonitoring).

8. Assess relevance of biomarkers of exposure in individuals, populations and the environment.

9. Characterize absorption (A), disposition (D), metabolism (M), excretion (E), and kinetics (PK or TK) of toxicants."

10. Assess and document behavior, fate, and transport of chemicals entering the environment (for example, biotransformation, bioavailability, bioaccumulation, biomagnification).

11. Consider issues of disproportional, unique, and reactive metabolites arising in specific species.

12. Identify primary and secondary interactions between agents and biological systems.

13. Assess impact of target and off-target interactions on cellular, tissue, organ, organism, population, and environmental functions.

C. Dose Response Assessment

14. Quantitatively and/or qualitatively characterize relationships between dose (or concentration) and incidence and severity of health effects or toxicological endpoint.

15. Analyze toxicity data to determine a safe dose (or concentration) or protective threshold (for example, benchmark dose).

16. Analyze toxicity data to determine an effective or toxic dose (or concentration).

D. Risk Characterization and Management

17. Integrate toxicity and exposure information to characterize potential health risks and margins of safety.

18. Assess health risks and management options to protect environmental or public health (including but not limited to cleanup goals, emission limits, safe concentrations, efficacious concentrations).
a. Evaluate and implement alternatives to reduce risks.

b. Derive safety limits that are protective of environmental or public health.

c. Identify and implement emergency risk management options to reduce chemical exposures or risks.

Domain V. Applied Toxicology: Public, Environmental, and Occupational Health

1. Characterize, describe and interpret effects of toxicological and ecotoxicological concern – in individuals, populations, communities, and ecosystems.

2. Identify critical effects and thresholds from dose-response assessment.

3. Respond to public health issues, including new or emerging public health concerns.

4. Assess public health impacts from ecosystem effects of environmental toxicants.

5. Investigate health outcomes in specific groups with respect to measured or modeled chemical exposures.

6. Use population-based biomonitoring studies to ascertain temporal trends in chemical exposures.

7. Identify sensitive or susceptible subpopulations.

8. Design or implement programs to reduce the exposure to hazardous substances.

9. Evaluate products and communicate potential environmental, health, or safety issues (including product stewardship).

10. Evaluate the safety or risk of toxic agents for the treatment of diseases (including but not limited to drug development).

11. Evaluate the signs and symptoms of toxicity.

12. Develop or provide treatment recommendations for poisoning incidents (including antidotes).

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