

DCDC Data Center Design Consultant

Exam Application and Information Handbook



*advancing the information and
communications technology community*

Become a BICSI DCDC

Congratulations on your decision to apply to become a BICSI Data Center Design Consultant (DCDC). In this booklet you will find exam information including requirements and fees and an exam application. As part of the handbook, we've also included the BICSI Code of Ethics, the Standards of Conduct and the BICSI Antitrust Statement.



Prerequisite Requirements

To be eligible to take the DCDC exam, you must first have:

A minimum of two years of approved and verifiable experience in the field of data center design and/or construction. Experience must be within the last six years.

Application Process

The following items must be completed and submitted to BICSI World Headquarters:

- A fully completed and descriptive DCDC Exam Application (see pages 6–8).
- Three letters of reference. Letters should be on company letterhead, dated, including a contact name, telephone number and email address. The letters should be from the following:
 - One personal reference. (Letterhead not required.)
 - One from your current employer stating your level of participation in data center design or construction projects you are working on and the length of time that you have been actively employed to work on data center projects.
 - One from a client or customer for whom you have recently completed data center design or construction work. The letter should be referencing your work within a data center project. The letters MUST include the following information:
 - Explanation of your data center design or construction qualifications by providing specific details of the work performed.
 - A summary of the scope of the project, the project's location and how you were involved in the project.
 - Date of the job from beginning to end and the level of the client's satisfaction. Generic details such as, "he did good work for us" or "he helped us with the design" will NOT be accepted by BICSI.

NOTE: If you are self-employed or a principal of your company, you must provide an additional letter from a client for whom you have performed data center design or construction.

Design includes development of design plans for data center systems and integration. This includes site surveys, user needs analysis, work print creation, project specifications, RFP creation and pre-project coordination with PEs, architects, AHJs, etc.

Construction includes installation, testing, project/site supervision, project QA, data center facilities management and operational support, etc.

All references will be verified. Letters that are not specific or cannot be verified as stated will result in rejection of the application. Based on the verification process of your data center design or construction experience, BICSI reserves the right to require additional submittals as proof of experience. Failure to provide these additional references will result in rejection of the application.

Application Processing

BICSI processes applications in the order they were received. Please be sure that all of your references have a phone number and email address.

Please allow up to 30 days for approval. Please do not send in partial applications.

Application Validity Period

Your application is valid for one year from the date it was approved. This is referred to as your eligibility dates in your Exam Authorization Letter.

Fees			
Exam Application Fee* \$495 Member	\$725 Nonmember	Recertification Fee (online)	\$195 Member \$325 Nonmember
(Paid to BICSI; non-refundable)		Recertification Fee (paper).....	\$225 Member \$325 Nonmember
Exam Retake Fee.....\$225 Member	\$340 Nonmember	Recertification Late Fee (91-120 days)	\$175
(Paid to Pearson VUE)		Recertification Late Fee (121-364 days)	\$300
		Duplicate Certificate.....	\$25 Member \$35 Nonmember

Exam application fee must accompany application. Application prices are listed in U.S. dollars.

*Includes first attempt exam fee.

Exam Registration

The exam is administered in a computer-based testing (CBT) format at Pearson VUE Authorized Testing Centers worldwide. You will receive a BICSI Exam Authorization Letter by email confirming your approval. The authorization letter includes your required Candidate ID number and scheduling information. Your testing date, time and location will be paid for and scheduled by you through Pearson VUE at pearsonvue.com/BICSI.

You are required to bring two forms of identification to the testing center, one of which must be a government-issued photo ID with your signature (e.g., driver's license, government ID or passport).

Note: The name on the photo ID must match exactly as the name submitted in your application and eligibility letter. You will not be accepted into the exam center if the names do not appear exactly the same. Contact BICSI to update your name or contact information. Pearson VUE cannot accept any changes to your records.

Exam Retake Policy

During any exam eligibility period (one year from the date of application approval), there is a 30-day waiting period between each unsuccessful exam attempt. After a third unsuccessful attempt, a 90-day waiting period will begin. You may be allotted additional attempts after the 90-day waiting period if your exam eligibility period is still valid.

Each exam retest requires the appropriate exam retest fee. If you do not pass the exam within your exam eligibility period, you can reapply for the exam by submitting a new application.

Reschedule/Cancellation Policy

You must contact Pearson VUE at least one business day prior to your scheduled appointment. Rescheduling or cancelling less than one full business day prior to your appointment may result in forfeiting your exam fees.

About the Exam

The DCDC examination is comprised of 100 multiple-choice questions. You are allotted 2 hours to complete the exam.

Pass/fail results will be provided at the testing center after completing the exam. A score report is also provided to all unsuccessful candidates. The score report will reflect a percentage of correct answers in each section of the exam, not an actual score.

Candidates must be able to use a computer and mouse. Special needs may be requested on page 9 of the application.

Candidates are not allowed to bring anything (phones, watches, hats, etc.) into the testing room. All necessary items will be available during the exam, including calculators and a whiteboard for scratch paper.

There are no scheduled breaks during the CBT exam. If a break is needed, the break will count towards the 120 minutes you have to complete the exam.

The exam is structured to allow you to challenge a question that you think may be unclear, confusing or incomplete. You may also flag a question and return to it at the end of the exam. Challenged questions that are meaningful and relevant to the exam question will be reviewed by the Registrations and Credentials Supervision (RCS) Committee. If you answer the question incorrectly and the committee determines a rescore changing your final score from fail to pass, the credentialing department will notify you by email within 30-days of the exam. The time spent on challenging questions is allotted in the 120 exam time total.

Exam Preparation

The content areas can be found in the following reference materials:

- ANSI/BICSI 002-2014, Data Center Design and Implementation Best Practices

Suggested DCDC Exam Preparation

- 125+ hours of study from the above reference materials
- DC101: Introduction to Data Center Design—(online)
- DC102: Applied Data Center Design and Best Practices—BICSI Instructor-Led Training (ILT)
- DCDC Online Test Preparation Course

The exam is designed to test your knowledge and your ability to solve problems in situations by applying the acquired knowledge (knowledge- and application-based questions) in the Duty/Task Statement areas of the BICSI DCDC Exam Content Outline.

DCDC Exam Content Outline

Area of Expertise		% of Exam
A	ARCHITECTURAL AND SPACE PLANNING	10%
	Identify space planning constraints	
	Apply availability requirements	
	Apply IT equipment capacity requirements	
	Apply IT equipment space requirements	
	Determine people requirements	
	Determine infrastructure requirements	
	Determine support requirements	
	Estimate growth rate	
	Develop space adjacencies recommendations	
	Provide functional space requirements	
	Compile and interpret external requirements	

DCDC Exam Content Outline

Area of Expertise		% of Exam
B	SITE SELECTION	3%
	Develop criteria for natural environment	
	Develop criteria for utility environment	
	Evaluate regulation requirements	
	Develop criteria for location environment	
	Develop financial criteria	
	Evaluate criteria for site selection	
	Compile and interpret external requirements	
C	ELECTRICAL SYSTEMS	16%
	Develop site utility requirements	
	Develop criteria for utility environment	
	Know main components of electrical system	
	Differentiate among availability levels	
	Differentiate among power distribution systems	
	Compile and validate user requirements	
	Understand advantages/disadvantages among various solutions	
	Compile and interpret external requirements	
D	MECHANICAL SYSTEMS	16%
	Develop site utility requirements	
	Apply mechanical systems criteria	
	Know main components of mechanical system	
	Differentiate among availability levels	
	Differentiate among mechanical systems	
	Compile and validate user requirements	
	Understand advantages/disadvantages among various solutions	
	Compile and interpret external requirements	
E	ANCILLARY SYSTEMS (FIRE PROTECION, SECURITY, BUILDING AUTOMATION SYSTEMS [BAS])	
	Develop site requirements for each ancillary system	
	Apply ancillary systems criteria	
	Know main components of each ancillary system	
	Differentiate among security systems	
	Differentiate among BAS systems	
	Differentiate among fire protection systems	
	Compile and validate user requirements	
	Understand advantages/disadvantages among various solutions	
	Interpret facility and data driven security plans	
	Differentiate among availability of BAS	
	Compile and interpret external requirements	

DCDC Exam Content Outline

Area of Expertise		% of Exam
F	INFORMATION TECHNOLOGY	16%
	Apply IT systems criteria	
	Describe networking fundamentals	
	Compile and interpret network connectivity media requirements	
	Describe fundamental network components	
	Describe basic data center network communications	
	Compile and interpret external requirements	
	Compile and interpret user requirements	
	Recognize contemporary and emerging technologies and how they relate to design of a data center	
	Develop site utility requirements	
	Apply telecommunications systems criteria	
	Differentiate among high availability solutions	
	Understand advantages/disadvantages among various solutions	
G	COMMISSIONING	10%
	Describe phases of commissioning process	
	Describe types of commissioning	
	Describe testing as a component of commissioning	
	Describe commissioning documents	
H	DATA CENTER OPERATIONS AND MAINTENANCE	3%
	Describe Owner's operation and maintenance processes' impact on design	
	Describe Owner's monitoring and control processes' impact on design	
	Describe operations and maintenance best practices	
I	SUSTAINABLE DATA CENTER	3%
	Translate sustainability requirements into the design recommendations	
	Describe 3rd party sustainability certification levels	
	Describe thermal management methodologies	
	Describe power consumption best practices	
J	DESIGN PROCESS	6%
	Describe project delivery methods	
	Describe facility design phases	
	Describe technology design phases	
	Describe data center documentation	
	Recognize 3rd party certification organizations	
K	RISK ANALYSIS	10%
	Identify assets	
	Manage threat assessment	
	Coordinate security audit	
	Verify against objectives	
	Identify countermeasures	
	Coordinate cost benefit/feasibility/present value studies	
	Translate client's business continuity plan (BCP) requirements into availability design recommendations	
	Translate client's disaster recovery plan (DRP) requirements into recovery design recommendations	

After Passing the DCDC Examination:

Upon successful completion of the exam, you will receive a certificate and lapel pin via U.S. mail.

Length of Validation for your DCDC Credential

Your DCDC credential is valid for three complete calendar years, with an expiration date of December 31. Your credential will be valid for the remainder of that calendar year in which you first passed the examination plus an additional three years, regardless of the month in which you passed the exam. For example, if you passed the exam in February 2016, your designation would expire on December 31, 2019.

Continuing Education Requirements

BICSI views learning as a life-long endeavor and places an emphasis upon continuing education as part of maintaining your DCDC status. Within each three-year registration period (after the exam is passed), all DCDCs must obtain a minimum of 24 BICSI-offered or -approved continuing education credits (CECs). These CECs must be directly related to the ICT industry. DCDCs must complete this requirement in order to renew their credential. Applicants who attend an exam review course within seven days prior to passing the exam will receive CECs toward their first CEC renewal requirements.

Visit www.bicsi.org for the full CEC policy.

Responsibility for Renewal

It is the DCDC's professional responsibility to ensure that all requirements and conditions for renewal are satisfied and submitted to BICSI prior to designation expiration. BICSI issues renewal reminders as a courtesy, but it is the credential holder who is ultimately responsible for keeping track of dates, CECs and any other requirements of the renewal process.

BICSI Antitrust Statement

BICSI believes strongly in competition. U.S. antitrust laws are the rules under which our competitive system operates. It is BICSI's policy to comply in all respects with the antitrust laws.

Association meetings or workshops by their very nature bring competitors together. Accordingly, it is necessary to avoid discussions of sensitive topics. Agreements to fix prices, allocate markets, engage in product boycotts and to refuse to deal with third parties are automatically illegal under the antitrust laws. It does not matter what the reason for the agreement might be.

Accordingly, at any association meeting discussions of prices (including elements of prices such as allowances and credit terms), quality ratings of suppliers, and discussions that may cause a competitor to cease purchasing from a particular supplier, or selling to a particular customer, should be avoided. Also, there should be no discussion that might be interpreted as a dividing up of territories.

An antitrust violation does not require proof of a formal agreement. A discussion of a sensitive topic, such as price, followed by action by those involved or present at the discussion is enough to show a price-fixing conspiracy. As a result, those attending an association-sponsored meeting should remember the importance of avoiding not only unlawful activities, but even the appearance of unlawful activity.

Exam Copyright

All exam questions are the copyrighted property of BICSI. Any attempt to reproduce all or part of an exam is strictly prohibited by law. Such attempts include, but are not limited to, removing materials from the exam room, aiding others in reconstructing any portion of an exam by any means, or selling, distributing, receiving, or having unauthorized possession of any portion of an exam. Alleged copyright violations will be investigated and, if warranted, prosecuted to the fullest extent of the law. It should also be noted that exam scores might be invalidated in the event of this type of suspected breach.

BICSI CODE OF ETHICS

BICSI's Code of Ethics is based on the principles which assume that societies are governed by a profound respect for human rights and the rule of law. In addition, these principles support the thought that ethics, the criteria for determining what is right and wrong, can be agreed upon by members of an organization and that understanding matters of taste requires sensitivity to cultural norms.

An ethics complaint may be filed when there is a concern of a violation of the BICSI Standards of Conduct. Information regarding the process for filing an ethics complaint is in the Procedures and Policies document, which can be found on BICSI's website at bicsi.org.

BICSI CREDENTIAL HOLDERS - STANDARDS OF CONDUCT

BICSI has established the Ethics Committee, the Standard of Conduct and the Code of Ethics to reinforce the following position: **It is important that the BICSI members and/or its credential holders exhibit the highest principles of ethical and professional behavior in the provision of their products and services associated with the information and communications technology (ICT) industry.** These codes and standards serve to enhance public confidence in the integrity and service of BICSI members and/or credential holders.

Adherence to the **14 Standards of Conduct** is mandatory.

As a BICSI member and/or BICSI credential holder, I have an ethical and professional obligation to the association, ICT industry and its consumers. I therefore pledge to:

1. Maintain a high standard of professional conduct.
2. Protect and enhance the reputation of the BICSI organization, the credentialing program and my credential through my actions.
3. Maintain the confidentiality of privileged information entrusted or known to me by virtue of my profession or position, unless disclosure is required by law or agreement.
4. Be accurate and truthful in my dealings with clients and be careful not to misrepresent the quality, availability or ability of the services I provide.
5. Never, under any circumstances, make a recommendation misrepresenting or misstating any other individual's qualifications, abilities or accomplishments.
6. Provide unbiased, accurate and objective assessments for all safety and operational deficiencies that may be discovered during the performance of my services.
7. Refrain from representing competitors to clients, or the public, by the use of false and misleading statements or malicious actions, but rather work and compete with them in a reasonable and professional manner for the benefit and advancement of our profession.
8. Refrain from using false and misleading statements or malicious actions that might injure another person's reputation or bring harm to their person or property.
9. Respect a client's decision in the selection of competitive services, and continue to offer and provide that client with quality services for as long as is necessary or requested.
10. Serve all members of the public impartially, providing no substandard service based on that individual's age, race, national origin, color, sex, sexual orientation, disability or religious belief.
11. Adhere to all relevant codes, laws, ICT industry standards and BICSI methodologies, where appropriate.
12. Take personal responsibility to ensure that all requirements necessary for the renewal of any BICSI credential that I hold is met on, or before, the expiration date.
13. Be accurate, honest and truthful in the presentation of all educational material or in the preparation of material orders and product availability.
14. I will not misrepresent my BICSI credential nor willingly allow others to do so.

By signing, I am confirming that I have read the BICSI Code of Ethics and the BICSI Standards of Conduct and agree to adhere to them.

Print name

Signature

Date signed

BICSI Data Center Design Consultant (DCDC) Examination Application

Personal Data

Name _____ BICSI member number (if applicable) _____

Home address (required) _____

City _____ State/Province _____ Zip/Postal code _____ Country _____

Company name _____ Job title _____ Email _____

Company address _____

City _____ State/Province _____ Zip/Postal code _____ Country _____

Phone (Business) _____ (Home) _____ (Mobile) _____

Design or Construction Work Experience

Begin with current position. Last six years only.

Dates Employed	Position/Title	Company Name	Phone	Name/Title of Supervisor
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From: _____ To: _____

Description of data center design or construction duties (be specific):

Description of data center design or construction projects (include client contact person and telephone number):

Dates Employed	Position/Title	Company Name	Phone	Name/Title of Supervisor
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2. From: To:

Description of data center design or construction duties (be specific):

Description of data center design or construction projects (include client contact person and telephone number):

3. From: To:

Description of data center design or construction duties (be specific):

Description of data center design or construction projects (include client contact person and telephone number):

Other Qualifications

List professional designations (i.e., licenses, certifications, etc.), awards, honors, membership in honorary societies, publications, consulting work in a professional field, etc. Use additional sheet if necessary.

I hereby attest that the information provided is a true and accurate statement of my qualifications and experience, and I authorize appropriate officials to seek further verification of my credentials, except as qualified here:

The undersigned applicant hereby agrees to be bound by the following terms and conditions as they pertain to the BICSI DCDC examination:

1. No reevaluation of the examination of the undersigned applicant shall be undertaken by BICSI, its agents or employees unless a written request for reevaluation is received by BICSI at 8610 Hidden River Parkway, Tampa, Florida 33637-1000, before the expiration of 180 days from the date of the examination in question.
2. If disputes concerning any aspect of the DCDC program arise between the applicant and BICSI, they shall be adjudicated in Hillsborough County, Florida.
3. If the applicant does not adhere to BICSI exam guidelines, BICSI has the right to negate the exam and prohibit the applicant from taking subsequent exams.
4. The information on this application is accurate in its description.
5. Agree to have read and abide by the BICSI Code of Ethics and Standards of Conduct.

Signature (Application will NOT be processed without signature.) Date

Please indicate any special needs.

Special needs may require additional documentation and additional time for processing. If a retest is necessary, you must contact credentialing for any special needs before scheduling with Pearson VUE.

Application Checklist

- Completed DCDC Examination Application
- Three letters of reference. (Note: Reference letters are not required when reapplying within 2 years of original application.)
- BICSI Code of Ethics and Standard of Conduct, page 8
- DCDC exam application fee

Submit your completed exam application and payment to:

BICSI, Attn: Credentialing, 8610 Hidden River Parkway, Tampa, FL 33637-1000; Fax: +1 813.971.4311; Email: Credentialing@bicsi.org

Payment Section

Please make all checks payable to BICSI in U.S. dollars, drawn from a U.S. bank. (Call BICSI's Accounting Dept. for instructions on wiring funds.)
For your protection, BICSI does not accept emailed credit card numbers. If paying by credit card, please mail or fax your payment information instead.

Total to be paid | Check or Money Order Enclosed
\$ _____ | Visa MasterCard American Express Diner's Club Discover

Internal Use Only

Cardholder name (as the name appears on the credit card) Cardholder signature

Credit card number CVV Expiration date Card billing zip code (required)