

Section VII. Technical Specifications

Notes for Preparing the Technical Specifications

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying their Bids. In the context of Competitive Bidding, the specifications (*e.g.* production/delivery schedule, manpower requirements, and after-sales service/parts, descriptions of the lots or items) must be prepared to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of transparency, equity, efficiency, fairness, and economy in procurement be realized, responsiveness of bids be ensured, and the subsequent task of bid evaluation and post-qualification facilitated. The specifications should require that all items, materials and accessories to be included or incorporated in the goods be new, unused, and of the most recent or current models, and that they include or incorporate all recent improvements in design and materials unless otherwise provided in the Contract.

Samples of specifications from previous similar procurements are useful in this respect. The use of metric units is encouraged. Depending on the complexity of the goods and the repetitiveness of the type of procurement, it may be advantageous to standardize the General Technical Specifications and incorporate them in a separate subsection. The General Technical Specifications should cover all classes of workmanship, materials, and equipment commonly involved in manufacturing similar goods. Deletions or addenda should then adapt the General Technical Specifications to the particular procurement.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for equipment, materials, and workmanship, recognized Philippine and international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that equipment, materials, and workmanship that meet other authoritative standards, and which ensure at least a substantially equal quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the Special Conditions of Contract or the Technical Specifications.

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested, the provisions of the latest edition or revision of the relevant standards and codes shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.

Reference to brand name and catalogue number should be avoided as far as possible; where unavoidable they should always be followed by the words “*or at least equivalent.*” References to brand names cannot be used when the funding source is the GOP.

Where appropriate, drawings, including site plans as required, may be furnished by the Procuring Entity with the Bidding Documents. Similarly, the Supplier may be requested to provide drawings or samples either with its Bid or for prior review by the Procuring Entity during contract execution.

Bidders are also required, as part of the technical specifications, to complete their statement of compliance demonstrating how the items comply with the specification.

Technical Specifications

Item No.	Specification	Statement of Compliance
		<i>[Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.]</i>
1	50 Strategies for Integrating AI into the Classroom, Donnie Piercey, 2024, ISBN: 9798765947111	
2	AI for Educators: Learning Strategies, Teacher Efficiencies, and a Vision for an Artificial Intelligence Future, Matt Miller, 2023, ISBN: 9781956306484	
3	AI in the Classroom: Strategies and Activities to Enrich Student Learning, Nancye Blair Black, 2023, ISBN: 9798888370124	
4	An Introduction to Cyber Analysis and Targeting, Jerry M, Couretas, Springer International Publishing, 2022, ISBN: 9783030885595	
5	Becoming a Social Justice Educator: A Guide With Practice, Zachary Scott Robbins/Dominique Smith/Sarah Ortega, 2024, ISBN: 9781071921265	
6	Bringing Heart and Mind into Storytime: Using Books and Activities to Teach Empathy, Tenacity, Kindness,	

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	and Other Big Ideas, Heather McNeil, 2022, ISBN: 9781440877186	
7	Build Reading Fluency: Practice and Performance with Reader's Theater and More, 2nd ed, Timothy Rasinski/Chase Young, 2024, ISBN: 9798765903223	
8	Coding Basics: Algorithms & Sequencing, Teddy Borth, ABDO Publishing: Cody Koala, 2022, ISBN: 9781098240547	
9	Coding Basics: Debugging & Problem Solving, Teddy Borth, ABDO Publishing: Cody Koala, 2022, ISBN: 9781098240554	
10	Coding Basics: Functions & Variables, Teddy Borth, ABDO Publishing: Cody Koala, 2022, ISBN: 9781098240561	
11	Coding Basics: If This / Then That, Teddy Borth, ABDO Publishing: Cody Koala, 2022, ISBN: 9781098240578	
12	Coding Basics: Loops & Sorting, Teddy Borth, ABDO Publishing: Cody Koala, 2022, ISBN: 9781098240585	
13	Comparative Research on Diversity in Virtual Learning: Eastern vs, Western Perspectives, Zuheir Khlaif/Mageswaran Sanmugam/Jamil Itmazi, 2023, ISBN: 9781668435977	
14	Corwin Literacy: Answers to Your Biggest Questions About Creating a Dynamic Classroom - Five to Thrive, Serena Pariser, 2023, ISBN: 9781071880692	
15	Digital Literacy Made Simple: Strategies for Building Skills Across the Curriculum, Jenna Kammer/Lauren Hays, 2023, ISBN: 9798888370100	
16	Digital Literacy: Skills and Strategies, Salem Press Editors, Salem Press, 2022, ISBN: 9781637003930	
17	Exploring Social Emotional Learning in Diverse Academic Settings, Regina Rahimi/Delores Liston, 2023, ISBN: 9781668472286	
18	Flip Your Classroom: Reach Every Student in Every Class Every Day, Revised edition, Jonathan Bergmann/Aaron Sams, 2023, ISBN: 9781564849885	
19	From Telenovelas to Netflix: Transnational, Transverse Television in Latin America, Palgrave Macmillan, 2021, ISBN: 9783030774707	
20	Frontiers of Science: Biological Sciences, Revised ed, Kyle Kirkland, Infobase: Facts on File, 2020, ISBN: 9781438195919	
21	Fundamentals of Mechanics of Robotic Manipulation, 2nd ed, Marco Ceccarelli, Springer International Publishing, 2022, ISBN: 9783030908485	

22	Grading for Equity: What It Is, Why It Matters, and How It Can Transform Schools and Classrooms, 2nd ed, Joe Feldman, 2024, ISBN: 9781071876572	
23	Hack Learning Series: Even More Hacking Engagement: 50 New Ways to Make Learning Fun for All Students, James Alan Sturtevant, 2023, ISBN: 9781956512342	
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28	Investigating Body Systems: The Nervous System, Natalie Hyde, Crabtree Publishing: Crabtree Forest, 2023, ISBN: 9781039807013	
29	Investigating Body Systems: The Respiratory System, Natalie Hyde, Crabtree Publishing: Crabtree Forest, 2023, ISBN: 9781039807020	
30	Look into the Human Body: Circulatory System, Tracy Vonder Brink, Crabtree Publishing: Crabtree Crown, 2023, ISBN: 9781039801974	
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35	Look into the Human Body: Skeletal System, Tracy Vonder Brink, Crabtree Publishing: Crabtree Crown, 2023, ISBN: 9781039801998,	
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37	Physical Science: Changes in Matter, Christina Earley, Crabtree Publishing: Stingray, 2022, ISBN: 9781638973782,	

38	Physical Science: Electric Circuits, Christina Earley, Crabtree Publishing: Stingray, 2022, ISBN: 9781638973775	
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43	Principles of Science: Botany, The Editors of Salem Press, Salem Press, 2020, ISBN: 9781642653922	
44	Principles of Science: Computer-aided Design, The Editors of Salem Press, Salem Press, 2022, ISBN: 9781637000984	
45	Principles of Science: Microbiology, The Editors of Salem Press, Salem Press, 2022, ISBN: 9781637000960	
46	Programming 101: Learn to Code with the Processing Language Using a Visual Approach, 2nd ed., Jeanine Meyer, Springer: Apress, 2022, ISBN: 9781484281949	
47	Python Challenges: 100 Proven Programming Tasks Designed to Prepare You for Anything, Michael Inden, Springer: Apress, 2022, ISBN: 9781484273982	
48	Recent Advances in Internet of Things and Machine Learning: Real-World Applications, Valentina E, Balas/Vijender Kumar Solanki/Raghvendra Kumar, Springer International Publishing, 2022, ISBN: 9783030901196	
49	Science Encyclopedia: Encyclopedia of Computer Science and Technology, 4th ed., Harry Henderson, Infobase: Facts on File, 2021, ISBN: 9781438198828,	
50	Shifting to Digital: A Guide to Engaging, Teaching, and Assessing Remote Learners, James A, Bellanca/Gwendolyn Battle Lavert/Kate Bellanca, 2022, ISBN: 9781952812224	
51	STEAM Lab: Astronomy Lab, Elsie Olson, ABDO Publishing: Checkerboard Library, 2024	
52	STEAM Lab: Biology Lab, Elsie Olson, ABDO Publishing: Checkerboard Library, 2024, ISBN: 9781098278052	

53	STEAM Lab: Engineering Lab, Elsie Olson, ABDO Publishing: Checkerboard Library, 2024, ISBN: 9781098278069	
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56	Teacher Leaders, Classroom Champions: How to Influence, Support, and Renew School Communities, Jeanetta Jones Miller, 2023, ISBN: 9781954631908	
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61	The Definitive Guide to Instructional Coaching: Seven Factors for Success, Jim Knight, 2022, ISBN: 9781416630678	
62	The Human Body, How It Works: Cells, Tissues, and Skin, 3rd ed., Donna Bozzone/Douglas B, Light, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937165	
63	The Human Body, How It Works: Human Development, 3rd ed., Ted Zerucha, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937172	
64	The Human Body, How It Works: The Circulatory System, 3rd ed., Donna Bozzone/Susan Whittemore, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937189	
65	The Human Body, How It Works: The Immune System, 3rd ed., Donna Bozzone/Gregory J, Stewart, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937219	
66	The Human Body, How It Works: The Reproductive System, 3rd ed., Randolph W, Krohmer, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937233	

67	The Human Body, How It Works: The Respiratory System, 3rd ed., Donna Bozzone/Susan Whittemore, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937240	
68	The Human Body, How It Works: The Senses, 3rd ed., Andrew Bellemer/Douglas B, Light, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937257	
69	The Human Body, How It Works: The Skeletal and Muscular Systems, 3rd ed., Diana Gitig/Gregory J, Stewart, Infobase: Chelsea House Publishers, 2021, ISBN: 9781646937264	
70	Understanding the Role of Artificial Intelligence and Its Future Social Impact, Salim Sheikh, IGI Global: Engineering Science Reference, 2021, ISBN: 9781799846086	
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