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This study guide corresponds to “Sintering of powder materials” course of the Master degree program at Novosibirsk State Technical University 22.04.01 – Materials Science and Technology. The guide consists of six parts and contains a brief overview of historical aspects of sintering, powder fabrication and characterization methods, powder shaping and compaction processes, and the basics of solid state and liquid phase sintering. The guide also contains a description of advanced sintering methods and sintering processes found in additive manufacturing. Classical and novel materials obtainable by sintering are described. Current trends in the development of sintering science are discussed. Each part of the guide is followed by control questions. Problems with solutions are offered to help the student solve problems encountered in real research and industrial sintering practice. Problems for self-study are also provided, many of which were designed by the author based on her own research experience. Topics for self-study are provided and can be used for students’ presentations at seminars.

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