# Autodesk Maya 2012:
# A Comprehensive Guide


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# CADCIM Technologies

## Autodesk Maya 2012: A Comprehensive Guide
## Sham Tickoo

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## DEDICATION

*To teachers, who make it possible to disseminate knowledge*
*to enlighten the young and curious minds*
*of our future generations*

*To students, who are dedicated to learning new technologies*
*and making the world a better place to live in*

## THANKS

*To the faculty and students of the MET department of*
*Purdue University Calumet for their cooperation*

*To employees of CADCIM Technologies for their valuable help*

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***Computer Programming**: C++, VB.NET, Oracle, AJAX, and Java*

***Animation and Styling**: Autodesk 3ds Max, Autodesk 3ds Max Design, Autodesk Maya, and Autodesk Alias Design*

***Architecture, Civil, and GIS**: Autodesk Revit Architecture, AutoCAD Civil 3D, Autodesk Revit Structure, and Autodesk Map 3D*

*For more information, please visit the following link:*

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**Note**

The free teaching and learning resources, mentioned in the cover page of this textbook, are available only for those who buy the textbook from our website **www.cadcim.com** or the university/college bookstores. We need proof of purchase when you request the technical support from us.

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# Preface

## Autodesk Maya 2012

Welcome to the world of Autodesk Maya 2012. Autodesk Maya 2012 is a powerful, integrated 3D modeling, animation, visual effects, and rendering software developed by Autodesk Inc. This integrated node based 3D software finds its application in developing films, games, and design projects. A wide range of 3D visual effects, computer graphics, and character animation tools make it an ideal platform for 3D artists. The intuitive user interface and workflow tools of Maya 2012 have made the job of design visualization specialists a lot easier.

**Autodesk Maya 2012: A Comprehensive Guide** textbook covers all features of Autodesk Maya 2012 in a simple, lucid, and comprehensive manner. It aims at harnessing the power of Autodesk Maya 2012 for 3D artists and designers. This textbook will help you transform your imagination into reality with ease. Also, it will unleash your creativity, thus helping you create realistic 3D models, animation, and visual effects. It caters to the needs of both the novice and advanced users of Maya 2012 and is ideally suited for learning at your convenience and at your pace.

The salient features of this textbook are as follows:

- **Tutorial Approach**
  The author has adopted the tutorial point-of-view and the learn-by-doing theme throughout the textbook. This approach will guide the users through the process of creating the models, adding textures, and animating them in the tutorials.

- **Real-World Models as Projects**
  The author has used about 25 real-world modeling and animation projects as tutorials in this textbook. This will enable the readers to relate the tutorials to the real-world models in the animation and visual effects industry. In addition, there are about 30 exercises that are also based on the real-world animation projects.

- **Tips and Notes**
  Additional information related to various topics is provided to the users in the form of tips and notes.

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The first page of every chapter summarizes the topics that will be covered in that chapter. This will help the users to easily refer to a topic.

- **Self-Evaluation Test, Review Questions, and Exercises**
  Every chapter ends with a Self-Evaluation test so that the users can assess their knowledge of the chapter. The answers to the Self-Evaluation Test are given at the end of the chapter. Also, the Review Questions and Exercises are given at the end of each chapter that can be used by the Instructors as test questions and exercises.

- **Heavily Illustrated Text**
  The text in this book is heavily illustrated with about 500 diagrams and screen captures.

## Symbols Used in the Text



The author has provided additional information to the users about the topic being discussed in the form of notes.



Special information and techniques are provided in the form of tips that helps in increasing the efficiency of the users.




This symbol indicates the new command or tool introduced in Autodesk Maya 2012.




This symbol indicates the existing command or tool that has been enhanced in Autodesk Maya 2012.

# Free Companion Website

It has been our constant endeavor to provide you the best textbooks and services at affordable price. In this endeavor, we have come out with a free companion website that will facilitate the process of teaching and learning of Autodesk Maya 2012. If you purchase this textbook from our website (www.cadcimtech.com), you will get access to the companion website.

To access the files, you need to register by visiting the **Resources** section at *www.cadcim.com*. The following resources are available for the faculty and students in this website:

## Faculty Resources

- **Technical Support**
  You can get online technical support by contacting *techsupport@cadcim.com*.

- **Instructor Guide**
  Solutions to all review questions and exercises in the textbook are provided to help the faculty members test the skills of the students.

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- **PowerPoint Presentations**
  The contents of the book are arranged in powerpoint slides that can be used by the faculty for their lectures.

- **Part Files**
  The part files used in illustration, examples, and exercises are available for free download.

- **Rendered Images**
  If you do an exercise or tutorial, you can compare your rendered output with the one provided in the CADCIM website.

If you are a faculty member, please contact the publisher at *sales@cadcim.com* or the author at *stickoo@purduecal.edu* or *tickoo525@gmail.com* to access the website that contains the teaching resources.

## Student Resources

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