

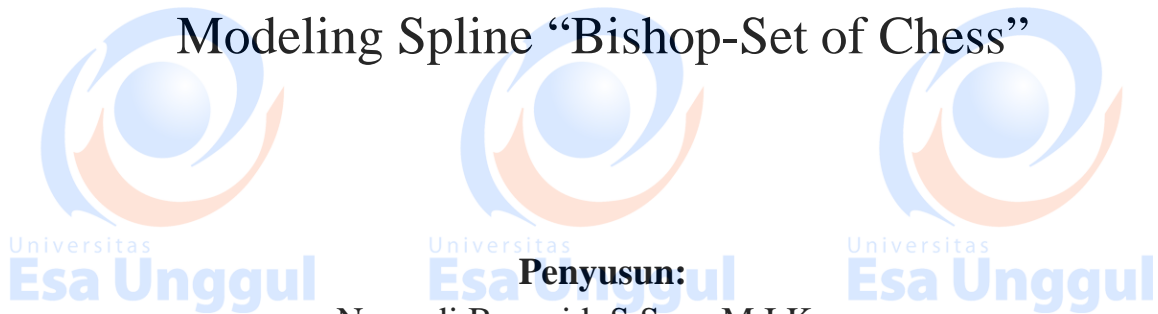
MODUL PRATIKUM



MATA KULIAH CREATIVE ANIMATION

TOPIK

Modeling Spline “Bishop-Set of Chess”



Penyusun:

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KATA PENGANTAR

Alhamdulillah, Puji syukur kami panjatkan pada Tuhan Yang Maha Esa bahwa kini telah tersusun Buku Panduan dan Modul Praktikum Mata Kuliah “Creative Animation” Universitas Esa Unggul.

Tujuan diterbitkannya modul praktikum ini adalah sebagai panduan dalam perkuliahan:

- 1) Pengaturan kegiatan praktikum bagi mahasiswa
- 2) Melaksanakan proses praktik dari bidang keilmuan dalam ilmu creative animation
- 3) Melaksanakan proses pembelajaran kasus, analisis praktis dan analisis profesional dalam praktik creative animation
- 4) Bagian dari proses belajar mengajar dan praktikum pada program pendidikan S1 Creative Animation

Harapan kami semoga modul praktikum ini dapat bermanfaat sesuai tujuan dan sasaran pendidikan.

Jakarta, 24 Maret 2018

Universitas Esa Unggul

Nuryadi

DAFTAR ISI

NO	ISI	HALAMAN
1	Kata Pengantar	2
2	Daftar Isi	3
3	Tujuan Instruksional	4
4	Sasaran Pembelajaran	4
5	Sumber Pembelajaran	4
6	Sumber Daya	4
7	Ruang Lingkup	4
8	Alat dan Kelengkapan	4
9	Pengendalian dan Pemantauan	4
10	Pelaksanaan	4



Tujuan Intruksional

- Memberikan Pengantar dan Perkenalan atas mata kuliah Creative Animation
- Mempersiapkan mahasiswa agar mampu mempromosikan diri dan mampu berkomunikasi dengan audiens.
- Pengenalan software Autodesk 3D Studio Max yang sebagai jembatan antara para desainer, engineer dan industry.

Sasaran Pembelajaran

Sasaran pembelajaran praktikum manual mata kuliah Creative Animation ini adalah mahasiswa S1 Desain Komunikasi Visual semester 3 Fakultas Desain dan Industri Kreatif Universitas Esa Unggul.

Sumber Pembelajaran

Sumber pembelajaran yang digunakan sebagai rujukan adalah:

- 3dsmax7 Fundamentals, NewRiders, TedBoardman
- 3d'sMax5Fundamentals, Techmedia, TedBoardman
- Inside3dsmax7, NewRiders, TedBoardman

Sumber Daya

A. Sumber daya manusia:

- Dosen pemberi kuliah pengantar : 1 orang
- Asistensi dosen : orang

B. Sarana dan Prasarana

Ruang Lab Komputer Universitas Esa Unggul

Ruang Lingkup

Ruang lingkup praktikum Creative Animation meliputi penjelasan tentang:

- Mendeskripsikan fungsi dan tujuan, pengembangan keterampilan & pengetahuan dalam 3D Modelling Animasi.
- Modelling dan creation of 3D Objects berbasis komputer dengan 3DS Max
- Mengaplikasikan teknik dasar 2D Splines, Shapes ke dalam 3D Object
- Mengaplikasikan teknik 2D Splines, Shapes & compound object
- Mengaplikasikan konsep 3D Modeling, Creating & Modifying Objects - Sesi 1
- Mengaplikasikan konsep 3D Modeling, Creating & Modifying Objects - Sesi 2
- Mengerti dasar-dasar Lighting & Camera Sesi 1

8. Mengerti dasar-dasar Lighting & Camera Sesi 2
9. Mengerti konsep membuat animasi dan motion dengan *Keyframe Animation*
10. Mengerti konsep dalam memberikan Texture with Max Sesi 1
11. Mengerti konsep Simulation & Effects

Alat dan Kelengkapan

1. Komputer, laptop, Wacom, Proyektor, Digital Pen, Mouse 3 Button.

Pengendalian dan Pemantauan

1. Absensi mahasiswa dan dosen yang telah ditanda tangani
2. Format asistensi tugas yang telah ditandatangani setiap adanya asistensi, diberi nama jelas dosen yang menilai serta peserta didik yang bersangkutan
3. Pedoman penilaian pencapaian kompetensi



Pelaksanaan

Modeling 3D, set of chess. Many different techniques can be used to create the objects in your scene. The techniques you learn in these tutorials can be adapted to any style of modeling you need to perform. For instance, if you're building models that will be incorporated into a game, you'll be most interested in low polygon modeling techniques. The same techniques will be equally beneficial when building highly detailed models for architectural presentations or motion pictures.

Creating primitive objects

Using a modifier to alter an object's shape.

Creating and editing spline objects

Converting splines into geometry using modifiers

Setting up viewports with background images

Editing a model at sub-object levels

Features in Editable Poly

Using Merge and Xrefs to bring external objects into your scene

Using the Graphite Modeling Tools Ribbon to edit poly objects



Modeling a Chess Set

In this tutorial, you will create four pieces of a chess set—a pawn, a bishop, a rook and a knight—using various modeling tools and techniques.



In this tutorial, you will learn how to:

- Create and edit spline objects.
- Use Lathe modifier to create a 3D object.
- Use Face extrusion to create geometry.
- Use Boolean compound objects.
- Use viewport background images.
- Use the Surface modifier.

Skill level: Beginner

Modeling a Bishop

In this lesson you will model a bishop for the chess set. For the most part, the bishop is modeled the same way as the pawn, based on a profile shape and a lathe modifier. The difference is the gap that shows on the bishop's head. You will use a Boolean object to achieve that result.



Features and techniques covered in this lesson:

- Using spline shapes to draw an outline of an object.
- Using the Lathe modifier to turn a 2D outline into a 3D model.
- Using Boolean to subtract geometry.

Skill Level: Beginner

Time to complete: 15 minutes

Set up the lesson:



- 1 The basic shape for the bishop is built exactly the same way as the pawn in the last lesson. Follow the procedures in the "Modeling a Pawn" exercise. Alternatively, on the Quick Access toolbar click the Open File button, navigate to the `\modeling\intro_to_modeling\bishop_outline_edited.max` file to work with a finished shape.

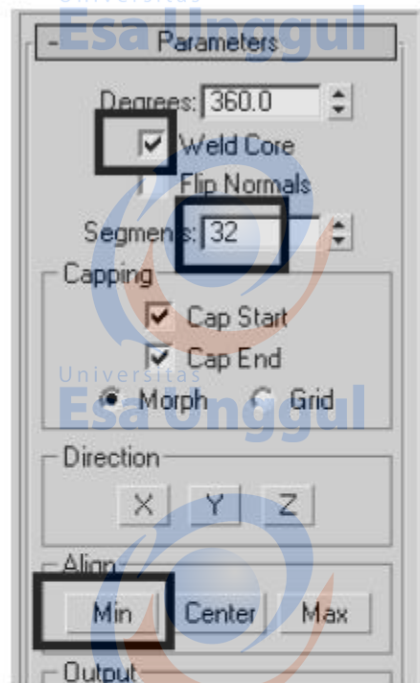
This file contains the profile of the bishop and a reference background image. If you cannot see the reference image, do the following steps.

- 2 Make sure the Front viewport is selected and then press Alt+B to open the Viewport Background dialog.

- 3 On the dialog, click the Files button.
- 4 Locate the *ref-chess.jpg* image in the *\sceneassets\images* folder and double-click it.
- 5 Click OK to exit the Viewport Background dialog.

Lathing the Bishop

- 1  On the main toolbar, click the Select tool. Select the spline representing the bishop's profile in any viewport.
- 2  With the Spline selected, go to the Modify panel. From the Modifier list, choose Lathe.
- 3 On the Parameters rollout, click the Min button in the Align group.
- 4 Set Segments to 32 and turn on the Weld Core option.




Create and position the box:


To create the gap in the bishop's head, you'll create a simple box and then subtract from the bishop model.

- 1 Zoom the Front viewport in, near the bishop's head.
- 2 From the Create menu, choose Standard Primitives > Box.
- 3 In the Front viewport, click and drag to define the base of the box. Do not worry about specific dimensions; you will change those in a moment.
- 4 Once you have defined the base, move the mouse and then click to define the height.




- 5  Go to the Modify panel and set the dimensions of the box as follows:
- Length=15.0
 - Width=2.0
 - Height=50.0



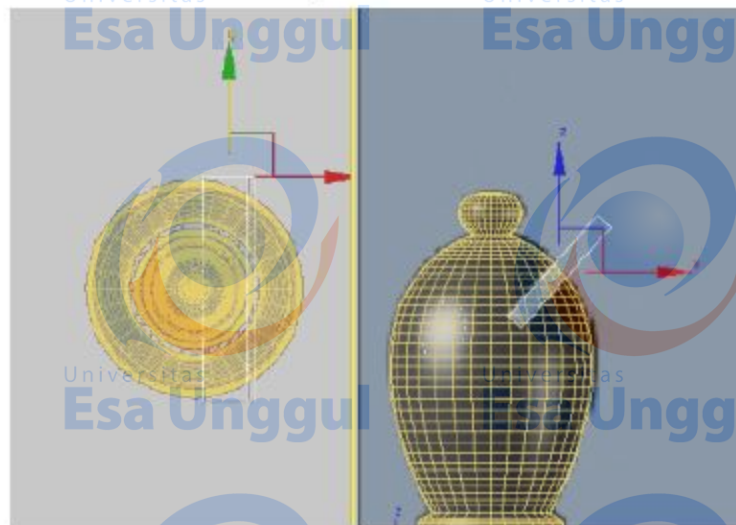
- 6  On the main toolbar, click the Select And Rotate button. Rotate the box in the Front viewport so that it is aligned with the gap on the bishop's head (in the reference image).



- 7  Use Select And Move to position the box on top of the gap.



- 8 In the Top view, move the box on the Y axis (green axis) until you can see it on both sides of the bishop.



Create the slice with a Boolean operation:

- 1 Select the bishop in any viewport.
- 2 On the Create menu, choose Compound > Boolean. The bishop is now a Boolean object and the command panel automatically switches to the Create panel, showing you the parameters of the newly converted object.
- 3 On the Pick Boolean rollout, click Pick Operand B and then click the box in any viewport.

When you perform a Boolean operation, the first object selected (in this case the bishop) is recognized as Operand A and the second object selected (in this case the box) as Operand B. You can then choose the type of operation to perform, whether it's union, intersection, or subtraction, and, in the latter case, which operand to subtract from which.



Summary

In this lesson, you learned to remove geometry by cutting a hole in an object using Boolean operations.