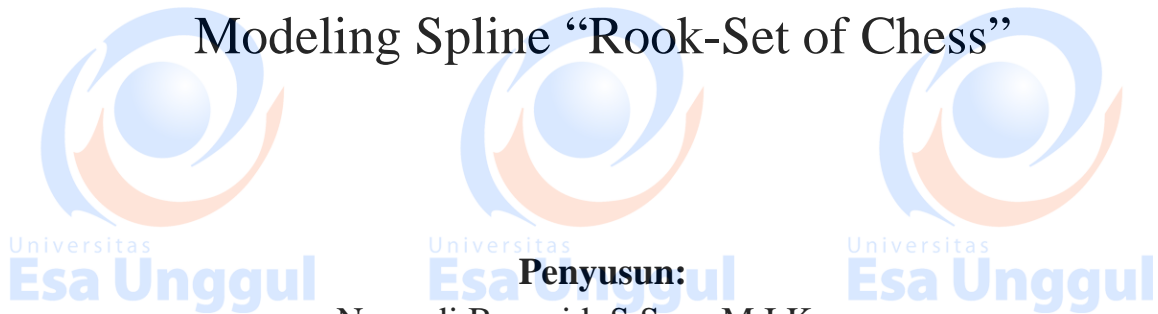# MODUL PRATIKUM

MATA KULIAH

CREATIVE ANIMATION

TOPIK

Modeling Spline "Rook-Set of Chess"

Penyusun:

Nuryadi Bayazid, S.Sos., M.I.Kom.

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

↓ 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 pembalajaran yang digunakan sebagai rujukan adalah:

1. 3dsmax7 Fundamentals, NewRiders, TedBoardman
2. 3d'sMax5Fundamentals, Techmedia, TedBoardman
3. Inside3dsmax7, NewRiders, TedBoardman

↓ Sumber Daya

A. Sumber daya manusia:

    1. Dosen pemberi kuliah pengantar : 1 orang

    2. Asistensi dosen : orang

B. Sarana dan Prasarana

    Ruang Lab Komputer Universitas Esa Unggul

↓ Ruang Lingkup

Ruang lingkup praktikum Creative Animation meliputi penjelasan tentang:

1. Mendeskripsikan fungsi dan tujuan, pengembangan keterampilan & pengetahuan dalam 3D Modelling Animasi.
2. Modelling dan creation of 3D Objects berbasis komputer dengan 3DS Max
3. Mengaplikasikan teknik dasar 2D Splines, Shapes ke dalam 3D Object
4. Mengaplikasikan teknik 2D Splines, Shapes & compound object
5. Mengaplikasikan konsep 3D Modeling, Creating & Modifying Objects - Sesi 1
6. Mengaplikasikan konsep 3D Modeling, Creating & Modifying Objects - Sesi 2
7. 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, Projektor, Digital Pen, Mouse 3 Button.

Pengendalian dan Pemantauan

1. Absensi mahasiswa dan dosen yang telah ditanda tangani

2. Format asistensi tugas yang telah ditandatangai 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 Rook

In this lesson, you will model a rook for the chess set. You'll build the rook the same way as in the previous lessons, where you created a pawn and a bishop, except for the top part with the battlement. If you were making a wooden chess set, you wouldn't be able to use a lathe for this part of the piece, and so it is with the 3D model: Although the basic structure of the rook is a

lathed spline, like the pawn and the bishop, its top requires a different modeling technique.

Features and techniques covered in this lesson:

■ Using face extrusion to change geometry.

■ Adjusting smoothing groups for better results.

Time to complete: 15 minutes

Set up the lesson:

1 On the Quick Access toolbar, click the Open File button, navigate to \scenes\modeling\intro_to_modeling and open rook_outline_edited.max.

This file contains the basic shape of the rook. If you prefer to build the rook from scratch, delete the profile and recreate it as you did in the previous lessons with the pawn and the bishop. Make sure, however, that you do not take into account the battlement at the top of the rook, as you will create it later using polygon extrusions.

The Front viewport should contain a reference image. If you cannot see the image, perform the following steps:

2 Make sure the Front viewport is active 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.
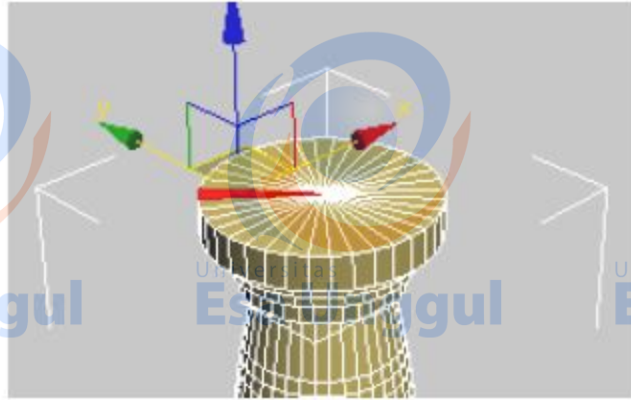
5 Click OK to exit the Viewport Background dialog.

Lathe the basic shape:

1 On the main toolbar, choose the Select tool. In any viewport, select the spline representing the rook's profile.

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 **36** and turn on Weld Core.
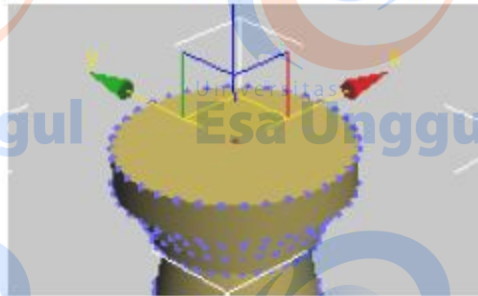
Prepare the top for the battlement:

1 With the rook still selected, make sure you are still in the Modify panel. From the Modifier List, choose Edit Poly.
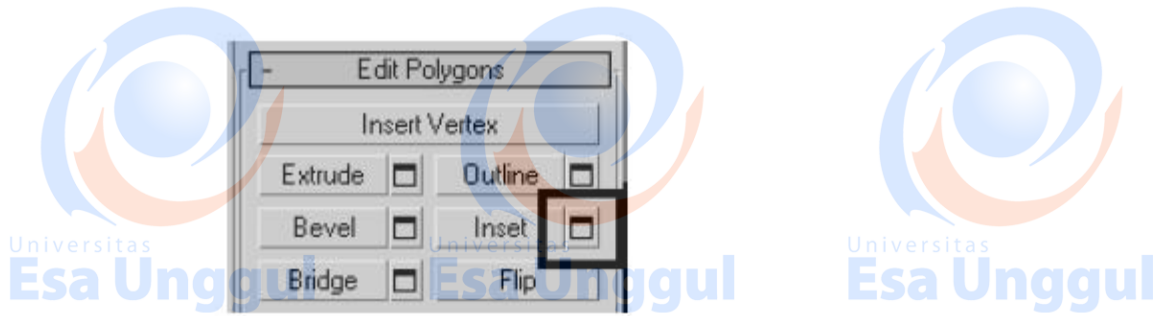
2 On the Selection rollout, click the Polygon button.

3 Try selecting the top of the rook.

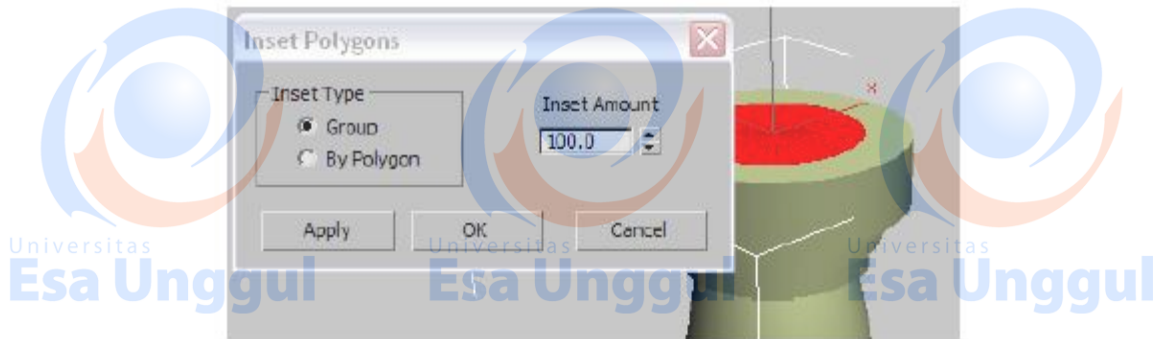You can only select a fraction of the area; 1/36th of the top area, to be exact.

4   On the Selection rollout, click the Vertex button.

5   Select the vertex in the top-center area of the rook.

6   Hold the Ctrl key down and click the Polygon button again on the Selection rollout. All polygons connected to the selected vertex are automatically selected.

7   Press F4 to turn on Edged Faces display, if necessary. This allows you to see the shaded object and its underlying geometry.

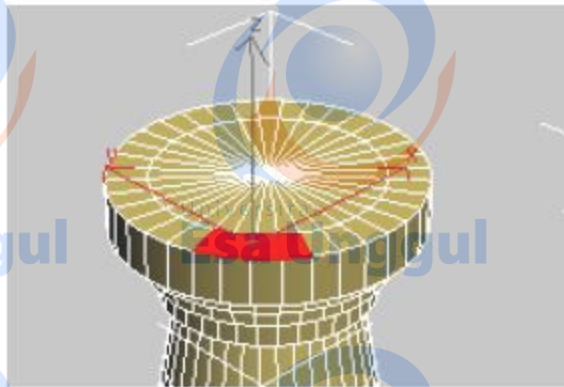**8**   On the Edit Polygons rollout, click the Settings button next to Inset.

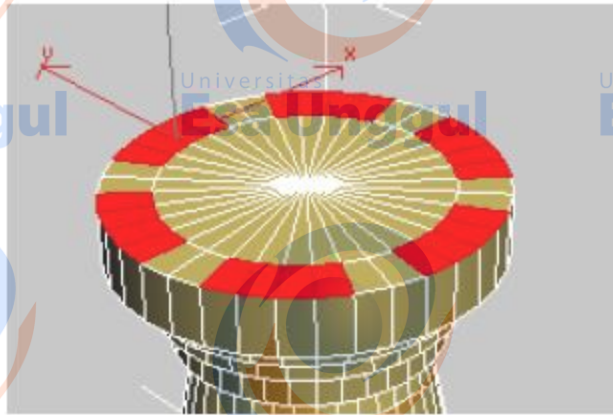9 In the dialog that appears, set Inset Amount to **100.0**.

10 Click OK to close the dialog and save the inset.

Create the battlement:

  Open the Modify panel, if necessary.

 On the Selection rollout, make sure you're at the Polygon sub-object level.

 Use the Select tool to select four adjacent polygons in the outer ring.

4   Skip the next two polys and then select the four after those. Repeat the procedure around the circumference until the selection resembles the following illustration:

5   On the Edit Polygons rollout, click the Settings button next to Extrude. On the dialog that appears, set the Extrusion Height value to **40.0** to match the height of the battlement in the reference image in the Front viewport (change the value if necessary). When you are finished, click OK to save the extrusion and exit the dialog.