



Computer Graphics Studio
Belgrade, Serbia
www.deform.rs

Digital production courses and lessons are aimed for people interested in a career in **digital sculpting, game industry, architectural visualization, lighting and rendering, animation or visual effects** for television and film. In theory and practice, this covers a large area of knowledge in many aspects of digital production.

Some artists are geared more towards overall principles of 3D and these people usually learn a lot about at least 3 major aspects of work, for example, modeling, texturing and lighting. Others may prefer only one or two aspects of production, but learn them completely and aim for the distinct job placements later.

For example, a 'character modeler' is expert in modeling and texturing for either game or film work. Or 'lighting TD' who excels in lighting, rendering and compositing. These are just some of the examples, while at least 20 different positions can be occupied in medium to large production houses.

For that reason, our training is divided into **modules**, giving the opportunity to either learn all aspects to a certain level, or maybe fully specialize in a single aspect of production, depending on student's preference. Some courses require entry modules to be completed, ensuring that all students at the course are at the same knowledge level. Some modules are also 'grouped' into packages, like "Game modeling and texturing", "Architectural Visualization", "Character animation" or similar, which you can view at the end of the document.

All training lessons are conducted by skilled instructors with more than 10 years of production experience. Also, few times during the course we may have **guest lecturers** explaining some examples of their professional, commercial work, sharing experiences and answering student questions.

All students must pass an **interview** prior to enrolling the course, they must be at least **17+ years old** and have a working knowledge of Adobe Photoshop or similar image editing software. Basic knowledge of English language is also mandatory. **Students not having sufficient knowledge about PhotoShop will be provided with a one week crash course free of charge.**

Foreign students can have lectures in English in separate terms, even one on one with the instructor, though this will reflect in a higher lessons fee. Students from abroad will be provided with accommodation and return travel ticket for the course period.

Please take your time to look at the training modules table, description, duration and prices of each course on following pages.

All prices stated for both modules and learning packages are for cash payments.

Students pay weekly, at the beginning of each week. If in any case students are not satisfied with the program or for some reason want to stop the training, they are free to do so at any time, paying only what they've learned until then.

Spring course will begin in Belgrade on **February 2012**, so send your application through our **online application** to schedule an interview.

To apply, or get any further information, email **learning@deform.rs** with your inquiry.

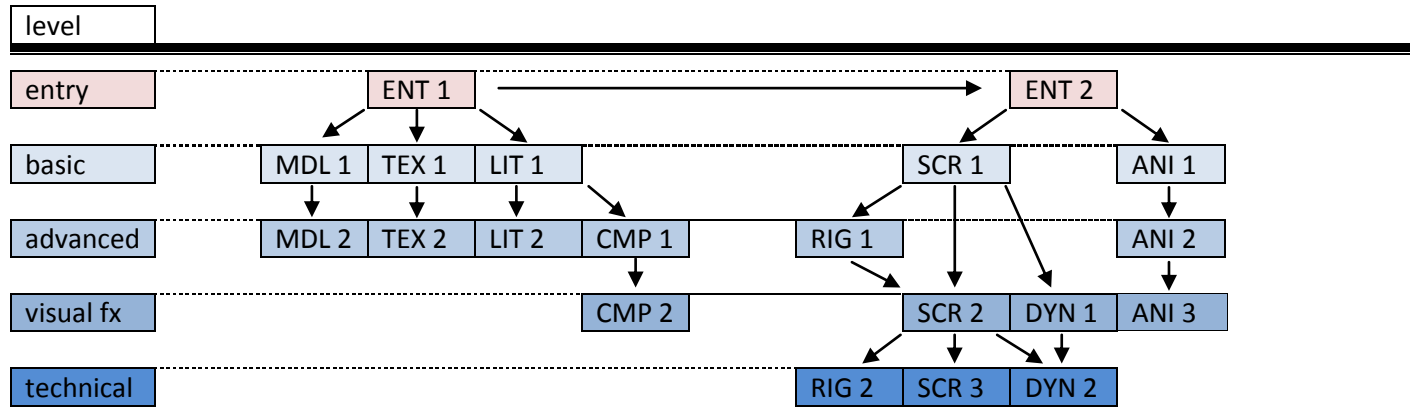
Looking forward to meet you,
Dejan Ivanovic, lead instructor

Below is a representation of all our current training courses, divided into 5 levels and 8 different categories. All courses revolve around **Autodesk Maya** as the main software of the training, though depending on the level, students also have the chance to learn ZBrush (MDL 2), After Effects (CMP 1), Nuke and V-Ray (LIT 2), RealFlow (DYN 2), Python programming (SCR 3), MotionBuilder (ANI 3) and their integration with Maya.

Lessons duration is 5 hours per day, 3 days per week.

Instructor lecture time is 2.5 hours with a 15 minute break, after which students proceed with daily assignments for the next 2-3 hours.

Training modules table:



Arrows represent the mandatory learning flow, for example: Student cannot enroll visual effects compositing (CMP2), without successfully finishing ENT1, LIT1 and CMP1 first. Another example would be that student must complete entry level 2 (ENT 2) and scripting 1 (SCR 1), before going into maya dynamics course (DYN 1).

Course description - entry level:

ENT 1 - (Entry level 1) opens up a group of courses relating to modeling, texturing, lighting and compositing.

Topics covered:

- Closer look to the learning program and concept, student introduction
- Basic principles of computer generated imagery (CGI)
- Commercial production workflows and project organization
- Introduction to Maya (interface, menus, hotkeys, object creation and manipulation)
- Maya space, nodes, attributes and connections
- Different geometry types and their application
- Intro to Maya animation tools, keyframing, motion path

<i>Duration:</i> 2 weeks	<i>Price:</i> 200 €	<i>prerequisites:</i> interview
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ENT 2 - (Entry level 2) continues into rigging, scripting, animation, dynamics effects and technical direction.

Topics covered:

- General animation principles
- Maya animation tools, keyframe editing
- Technical animation
- Intro to MEL scripting and expressions

<i>Duration:</i> 2 weeks	<i>Price:</i> 200 €	<i>prerequisites:</i> ENT 1
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Course description - basic level:

MDL 1 - (Modeling 1) is about both organic and hard surface modeling basics, good modeling practice and Maya modeling toolset. Course is focused on polygonal modeling though other Maya geometry types will be addressed as well. At the end of the course students will have 3 finished models they can use for their later representation (e.g. **room interior**, model of a **cell phone** and a **human head**).

Topics covered:

- Surface types
- Maya Nurbs geometry basics
- Polygonal geometry tools and practices
- SubD modeling techniques and application
- Anatomy lessons
- Intensive modeling practice

<i>Duration:</i> 7 weeks	<i>Price:</i> 700 €	<i>prerequisites:</i> ENT 1
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TEX 1 - (Texturing 1) makes those models one step closer to reality, bringing them color, reflection, transparency or something else. Students will learn principles and practices of **texture painting** and uv mapping within Maya and Photoshop. Models for texturing practice will be provided, though students coming from modeling course are encouraged to continue with texturing on their own finished models.

Topics covered:

- Material attributes
- UV space, resolution, mapping toolset
- Texture formats and painting in Photoshop
- Procedural texturing

<i>Duration:</i> 6 weeks	<i>Price:</i> 600 €	<i>prerequisites:</i> ENT 1
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LIT 1 - (Lighting and Rendering 1) brings everything together, textured models, materials and finally lights to complete the image look. Learn about MentalRay rendering engine, light and shadow, global illumination principles, basic layer compositing and image depth. Student will have 3 different environments and situations to work on, **exterior**, **interior** and a **studio lighting** practice.

Topics covered:

- Material and surface properties
- Maya shading toolset
- Light types and their application
- Render layer system
- Basic compositing practice

<i>Duration:</i> 7 weeks	<i>Price:</i> 700 €	<i>prerequisites:</i> ENT 1
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ANI 1 - (Animation 1) - bring life to characters and models, learn about human **body mechanics**, cartoon animation principles and **facial animation**.

Topics covered:

- Principles of human motion
- Walk cycle, basic body mechanics
- Pushing and pulling objects
- Facial animation

<i>Duration:</i> 6 weeks	<i>Price:</i> 600 €	<i>prerequisites:</i> ENT 2
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SCR 1 - (Scripting 1) - Basic programming principles and techniques in Maya MEL. Necessary for any future rigging or dynamics artists, **language syntax, variables, procedures, expressions.**

Topics covered:

- Intro to MEL (Maya Embedded Language)
- General programming practice
- Procedures, expressions
- Custom script creation for enhancing workflow

<i>Duration:</i> 4 weeks	<i>Price:</i> 400 €	<i>prerequisites:</i> ENT 2
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Course description - advanced level:

MDL 2 - (Modeling 2) - Next step to improve models further and get more deeper knowledge into industry practices and standards. Learn about ZBrush and Maya integration, **high detail sculpting** and ways of presentation. Students can work on their own model from MDL1, or on the ones provided. At the end of the course, each student will have 3 distinct production ready models, **detailed human head model, model of an animal** and a **game-ready prop** model.

Topics covered:

- Game modeling principles
- Organic modeling methods
- ZBrush interface and modeling basics
- Digital sculpting
- Maya - ZBrush integration

<i>Duration:</i> 7 weeks	<i>Price:</i> 700 €	<i>prerequisites:</i> MDL 1 or MAB
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TEX 2 - (Texturing 2) - is about different approaches to texturing, both in Maya and ZBrush. Using advanced methods for painting and mapping, students will have 3 final textured models at the end of the course, e.g. **human head, animal model** and a **game ready textured prop.**

Topics covered:

- Game texturing principles
- Organic texturing methods
- ZBrush interface and texturing workflow
- Maya - ZBrush maps integration

<i>Duration:</i> 6 weeks	<i>Price:</i> 600 €	<i>prerequisites:</i> TEX 1 or MAB
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LIT 2 - (Lighting and Rendering 2) - go deeper with Maya lighting, now using both MentalRay and VRay and their own features and tools. Learn more about 3D compositing for that final touch on completed renders. Students will have 3 different environments and situations to work on, **exterior, interior** and a **studio lighting** practice.

Topics covered:

- MentalRay custom nodes
- Advanced shading networks
- VRay materials and lights
- Fur and hair rendering
- Memory management

<i>Duration:</i> 7 weeks	<i>Price:</i> 700 €	<i>prerequisites:</i> LIT 1 or MAB
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CMP 1 - (Compositing 1) - basics of 2D and 3D compositing, using After Effects. Keying, rotoscoping, tracking on a filmed footage. Combining 3D elements into a final shot, light and color matching, grading, etc..

Topics covered:

- Intro to After Effects, interface, important features
- Layered keying
- Rotoscoping problem areas
- Camera tracking
- Render pass layout and composit
- Color and light match with footage

Duration: 5 weeks

Price: 500 €

prerequisites: LIT 1 or MAB

RIG 1 - (Rigging 1) - Rigging basics in Maya, start from technical object 'rigid' body rigging, to humanoid character. Make use of custom attributes and connections, utility nodes and expressions to make more animator friendly rigs. Finish the character rig by learning how to bind the geometry to the skeleton and skin it correctly. After this course students will have one fully functional character rig.

Topics covered:

- Custom attributes and connections
- Utility nodes
- Expressions
- IK and FK setup
- Joint creation and orientation
- Good practice on character rigging
- Blendshape deformers
- Binding geometry to skeleton
- Facial control setup

Duration: 7 weeks

Price: 700 €

prerequisites: SCR 1

ANI 2 - (Animation 2) - After animation basics go step further and learn about animal movement and animation, work on quadruped rigs, e.g. (cat jump, or horse run). More about acting and facial animation principles, all students will have about 10 seconds movie clip as a reference for animation. This course is specializing in animation only, so at the end of the course students will have few completed animations ready for their demoreels.

Duration: 6 weeks

Price: 600 €

prerequisites: ANI 1

Course description - visual fx level:

CMP 2 - (Compositing 2) - More advanced methods in 3D and 2D compositing, using After Effects, Nuke and Maya. 3D camera importing for proper perspective match, color correction, grading, motion blur nodes, problem solving.

Topics covered:

- 3D camera export and projection
- Grading nodes in Nuke, typical workflow
- Advanced render pass setup
- Smoke, explosions, other visual fx practice
- 3D extensions, geometry replacing

Duration: 6 weeks

Price: 600 €

prerequisites: CMP 1 or VFX

SCR 2 - (Scripting 2) - continue from basics of MEL, now into interface creation and layouts. Create more useful scripts and interface windows and buttons, problem solving, automated scripts for project paths setup, directory structures, etc....

Topics covered:

- UI creation, windows, layouts, buttons
- Scripts organization for use in other projects
- Custom tools creation
- Project organization scripts

<i>Duration:</i> 4 weeks	<i>Price:</i> 400 €	<i>prerequisites:</i> SCR1 and RIG1, or VFX
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DYN 1 - (Dynamics 1) - Get into dynamic effects, particles, rigid and soft body simulations and hair. Start creating visual effects for tv and film production. Students will have their own final scene at the end of the course to use in future showreels.

Topics covered:

- Rigid bodies
- Particles
- Soft bodies
- Hair

<i>Duration:</i> 6 weeks	<i>Price:</i> 600 €	<i>prerequisites:</i> SCR 1
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ANI 3 - (Animation 3) - Learn about motion capture animation and how to use it in your projects. MotionBuilder basics, character definitions, animation baking and Maya integration. Create and use Maya blendshapes inside MotionBuilder for a realtime lipsync and voice recognition animation.

Topics covered:

- MotionBulder interface and animation basics
- Maya - MotionBuilder integration, reuse motion capture data inside Maya
- Custom blendshapes and voice recognition animation insind MotionBuilder

<i>Duration:</i> 6 weeks	<i>Price:</i> 600 €	<i>prerequisites:</i> ANI 2
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Course description - technical level:

RIG 2 - (Rigging 2) - under construction

<i>Duration:</i> n/a	<i>Price:</i> n/a	<i>prerequisites:</i> SCR 2
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DYN 2 - (Dynamics 2) - go further into dynamics with Maya with cloth, particles and fluid simulations. Apart from a lot of practical examples, this course is also project based. All students will work on their 'final' scenes for the last half of the course, completing the final dynamic output which they can use in future showreels. (e.g. meteor crash type scene)

Topics covered:

- nCloth
- nParticles
- Fluids

<i>Duration:</i> 6 weeks	<i>Price:</i> 600 €	<i>prerequisites:</i> SCR2 and DYN1, or VFX
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SCR 3 - (Scripting 3) - under construction

<i>Duration:</i> n/a	<i>Price:</i> n/a	<i>prerequisites:</i> SCR 2
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Not sure what to learn yet? Schedule an interview with us and let us help you decide, or check out our training module packages.

Module packages description:

Maya Basics (MAB) - This course is developed to give the student insight to all relevant aspects of 3D in shortest time possible. Students will learn **maya modeling basics, texturing, shading and lighting**, as well as some simple animation techniques. After this course all students will have more in-depth knowledge of overall 3D principles and may help them decide what skills to develop further. Course is **'project based'**, all student will build their final scenes from start to finish based on the course assignment which will be different for each group. Successful finishing of this course **opens up all 'advanced'** level courses of the first category (MDL2,TEX2,LIT2 and CMP1)

<i>Duration: 14 weeks</i>	<i>Price: 1400 €</i>	<i>prerequisites: interview</i>
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Game modeling and texturing (GMT) - During this 10 weeks program, students can learn all about Maya basic modeling techniques, game modeling practice, texturing basics while working on a game weapon prop, a soldier model and a game environment. At the second half of the program, we take the models into ZBrush for more detailing, normal and displacement map creation and finalization of the model. After the course, students will have at least 3 'game-ready' models for their showreels.

<i>Duration: 10 weeks</i>	<i>Price: 1000 €</i>	<i>prerequisites: interview</i>
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Architectural visualization (VIZ) - Learn what you need about Maya modeling, texturing, lighting, shading and rendering for architectural visualization. Speed up workflow by creating libraries of objects, make the use of render proxies for heavy scenes, light and color baking, etc... Learn about V-Ray for Maya, while working on an exterior building model and a modern interior. After this course, students will have needed knowledge to continue on their own and be visualization artists.

<i>Duration: 10 weeks</i>	<i>Price: 1000 €</i>	<i>prerequisites: interview</i>
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Character animation (CAN) - Take a shortcut to animation in Maya in about 3 months program. Learn about animation principles, traditional animation, body mechanics and movement, biped and quadruped characters, lipsync, acting, etc.. Use the inhouse rigs for all the work and focus solely on the animation and story. After this package, students will have more than 5 short animations they can use in their reels while searching future work.

<i>Duration: 13 weeks</i>	<i>Price: 1300 €</i>	<i>prerequisites: interview</i>
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Maya visual effects (VFX) - Get familiar with Maya rigid and soft body dynamics, MEL scripting, particle effects and compositing tricks in this 4 months program. After learning the basics of Maya software, students proceed directly to their project assignment through which they will learn and cover all major aspects of vfx during the course. After successfully finishing VFX training, students will have enough material to put in their showreels. This course also 'unlocks' some courses from upper levels, like CMP2, DYN2, SCR2, for future skill development.

<i>Duration: 16 weeks</i>	<i>Price: 1600 €</i>	<i>prerequisites: interview</i>
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Maya generalist (GEN) - In this 6 months program, student can learn all aspects of 3D production to a certain level. Through modeling and texturing basics, over lighting and compositing, to rigging, animation and dynamics effects. Fast paced learning with a lot of practical examples and excersises, should give you enough training to start working in a company right away.

<i>Duration: 25 weeks</i>	<i>Price: 2500 €</i>	<i>prerequisites: interview</i>
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Students pay weekly, at the beginning of each week. If in any case students are not satisfied with the program or for some reason want to stop the training, they are free to do so at any time, paying only what they've learned until then.

Thank You for reading through our learning plan, if you have more questions, don't hesitate to ask at learning@deform.rs