

### Photoshop Course for Scientists

Lecturers: Oren Shimon, Keren Kaztav

10 sessions (40 academic hours each, delivered in English)

#### Course description:

The course provides knowledge and hands-on expertise in using market-leading computer graphics editing and image processing software application Adobe Photoshop. During the course, you'll learn to use advanced tools for image processing and enhancement, color editing techniques, typography, and various effects.

#### Course objectives:

- Acquaintance with Photoshop tools, including brushes and retouching (speck/blemish elimination, contrast, brightness, and saturation adjustment, and more).
- Mastery of image compositing, and creation of new designs combining multiple images.
- Provisioning of techniques to streamline and enhance Photoshop software usage.
- The ability to export Photoshop images to various file formats.
- Interoperability with other graphic design applications, and more.

#### Course deliverables:

The Photoshop course will provide students with basic image processing tools and skills. Course studies will focus on base concepts for simple image retouching, processing, and quality enhancement, and on the skills required to create harmonious image collages. Students will ultimately also learn how to export images to the most appropriate formats for specific use cases, as well as for integration with other software applications.

### Course requirements:

Presence and active participation in course sessions, and submission of a homework assignment in every session.

The nature of each assignment will be determined as per specific session content.

**Example homework assignment:** separation of an image object, and placement of that object on an alternate background.

Assignments will require a maximum investment of two hours of homework and will be reviewed with both lecturer and student present in class at the beginning of each session (no grades will be given).

### Required gear:

- Adobe Photoshop software application.
- Internet connectivity.

## Course/module topics:

### Session 1

IMAGE INTEGRITY– delivered by Keren Kaztav, Head of Design, Photography and Printing Branch.

### Session 2

#### Getting to know your workspace

- Menu, application, and options bars, tools panel, right-hand side dock panel.
- Differences between PC and Mac versions.
- Different ways to zoom.
- Hidden toolbar tools.

#### Basic selections

- Why makes selections?
- Geometric selections.
- Freehand selections.
- Edge-based selections.
- Color-based selections.
- How to choose a selection tool?

### Session 3

#### Basic photo corrections •

The image menu.

- Color modes.
- Image resolution and size.
- Straightening and cropping images.
- Cropped image rotation.
- Automatic adjustments.
- Auto color - removing color casts.
- Manually adjusting color casts.
- Manually adjusting the tonal range.

## Session 4

### Layers

- The background layer.
- Isolating parts of an image.
- Hiding, viewing, repositioning, deleting, renaming and merging layers.
- Locking layers.
- Converting the background layer to a regular layer.
- Converting a regular layer to the background layer.
- Layer styles.
- Applying styles to multiple layers.

## Session 5

### Brushes and paint tools

- Working with brushes (general).
- The brush tool.
- The pencil tool.
- The bucket tool.
- The gradient tool.
- Gradient styles.
- Editing colors.

## Session 6

### Basic photo corrections

- The clone tool.
- The spot healing brush.
- The healing brush.
- The patch tool.
- Content-aware fills.
- Red-eye corrections.
- Sharpening edges.

## Session 7

### Type

- Point vs. paragraph type.
- The character panel.
- The paragraph panel.
- Type on a path.
- Warping type.
- Creating a work path from type.
- Convert type to shapes.

## Session 8

### Masks

- How are masks different from selection tools?
- Saving time-consuming selections.
- Quick mask mode.
- Using the brush tool.
- The channels panel.
- Loading a mask as a selection.

## Session 9

### Creating vector graphics in Photoshop

- The pen tool.
- The magnetic and freeform pen tools • Using the pen tool as a selection tool.
- Converting selections to paths.
- Shape layers.
- Smart objects.

## Session 10

### Working with filters

- Art filters.
- The blur filter.
- The sharpen filter.
- The camera raw filter.
- The liquify filter.

### Notes:

- Literature will be handed out at the beginning of the course.
- This course is recognized by the FGS as an external course for life science students warranting the following CPs:
- Photoshop long – 1.5 CP
- On completion of the course and receipt of the course graduation certificate, it is the responsibility of the student to send the certificate to the FGS Courses Coordinator (Ms. Ruth Kamensky) to receive the credit points.

