

## Route Toward Certification in Hydraulics

This document will describe the various routes available when working toward certification. SFMA is responsible for and grants the certification. Theoretical exam is administered by ITH – Institutet för Tillämpad Hydraulik.

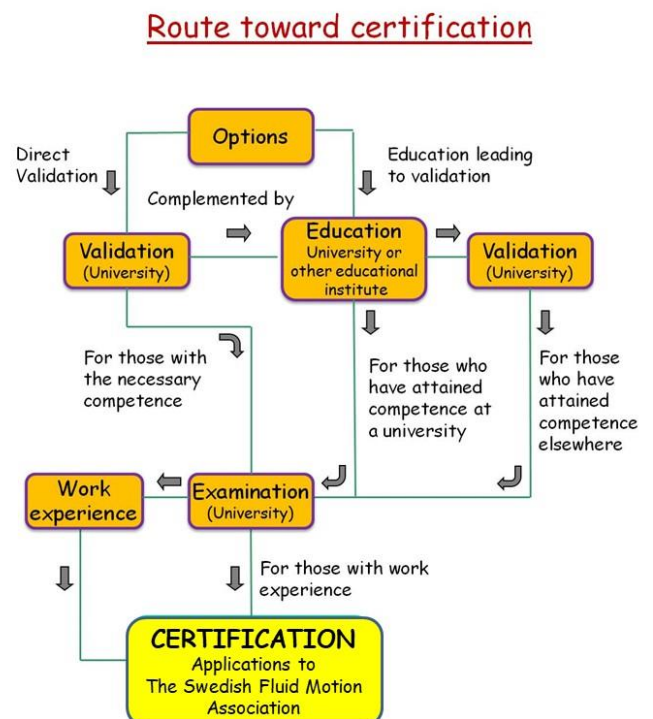
There are four work areas for certification within hydraulics:

- Operator** basic knowledge within hydraulics, an Operator can work within all types of industrial, mobile and marine environments.
- Assembler** who can, for example, work with fitting of hydraulic systems: pipes, connectors, tubes and assembling other hydraulic system components within all types of industrial, mobile or marine environments.
- Maintenance Technician** who, for example, work with service, repairs, maintenance, sales or general hydraulics technology within all types of industrial, mobile or marine environments.
- System Designer** who can, for example, work with designing, dimensioning and/or sales of hydraulic systems within all types of industrial, mobile or marine environments.

There are a variety of routes towards certification depending on your experience within hydraulics. For those thinking about entering the branch, education at various levels is available – see section entitled ‘Education’ on page 3. Those with work experience within hydraulics can request validation of that experience.

The validation method used here assumes that you can yourself decide if a course of study is necessary or if you have the competence to apply directly for certification. See section entitled ‘Validation’ on page 2.

The flow chart describes the various routes towards certification depending on your prior experience.



## VALIDATION – for those who have work experience with hydraulics

Validation for each module shall be carried out for those who have not studied at university. The application for validation shall be signed with the assurance that you have honestly assessed your competence. It shall also be signed by someone who can vouch for your competence.

Validation is done in such a way that you evaluate your own level of prior knowledge on the form provided. This form includes a course description which states the requirements for each module within each work area. Three yes or no questions shall be answered which, in turn, will describe your own assessment of your own level of knowledge. To help with this self-assessment there is a test, with answers, with questions based on the contents of the course, similar to questions on the certification exam (Please note that this test should not be sent into the university - you should only send in the form.).

Your CV describing previous education and work experience should be included with the form. University entrance qualifications are not necessary - see section 'Education' on page 3.

### Validation and application to sit the examination

The first step is to obtain the application form for examination within your work area. For those who plan to sit the exam without undertaking/having undertaken university education, a validation form shall also be filled in. Both the examination application form and the validation form can be obtained from ITH:s website <https://www.ith.se/certifieringstentamen>.

These should be filled in as necessary and returned to ITH.

Once applications have been received by ITH, you will receive notification of the examination. An invoice for the examination fee will be sent to you later. For details of the fee payable, please see ITH:s website.

Applications must be received by ITH not later than 6 weeks before the date of the examination.

## EXAMINATION

The examination is held at ITH in Örnsköldsvik, but it is possible to sit the exam in other towns. This applies even to those who have studied at another educational institute.

Examination of several modules can be done on the same occasion. Four examinations are available per year – suggested times are available on ITH:s website <https://www.ith.se/certifieringstentamen>. The modules for each work area are as follows:

<i>Work area</i>	<i>Modules</i>
Operator	Foundation Course 1
Assembler	Foundation Course 1 and Assembly Course
Maintenance Technician	Foundation Course 1 and 2, Maintenance Technician Course
System Designer	Foundation Course 1 and 2, System Design Course

There is one examination for each module. A grade is given for each module using the grading scale: Fail, 3, 4, or 5

To meet the demands for certification an **average grade of 4** is required for the modules within each work area. For Operators level **grade 4** is required in Foundation Course 1.

### Re-examination

Re-examination will only be done on the exam/test with grades Fail or grade 3.

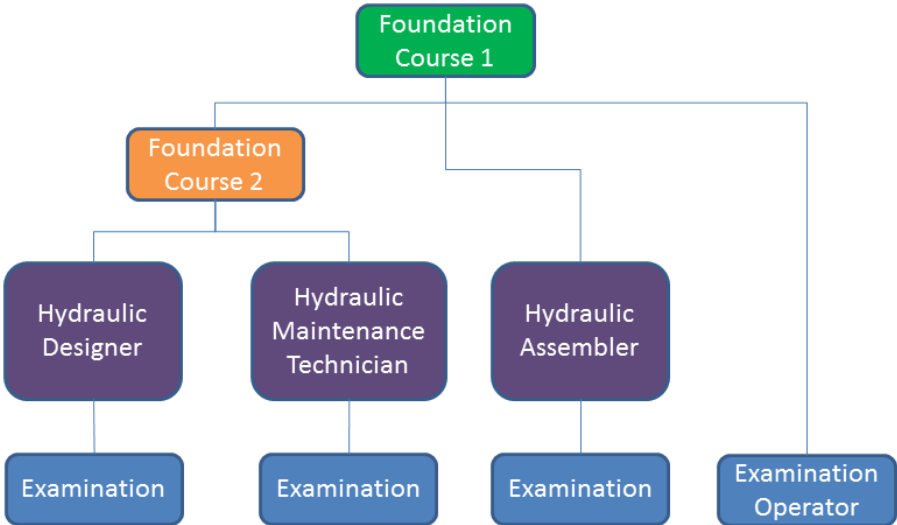
The modules Foundation Course 1 and Foundation Course 2 are common to all work areas. This means that if you are a certified Maintenance Technician and would like to be a certified System Designer you don't need to take the Foundation Course 1 and 2 exams again. You can simply sit the System Design Course examination.

# EDUCATION

For those who do not have any official education within the work areas or for those who wish to complement or update their knowledge prior to certification, there are a variety of courses available. Syllabi for these courses are available on ITH:s website <https://www.ith.se/certifiseringstentamen>.

It is also possible to study with other educational institutes which do not have any entry requirements. Please contact these institutes directly for details of the course fees.

The following flowchart shows the courses which are part of the Certification process



## WORK EXPERIENCE

To qualify for certification relevant practical work experience is required.

### *Minimum demands:*

Operator	1 year within hydraulics
Assembler	2 years within work area
Maintenance Technician	2 years within work area
System Designer	2 years within work area
Complete Certification	4 years in total, of which at least one-year assembly experience and 2 year's experience of designing and/or maintenance

Other practical experience within the work area or other combinations of experience may be validated after approval from Swedish Fluid Motion Association.

## CERTIFICATION

Certification is issued by Swedish Fluid Motion Association (SFMA). To obtain certification within a given work area an application form, a study transcript from ITH, and a certificate showing relevant work area experience should be sent to SFMA for evaluation.

Once an application has been approved, a personal diploma will be issued together with a proof of work area competence in the form of a photo ID.

A register of all certified people is held by Swedish Fluid Motion Association.

## CETOP

Certificate of CETOP Level 1 and 3 correspond to the work areas:

- Operator, CETOP Level 1
- Maintenance Technician, CETOP Level 3

Certificate (diploma) is obtained on application from SFMA.

## Complete Certification

Within the framework for hydraulics certification there is the concept of complete certification.

### *Complete certification within the field of hydraulics implies that:*

- The certified person must have passed examinations for all 3 work areas within hydraulics – Assembler, Maintenance Technician, and System Designer – and have the relevant experience – see section Work Experience on page 4.

### *Complete certification gives the following rights:*

- Those who hold a complete certification diploma have the right to supervise work carried out by non-certified technicians within each work area. As the holder of complete certification has documented competence within hydraulics for all 3 work areas, he/she acting as supervisor can guarantee that the work is carried out in line with good professional conduct.

### *The non-certified technician:*

- The non-certified technician who carries out work under supervision must have documented basic knowledge within the work area. This means that he/she will have attained at least grade 3 for Foundation Course 1 within the framework for hydraulic certification.

A diploma for complete certification is obtained on application from Swedish Fluid Motion Association.

### Validity

Certification is valid for 10 years after which it must be renewed. Application for renewal should be sent to SFMA. This application should include a certificate/reference which shows that within the previous 10 years, the applicant has at least 5 years work experience within the hydraulics field. A recently taken photograph should also be included in the renewal application.

### COMPLETE CERTIFICATION

