

## Besluit

### Besluit strekkende tot het verlenen van accreditatie aan de opleiding hbo-bachelor Aviation van de Hogeschool van Amsterdam

#### Gegevens

|                                |                                 |                                             |
|--------------------------------|---------------------------------|---------------------------------------------|
| <b>datum</b>                   | Naam instelling                 | : Hogeschool van Amsterdam                  |
| 30 november 2015               | Naam opleiding                  | : hbo-bachelor Aviation (240 EC)            |
| <b>onderwerp</b>               | Datum aanvraag                  | : 19 december 2014                          |
| Voornemen tot besluit          | Graad opleiding                 | : Bachelor of Science                       |
| accreditatie hbo-ba            | Variant opleiding               | : voltijd                                   |
| Aviation van de Hogeschool van | Afstudeerrichtingen             | : Aviation Operations; Aviation Engineering |
| Amsterdam                      | Locatie opleiding               | : Amsterdam                                 |
| (003604)                       | Datum goedkeuren                |                                             |
| <b>uw kenmerk</b>              | panel                           | : 25 augustus 2014                          |
| CvBuit2014-235                 | Datum locatiebezoek             | : 24 september 2014                         |
| <b>ons kenmerk</b>             | Datum visitatierapport          | : 16 december 2014                          |
| NVAO/20152765/ND               | Instellingstoets kwaliteitszorg | : ja, positief besluit van 5 november 2013  |

#### bijlagen

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#### Beoordelingskader

Beoordelingskader voor de beperkte opleidingsbeoordeling van de NVAO (Stcrt. 2010, nr 21523).

#### Aanvullende informatie

De NVAO heeft bij brief van 1 mei 2015 de instelling aanvullende informatie gevraagd over de wijze waarop de examencommissie inhoudelijk toeziet op de twee afstudeerrichtingen die de opleiding respectievelijk met de European Pilot Selection & Training (EPST) en de Luchtverkeersleiding Nederland aanbiedt. Bij brief van 1 juli 2015 heeft de NVAO de aanvullende informatie ontvangen. De NVAO heeft de aanvullende informatie in haar oordeelsvorming betrokken.

#### Bevindingen

De NVAO stelt vast dat in het visitatierapport en de aanvullende informatie deugdelijk en kenbaar is gemotiveerd op welke gronden het panel de kwaliteit van de opleiding voldoende heeft bevonden.

#### Advies van het visitatiepanel

Samenvatting bevindingen en overwegingen van het panel.

Pagina 2 van 8 The Aviation course is part of the Technology Domain of the Amsterdam University of Applied Sciences (HvA). It is offered as a full time course with around 325 new students each year.

It is linked to two readerships: Aviation Management and Aviation Engineering. Whereas other educational programmes in the Netherlands focus on designing aircrafts, the Amsterdam course highlights maintenance and utilization of aircraft.

On the one hand the course focuses on optimal utilization of the airplane throughout its life-cycle, including maintenance and modifications (Aviation Engineering). On the other hand it features the conduct of the flight, including air traffic control, the turn-around process and airport security (Aviation Operations).

The panel acquired a clear view of the ambitions of the course. It is based on three pillars: (1) being part of European top education, (2) maintaining structural and worldwide contacts with the industry and (3) having two full swing research units.

#### *Standard 1. Intended learning outcomes*

The Aviation course takes the national Bachelor profile of Engineering as a starting point to define its intended learning outcomes. This national Bachelor profile of Engineering was renewed in 2013 in association with the Dutch universities of applied sciences and representatives from the professional field. It consists of a total of eight competencies; four technical and four generic ones. The technical competencies comprise analysis, design, realisation and managing (allowing for optimal functioning of products in context). The generic competencies are managing (leading an organisation and employees), advising, research and professionalisation. Level-wise the intended learning outcomes are nicely linked to the Dublin Descriptors and the hbo standard.

The school translated the eight competencies into the key-tasks of an aviation professional. As stated, the Aviation course of the HvA focuses on maintenance and operations. This also becomes visible in the way research is integrated in the programme, by making analyses of a (problem) situation and the creation and testing of solutions. The research competency is very much interwoven with the other competencies analysis, design and realisation.

By its very nature an aviation course has an international focus. This, too, goes for HvA's Aviation programme, although the aspect of internationalisation is not directly reflected in its intended learning outcomes. The panel established, however, that the international dimension of the profession has certainly been incorporated in the underlying key tasks of the aviation professional.

The eight intended learning outcomes serve as a solid basis for the Aviation course and tie in well with both the Dublin Descriptors and the hbo-standard. The course's profiling features on maintenance and operations, as well as on internationalisation, are reflected in the professional tasks. The way research has been integrated in the programme clearly contributes to the development of students' professional skills. Considering this, the panel rates the intended learning outcomes of the course, detailed and specified by the professional tasks, as 'good'.

#### *Programme*

In view of the renewed national Bachelor profile and the updated professional profile, at the time of the audit the curriculum is in transition. The first two years are already executed in the new format; year three and four will undergo changes in the two upcoming years.

The panel considers the (new) curriculum well-structured, showing both a good vertical and horizontal coherence. Each block has its own theme, whereby each theme includes a mixture of knowledge transfer, skills training and integration of theory and practice in assignments. The curriculum provides students with the applicable knowledge and skills to develop the intended learning outcomes.

The Aviation course has a work field committee and a Board of Advice that helps the course keep the curriculum up-to-date. The panel believes the new programme is more attractive than the previous one because it offers more possibilities and specialisations to students.

#### *Specialisations*

The first year of the programme offers a solid base which is the same for all students. At the beginning of the second year students can either choose the major Aviation Operations or Aviation Engineering. Later on, in the third year they can specialize even more and for each major chose from three different specialisations. These specialisations are reflected in the minor, the internship, the fourth year lessons and in the thesis. Students with the ambition to become a pilot or air traffic controller can apply for a special study path, Aviation Flight and Aviation Air Traffic Control respectively. Both these paths are offered in cooperation with external partners; European Pilot Selection & Training (EPST) and Air Traffic Control Nederland (LVNL). These students have to attain the same competencies as their fellow-students taking one of the regular paths. Flight students finish their pilot training during or shortly after graduation from the Aviation course. After graduation, ATC-students need to study one or two more years at LVNL to actually become a fully trained and licensed air traffic controller. Both LVNL, EPST and several airlines that have already employed HvA Aviation Flight students, as well as the panel, are very pleased with the way Aviation Flight and Air Traffic Control are intertwined in the curriculum design.

#### *Internationalisation and research*

The panel members expressed their satisfaction with the international character of the course. Last year the course management appointed several new teachers, amongst others from Greece, China, Mexico and America. Most of the assignments have an international aspect in them, international literature is being used and with the introduction of the new curriculum all classes are taught in English except for classes in the first year. The panel is pleased with these recent developments, but living up to the ambition of becoming a top 3 course in Europe, more effort should be put into making the course and its students even more international.

Two years ago the Aviation course introduced a revised research track. The project assignments in each block make students do research, starting in the first year with simple 'literature search' assignments and resulting in the fourth year in analysing problems and testing the designed and realised solutions. The way research is taught to the students is very much in line with requirements of the professional field, the panel concluded.

The teaching staff are well-equipped to teach the students the knowledge and skills they have to acquire. The teaching staff are composed of a nice mix of younger and more experienced teachers. About 60% of the teachers have a Master's Degree. They are well facilitated to improve further by visiting conferences, in offering opportunities to calibrate and evaluate and in 'going to school' themselves.

At the time of the audit, ten teachers are following a Master's programme, including programmes at Westminster and Cranfield University.

There are teachers who also work as a pilot, flight instructor or airline consultant. Most teachers have obtained their didactic qualification or are following a course in this field. Also, the Amsterdam University of Applied Sciences offers their teaching staff English courses and research programmes to improve their skills in these domains.

The management is aware of the fact that the workload of the teaching staff must be closely observed and requires improvement. The panel learned that there is an open on-going discussion between the teaching staff and management about this issue.

#### *Facilities and services*

The school building, classrooms and facilities meet the standards of professional education. The school has two labs available for doing tests and simulations. One lab is provided with a wind tunnel, the other has a ground simulator.

Aircraft manuals are available both digitally as well as on paper. There are enough work places for students. The study coaching is personal and there is an open door policy when it comes to asking teachers questions outside scheduled hours. Students are represented in the Course Committee. The panel learned that the feedback they give is taken seriously by the management.

Considering that the panel finds the (new) programme, the staff, as well as the physical learning and teaching environment of the Aviation course of a fine quality, its overall judgement on Standard 2 reads 'good'.

#### *Standard 3. Assessment system and achieved learning outcomes*

The document 'Toetsplan Aviation 2014' governs the assessment system of the Aviation Course. Based on a random sample of tests and assignments the panel concludes that the course has in place a functional and conforming mix of tests, tying in well with the level and complexity of each study year concerned. Also, the course ensures that tests are valid, reliable and transparent: tests and assignments are all linked to the professional tasks, teachers are allocated time to review each other's tests and the test commission screens all tests developed for the new curriculum.

Assessments and internship reports show a positive development of level and complexity, a good outline and a clear structure. A random selection of fifteen theses was evaluated before the audit took place. The panel graded one out of fifteen unsatisfactory. The other fourteen are all of a satisfying level, although the panel considered the grading generally too generous; also the correct use of the Dutch language was sometimes evaluated as poor. The Aviation course has an Examination Committee that has delegated part of its responsibility to the test committee to ensure the quality of tests and examinations. Both committees are 'in control' and use various mechanisms to stay 'in control'. They are aware

Pagina 5 van 8 of the needed changes and they are well facilitated by the management regarding time and training opportunities.

Considering the appropriateness of the assessment system, the sufficient quality of most of the theses and the adequate functioning of the Examination Committee and the Assessment Committee, but also taking into account that quite a number of the final papers were overrated, students' command of the Dutch language is sometimes poor and the panel rated a single thesis unsatisfactory, it evaluates standard 3 as 'satisfactory'.

#### *Overall conclusion*

The audit panel concludes that the Aviation course offers an educational programme that meets Bachelors level. It prepares students sufficiently to execute relevant positions in the Aviation industries, as was confirmed by the alumni and professional field.

The programme is topical and international. It gives students choices to specialize and research is conducted in such a way that it can be applied in students' professional careers. Also, the teachers contribute to an enthusiastic, professional and international learning environment. The building and facilities are up to the mark, as well as the study guidance.

The course sees to it that a valid, reliable and transparent way of testing is applied. All competencies are incorporated into the various professional tasks and learning objectives, and tests and assignments are based on these. Considering the reviewed assignments, internship reports and theses, the panel established that students, including those who chose the specialisation Flight or Air Traffic Control, generally achieve the learning outcomes of the course at a satisfactory level.

#### **Aanbevelingen**

De NVAO onderschrijft de aanbevelingen van het panel en in het bijzonder de aanbeveling over de scheiding van afstudeerbegeleiding en – beoordeling. Het panel beveelt aan om de afstudeerbegeleider niet meer als eerste beoordelaar in te zetten, maar als tweede beoordelaar.

#### **Bestuurlijke afspraak**

De NVAO heeft op basis van het beoordelingsrapport bij de accreditatieaanvraag en het antwoord op enkele aanvullende vragen aan het beoordelingspanel vastgesteld dat er geen twijfel is over de kwaliteit van de genoemde afstudeerrichtingen en het gerealiseerd niveau van de afgestudeerden. De opleiding is derhalve accreditatiewaardig.

De NVAO heeft er kennis van genomen dat de twee hogescholen in Nederland met een hbo-bachelor opleiding waarin een opleidingstraject tot piloot respectievelijk luchtverkeersleider is opgenomen, een gezamenlijk traject starten dat ziet op een heroriëntatie van de inrichting van deze opleidingstrajecten. Voor de opleiding hbo-bachelor Aviation betreft het de studiepaden Aviation Flight and Aviation Air Traffic Control. Een in te stellen werkgroep komt uiterlijk 1 april 2016 met voorstellen. Per studiejaar 2018-2019 is de bedoelde nieuwe inrichting volledig doorgevoerd. De redenen ervoor zijn een herijking van de hier aanwezige publiek-private samenwerking aan huidige wettelijke eisen en de versterkte rol van examencommissies in bachelor- en masteropleidingen. De NVAO zal uiterlijk per 31 augustus 2018 door de instelling worden geïnformeerd over de consequenties van de door de instelling gemaakte keuze ten aanzien van de inrichting van de opleiding hbo-bachelor Aviation van Hogeschool Amsterdam.

Ingevolge het bepaalde in artikel 5a.10, derde lid, van de WHW heeft de NVAO het college van bestuur van de Hogeschool van Amsterdam te Amsterdam in de gelegenheid gesteld zijn zienswijze op het voornemen tot besluit van 19 oktober 2015 naar voren te brengen. Bij brief van 3 november 2015 heeft het college van bestuur van deze gelegenheid gebruik gemaakt. Dit heeft geleid tot een enkele tekstuele aanpassingen.

De NVAO besluit accreditatie te verlenen aan de hbo-bachelor Aviation (240 EC; variant: voltijd; locatie: Amsterdam) van de Hogeschool van Amsterdam te Amsterdam. De opleiding kent de volgende afstudeerrichtingen: Aviation Operations en Aviation Engineering. De NVAO beoordeelt de kwaliteit van de opleiding als voldoende.

Dit besluit treedt in werking op 30 november 2015 en is van kracht tot en met 29 november 2021.

Den Haag, 30 november 2015

De NVAO  
Voor deze:

A handwritten signature in blue ink, consisting of a large, stylized 'R' followed by a horizontal line extending to the right.

R.P. Zevenbergen  
(bestuurder)

Tegen dit besluit kan op grond van het bepaalde in de Algemene wet bestuursrecht door een belanghebbende bezwaar worden gemaakt bij de NVAO. De termijn voor het indienen van bezwaar bedraagt zes weken.

| <b>Standaard</b>                                      | <b>Formulering Standaard</b>                                                                                                                                      | <b>Beoordeling door het panel</b> |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <b>1. Beoogde eindkwalificaties</b>                   | De beoogde eindkwalificaties van de opleiding zijn wat betreft inhoud, niveau en oriëntatie geconcretiseerd en voldoen aan internationale eisen                   | <b>Goed</b>                       |
| <b>2. Onderwijsleeromgeving</b>                       | Het programma, het personeel en de opleidingsspecifieke voorzieningen maken het voor de instromende studenten mogelijk de beoogde eindkwalificaties te realiseren | <b>Goed</b>                       |
| <b>3. Toetsing en gerealiseerde eindkwalificaties</b> | De opleiding beschikt over een adequaat systeem van toetsing en toont aan dat de beoogde eindkwalificaties worden gerealiseerd                                    | <b>Voldoende</b>                  |
| <b>Eindoordeel</b>                                    |                                                                                                                                                                   | <b>Voldoende</b>                  |

De standaarden krijgen het oordeel onvoldoende, voldoende, goed of excellent. Het eindoordeel over de opleiding als geheel wordt op dezelfde schaal gegeven.

- Drs. W.G. van Raaijen, partner bij Hobéon en treedt sinds 2004 veelvuldig op als lead-auditor van auditpanels in het kader van accreditaties hoger onderwijs ;
- Ir. P.K.M. De Swert was tot 2012 Executive Vice President Engineering & Maintenance bij KLM. Na 2012 is hij minder gaan werken, maar hij voert nog steeds met enige regelmaat adviesopdrachten uit en hiernaast is hij visiting professor aan de Katholieke Universiteit Leuven (België);
- Prof. Dr. P.S. Morrell is consultant en visiting professor aan Cranfield University (Engeland). Hij heeft verschillende publicaties en handboeken geschreven op het gebied van air transport economics and finance;
- Dr. Ir. I. Hermann is hoofddocent Tourism & Leisure Management bij Saxion en in die rol coördinator van het semester Destination Development & Management;
- Ir. B.B. Kok is verkeersvlieger bij Transavia.com op de Boeing 737NG en daarnaast (parttime) werkzaam als senior Aviation Operations Expert bij To70, waarbij hij consultancy opdrachten uitvoert op het gebied van Air Traffic Management en Flight Operations. Hij is bevoegd als instructeur voor zowel de Boeing 737 als alle mogelijke bevoegdheden en brevetten in de kleine luchtvaart. Van 1999 tot 2008 was hij bovendien werkzaam bij Luchtverkeersleiding Nederland (LVNL);
- Ing. A. Akopov volgt de premaster voor Aerospace Engineering aan de TU Delft. Hiervoor heeft hij de hbo- bacheloropleiding Luchtvaarttechnologie van Inholland gevolgd, die hij in 2013 met succes afrondde.

Het panel werd ondersteund door I.A.M. van der Hoorn, secretaris (gecertificeerd).