



Minimal Standards for Certificates and Specializations of Advanced Practice Nurses (MiS-APN)

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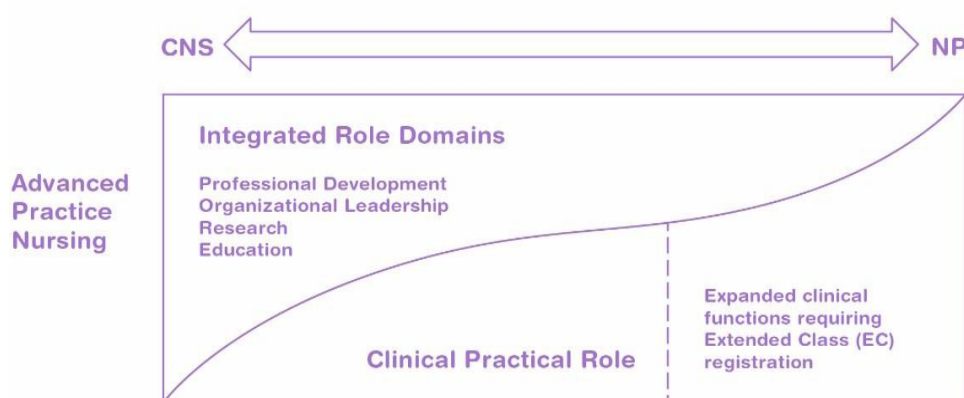
1 Introduction

The increased care needs of an aging population and an increase of people in all ages with chronic illnesses due to medical and medical-technical advancements suffering from, e.g., diabetes, cancer, depression, dementia, as well as polymorbidity, require new models of care. New models of care which are based on coordination and continuity of care, self-management support, and interprofessional collaboration. Within these new models of care, due to their specific educational profile, Advanced Practice Nurses (APNs) play a central role (Schweizerische Gesundheitsdirektorenkonferenz & Schweizerisches Bundesamt für Gesundheit, 2012). The contribution of APNs to affordable, easily accessible, and patient- and family-centred health care, focusing on self-management, continuity, coordination, and interprofessionalism, has also gained momentum in Switzerland within the last few years. A variety of research findings from different national pilot projects have demonstrated that APNs can substantially contribute to high-quality health care (Bachofner et al., 2021; Bologna et al., 2023; Essig, 2019; Gysin et al., 2019, 2020; Häfliger et al., 2023; Imhof et al., 2012; Lauber et al., 2022; Sailer Schramm et al., 2019; Soldi et al., 2021; Steinbrüchel, 2019; Stürmer et al., 2021; Ullmann et al., 2017).

In September 2016 the Swiss Parliament voted on the law for health professionals at the undergraduate (BSc) level. This law represents a legal basis provision for the accreditation of educational programs at the university level (universities and universities of applied science (UAS)), for the regulation of the right to practice, as well as for a register for all nurses. Nursing stakeholders lobbied together to additionally obtain a legal basis for a separate regulation of the APN role, which is, per definition, a role at the Master of Science level. Despite all lobbying actions, the law passed without including the master's level, and consecutively, APN has not been regulated in the law. The nursing stakeholders decided to define the requirements for regulation and registration as APNs and organize a professional self-regulatory mechanism for the growing number of APNs in Switzerland.

By developing the requirements, Bryant-Lukosius & Dicenso's, (2004) definition of advanced practice nursing on a continuum between the roles of Clinical Nurse Specialist (CNS) and Nurse Practitioner (NP) has been the leading framework.

Continuum of APN Roles



Bryant-Lukosius, D. (2004 & 2008). The continuum of advanced practice nursing roles. Unpublished document.

Within this continuum, several profiles can be defined. However, despite differences in role components and the main addressees in daily practice, all these APN roles focus on providing direct care to patients and their families.

Whereas the CNS is, in addition to her or his direct clinical work with patients and families, often responsible for providing care standards and guidelines for the organisation, coaching nursing and other health professional colleagues in their work, ensuring quality of care in the health care system, the NP places its emphasis primarily on care delivery to patients and families, including diagnosing, prescribing, and referring, and to a lesser extent, coaching and development tasks toward nurses and other health professional colleagues. Despite those differences, all nursing stakeholders in the workgroup of the initial regulation task force agreed to regulate both roles and all in-between diversifications. As the overarching framework for APN regulation, Hamric and colleagues domains for an advanced practice (Hamric et al., 2009; Hamric & Tracy, 2019) and the Pan-Canadian framework (Canadian Nurses Association, 2019) were used. The nursing stakeholder organizations and the educational institutions providing nursing programs at the Master level consented to the following definition of APN (Verein für Pflegewissenschaft et al., 2012)

*“Eine **Pflegeexpertin APN** ist eine registrierte Pflegefachperson, welche sich durch akademische Ausbildung, Expertenwissen, Fähigkeiten zur Entscheidungsfindung bei hoch komplexen Sachverhalten und klinische Kompetenzen für eine erweiterte pflegerische Praxisangeeignet hat. Pflegeexpertinnen APN sind fähig, in unterschiedlichsten Settings vertiefte und erweiterte Rollen zu übernehmen und diese in eigener Verantwortung im interprofessionellen Team auszufüllen.*

Die Kernkompetenzen einer Pflegeexpertin APN sind: direkte klinische Praxis, Experten-Coaching, Beratung, Ethische Entscheidungsfindung, interdisziplinäre Zusammenarbeit, klinisches und fachspezifisches Leadership und Forschungskompetenz.

Voraussetzung für die Anerkennung und Registrierung als Pflegeexpertin APN ist ein Master in Pflegewissenschaft (mindestens 90 ECTS) mit einem APN-Fokus, der für eine vertiefte und erweiterte Pflegepraxis vorbereitet. Für den Titelerhalt sind der regelmässige Nachweis von kontinuierlicher Weiterbildung nach Vorgaben des aktiven Berufsregisters und der Nachweis regelmässiger direkter klinischer Praxis notwendig.”

«Une infirmière de pratique avancée APN est une infirmière enregistrée qui, par sa formation académique, a acquis un savoir d'experte ainsi que les aptitudes nécessaires pour prendre des décisions dans des situations complexes et qui possède des compétences cliniques indispensables à un exercice professionnel infirmier avancé. Les infirmières de pratique avancée APN sont capables, dans des situations les plus diverses, de se charger de rôles avancés et élargis, ce qu'elles assument sous leur propre responsabilité au sein d'une équipe interprofessionnelle. Les compétences clés d'une infirmière de pratique avancée APN sont: la pratique clinique directe, le coaching en tant qu'experte, la consultation / guidance, le processus de la prise de décision éthique, la collaboration interdisciplinaire, le leadership clinique et spécialisé et les compétences en matière de recherche.

Pour obtenir la reconnaissance et l'enregistrement en tant qu'infirmière de pratique avancée APN, il faut être titulaire d'un Master en sciences infirmières (d'au minimum 90 ECTS) avec un focus en pratique infirmière avancée (APN) qui prépare spécifiquement à un exercice professionnel avancé et élargi. De plus, pour conserver ce titre, il est nécessaire d'apporter la preuve régulière d'une formation continue prise au sens des prescriptions du registre professionnel actif, ainsi que la preuve d'une pratique clinique directe régulière.»

In 2019, the nursing stakeholders established an association called “APN-CH: The Swiss Professional Regulator” (APN-CH: Die reglementierende Organisation, 2023). The funding organisations are the Swiss Nurses Association (SBK-ASI), the Swiss Association for Nursing Science (VFP-APSI), the Swiss Nurse Leaders (SNL), the Interest Group of Advanced Nursing Practice (IG SwissANP), and the Foundation Lindenhof, Bern (Stiftung Lindenhof, Bern). The requirements for registration as a “Pflegeexpert:in APN-CH/infirmière de practice avancée APN-CH” were defined, operationalized, and a virtual registration platform (e-log) had been installed and tested. Since May 2021 the registration platform is operational.

APNs with a MScN degree of a minimum of 90 ECTS focusing on clinical practice with modules in pathophysiology, pharmacology, and physical assessment and an internship lasting at least 6 months (approximately 450 h with 50 h of supervised practice) can register if they hold a position in direct clinical practice of 40% FTE.

In the summer of 2023, more than 120 APNs have registered. This professional self-registration is an essential condition for the negotiation for inclusion of APNs in the financial systems for long-term care in institutions and home-based, as well as for primary care (e.g., Tarmed), according to Swiss law.

2 Project MiS-APN

Within the last decade, APN numbers have increased in Switzerland. A recent survey in 2022 conducted by SBK-ASI, APN-CH and the Institute of Nursing Science, University Basel showed that out of 505 participants with an MScN degree, 60% work as APN in clinical practice with diverse patient populations. APNs have found their workplace in diverse settings in the health care system. Starting out in hospitals, the most recent developments demonstrate that APNs are being integrated into primary care and becoming part of the interprofessional teams in GP practices (Schweizer Berufsverband der Pflegefachfrauen und Pflegefachmänner (SBK) et al., 2022).

Different educational programs at universities and UAS with a clinical focus have developed in all regions of Switzerland. In the beginning, there were more generic APN programs; after some time, more and more diversifications could be observed. Cantonal health laws (e.g., Canton Vaud) have changed or are under way of being changed, allowing new competencies and responsibilities for APNs and an expanded scope of practice for nurses prepared for advanced nursing practice. Furthermore, an increasing number of strategies and projects for the implementation of APN roles can be observed in the Swiss health system; some are led by cantonal governments (e.g., Jura, Luzern), others by organizations and institutions, such as Medbase as a primary care provider. Additionally, in several cantonal parliaments, the governments are asked to consider the implementation of APN roles.

Generic core competencies of APN are important to safeguard high competencies and performance for all APN profiles. The current Swiss regulation assesses the generic core competencies of the APN. The current implementation efforts and the diversification of APN roles are based on the needs of patients, the population, and consequently the health system and its institutions, resulting in different role profiles. The increasing number of APNs and the diversity of their profiles require the definition of more specific competencies and scope of practice for specific fields of health care. Specifying profiles and specific competencies for Switzerland through APN-CH will contribute to the continuing ability to guarantee patient safety and quality of care in the future. Additionally, defining the specific profiles and competencies will foster a common understanding concerning the scope of

practice among APNs, employers, educational institutions, and cantonal authorities, as cantons are responsible for health care and its quality.

To reach the goal of specifying profiles, defining a common trunk and minimal requirements for education, and consenting on the necessary specializations based on epidemiology, scenarios of current and future needs in Switzerland are required. The goal is to include APNs with their fullest scope of practice in the best possible health care. A national solution is needed. Therefore, developing common ground for the regulation of specific profiles on a national level is pivotal to avoid running the risk of ending up with only a few cantons having the APN roles properly regulated. These goals and intentions were also the result of a round table organized by APN-CH in 2022 with all the nursing stakeholders and MScN education institutions.

Additionally, the implementation of Art. 117b of the Swiss Constitution, based on the popular nursing initiative, provides a window of opportunity to foster the implementation of APN regulation in national legislation. A first proposal of the Federal Office of Public Health (FOPH) favors a model in analogy to the one for physicians. FOPH suggests regulating the Master of Science in Nursing with 90 ECTS in the law for health professionals as the required educational preparation for APNs. Additionally, a passed national exam as the entrance level for advanced nursing practice could be required, followed by an internship for specialization and profile diversification. After government and administrative internal consultations, a report will be presented to parliament by the federal administration in 2024. The consultation of this APN report represents a unique opportunity for nurses and other supporting stakeholders. If they succeed in feed back to the government with one strong voice and a shared position on the APN scope of practice and regulation, their position must be heard and integrated into all relevant laws. If there is too much diversity and contradiction between the nursing stakeholder's positions, the government is likely to renounce regulation advanced nursing practice or to decide on an approach that contradicts the wishes of the APN community.

Subsequently, the nurses' organizations agreed to collaborate systematically and to achieve agreed-upon joint positions. APN-CH took the initiative to start the "**Minimal Standards for Certificates and Specializations of APN's (MiS-APN)**" together with the nursing stakeholders.

The goal is to mesh the minimal educational requirements amongst the educational institutions and establish clinical preparation requirements to achieve specific certificates. Additionally, these standards shall be developed further with content for specific certificates and operationalized for regulation. The overall goal is to warrant safe, high-quality care for patients, their next of kin, and other targeted population groups.

Objective 1

Defining a standardized common trunk (content and clinical preparation) to educate APN.

Objective 2

Developing the structure and necessary content for certificate acquisition.

Objective 3

Developing certificates for two to three profiles and specializations including post-master educational and clinical residency requirements.

Objective 4

Operationalizing and pilot testing the requirements for issuing the registration.

The project organization includes all Swiss nursing stakeholders currently active in APN regulation and education. The steering group consists of representatives of national associations and educational institutions (universities, UAS). The members of the working group combined are representing APN in different settings: APN education, research, leadership, and professional practice.

The working group started in June 2023 with the goal of developing **objective 1 and 2**, according to the agreed-upon work plan. The following report contains the requirements and recommendations for these two objectives. According to the project plan, these two objectives will be presented as milestone 1 at the steering group meeting in January 2024.

2.1 Working group proceeding / methodology

The working group collected, shared, and read international literature about APN frameworks (Canadian Nurses Association, 2019, 2019; Nursing and Midwifery Board Ireland, 2017), recently published Swiss papers (Schweizer Berufsverband der Pflegefachfrauen und Pflegefachmänner (SBK) et al., 2022; unimedsuisse, 2023), and key papers about APN education (APRN, 2008; International Council of Nurses, 2020; Wheeler et al., 2022). Furthermore, the members of the working group collected and shared information about all the current MScN curricula in Swiss educational institutions. Curricula of all educational institutions preparing nurses on an MScN level for advanced practice were evaluated and discussed in the working group. An overview was established. The common trunk amongst the programs was then defined and conclusions for minimal requirements were developed including international recommendations (APRN, 2008; International Council of Nurses, 2020; Wheeler et al., 2022).

The post-graduate education requirement in the form of an internship year has been developed by the working group incorporating the continuous education requirements for physicians pursuing a specialty (Schweizerisches Institut für ärztliche Weiter- und Fortbildung, 2022). Education experts from the master programs of the Swiss universities, the expert committee of APN-CH, as well as several international experts in the field of APN provided feedback (see acknowledgement).

The Universities Basel and Lausanne and the Universities of Applied Science (UAS) Zürich, Winterthur, St.Gallen, Bern, Supsi Manno programs will be referred to in a generalized way as universities in the following text. If there is a need to highlight specialties and differences between the seven institutions, they will be named individually.

3 Minimal requirements and common trunk

Program analysis

Four universities have divided their programs into diverse tracks preparing their students for the specific role of a CNS or NP. Three other programs have a generic form of APN preparation. Additionally, some of the universities developed an academic track to allow students to pursue eventually an academic career as nurse researchers.

For the Minimal Standards to issue certificates for APNs, the academic tracks have been excluded from the analysis.

The scope of practice of APNs, be it CNS or NP, have according to the ICN paper, equal competencies (skills and knowledge) in clinical reasoning to manage full episodes of care and

complex healthcare problems of populations, in ethical decision-making, in leadership in professional and interprofessional teams, and in evaluating and enhancing healthcare services. Therefore, all APN education must provide core courses to all students, despite the different competencies amongst NPs and CNSs in providing direct care to patients, as far as diagnosing, prescribing, or referring across the life span or specific health care problems are concerned (International Council of Nurses, 2020).

A national exam to prove the mutual and the role-specific competencies of the MScN graduates is one possibility that might be developed in the future. A prerequisite following that route is national legislation for APNs. In the meantime, harmonization and agreement upon a common trunk and role-specific contents in master programs can help to clarify the educational and internship requirements. The goals are to reach a safe autonomous practice toward the patients in both roles. Therefore, the development of a possible structure to ensure safe entry into practice, and the safe provision of care for patients and their families has been prioritized.

The contents of the programs have been grouped into five domains: three are concerned with content topics, one with the hours of internship during the educational program to allow translating learning contents into clinical practice and one with the requirements for the master thesis.

Three content topics

The first domain contains the ECTS for all courses/modules that deepen and expand the knowledge base for the work with patients and families (direct clinical practice) such as expanded pathophysiology, pharmacology and physical assessment, ethical practice as well as guidance and coaching.

The second domain contains the ECTS of all courses/modules which prepare the students to act as leaders of teams, change agents in health care systems (leadership), and interprofessional collaborators.

The third domain with its ECTS highlights the research capabilities and translation competencies to allow evidence-based practice and competencies to evaluate their work descriptively.

Internship during the educational program

The clinical preparation hours respectively ECTS have been grouped to a separate domain. The assigned hours have been proven to be clinical hours with patients, clients, nursing home residents, and/or family members. Hours as research assistants or visits in other institutions have been excluded.

Master thesis

The last domain is the master thesis. The assignments and the ECTS have been evaluated. It was decided to only include/count the learning experience of the students to show proficiency in their academic work to systematically answer a research question with the appropriate methodology. To have equal assessments amongst the programs, proposal writing as courses has been included in the domain of research capacity building for all programs and is not counted as part of the master thesis.

Table 1: Overview ECTS assigned to content domains.

		ECTS of the entire program. (1 ECTS accounts for 30 learning hours)	modules that deepen and expand the knowledge in pathophysiology , pharmacology- non- parmaceutical interventions, physical assessment (3 P); increase the understanding of disease and illness experience; train systemic approaches to coaching patients and families etc	modules that prepare the students as project managers or change agents in health care, provide insight in health care system, policy making etc. Including interprofessional collaboration	modules that target the research competency of the student: Research methods, statistics, proposal writing, reviews of literature etc.	ECTS assigned to the master thesis. Proposal writing is excluded	hours (ECTS)in direct clinical practice within the MSc program
* Domains of Hamric & Hanson APN approach in M. F. Tracy et al., 2023.			* Hamric & Hanson APN model domains: 1. direct clinical practice 2. coaching and guidance 3. ethical practice	Hamric & Hanson domains: 4. leadership 5. collaboration	Hamric & Hanson domain: 6.evidence- based practice		
MScN program		ECTS overall	clinical deepening/ expertise	practice development/ leadership	Research competency/ evidence-based practice	Masterthesis	Clinical preparation/ knowledge transfer/ internship
ZHAW	CNS	90	20	20	25	15	150 h (5 ECTS)
ZHAW	NP	90	24	15	20	18	500 hours
Uni Lausanne/ HES-So	CNS clinical option	90	20	21	32	30	150 h (5 ECTS)
Uni Lausanne	NP	120	57	8	13	9	1100 h (33 ECTS)
Bfh	CNS	90	10	25	25	20	300 - 900h
Bfh	NP	90	30	10	20	20	420 - 1020h
Careum	clinical excellence	90	30	26	19	13	0 hours
OST	APN	90	12	15	33	20	150 h (5 ECTS)
Uni Basel	APN	180	60	38	55	20	150 h (6 ECTS)
Suspi	APN	90	51	8	21	10	0 (60-120h (2-4 ECTS) are planned for next program starts)

Conclusion

A recent survey in Europe demonstrated that most countries have master programs of 90 or 120 ECTS (De Raeve et al., 2023). For example, in Finland master programs of 90 and 120 ECTS exist for APN education as we see it in Switzerland. Although harmonization of the program on the 120 ECTS level throughout Europe has been seen as desirable by some nursing and educational stakeholders (European Federation of Nursing Associations APN workgroup, 2022), the current political situation with the necessity to formulate feasible and (more) easily accessible solutions on a national level in Switzerland led the working group to formulate the minimal requirement based on the 90 ECTS programs.

In Switzerland, the requirements for MSc program entry vary amongst the universities. Whereas e.g., the University of Basel admits nurses with a diploma degree and high school

diploma (Schwendimann et al., 2019), the UAS can only admit students with a BScN in their programs. Students with a BSc from a UAS degree who want to study at the University Basel can apply for learning efficiency approval from their BSc program. The current practice is to approve credits from the BSc program if future students make an application. The initial competencies of students entering the programs are therefore hard to compare and hence the time needed to achieve APN-level competencies within the graduate program may vary.

The working group analysis of the current curricula has shown common content throughout the programs. The assigned ECTS amongst the programs to important topics for APNs vary, but all programs target APN level education by addressing all of Hamric & Hanson's model domains (Tracy et al., 2023). The specific contents in deepening and expanding the knowledge of major health challenges of populations and understanding pathophysiological background as well as therapies, be it pharmacological or non-pharmacological, are hard to identify in detail within the programs. Nevertheless, the common trunk should consist of minimal learning hours for all APN roles because all APNs in Switzerland have expanded direct care responsibility to patient populations and the responsibility to advise nurse colleagues and other health professionals in direct patient care.

The UASs allow the students to book elective modules. We did not count for all the elective courses that students can pursue although we acknowledge that these voluntary efforts may benefit the students and hence their standing as APNs.

The transfer of educational knowledge into clinical practice differs amongst the programs from 0 to 1100 hours. Some UASs allow the students to expand their clinical hours from a minimum to a maximum of organized practicum (e.g. BFH 300 to 900 hours for CNS and 420 to 1020 hours for NP).

APN program requirements

The APN-level work builds always on the RN competencies (International Council of Nurses, 2020). It is strongly recommended that the RN entering an APN education program have work experience of two years as a RN.

Based on all preparatory work of the working group, for all APN roles and specialties a common trunk is necessary to warrant a secure entry level for APN practice (APRN, 2008).

For entry into APN practice and regulatory purposes APN education must:

- Be formal education with a graduate degree awarded by an accredited academic institution.
- Be pre-approved, pre-accredited, or accredited before admitting students.
- Be comprehensive and at a graduate level.
- Prepare the graduates to practice at APN-level.
- Prepare the graduates in the core competencies for the APN roles. Choosing a population focus within the program can be considered. Possible population foci could be neonatal, pediatrics, adult, adult-gerontology, family across the life span, mental health, and gender health.
- Include, at a minimum, three separate comprehensive graduate-level courses (the APN Core) in:
 - Advanced physiology and pathophysiology, including general principles that apply across the lifespan.
 - Advanced health assessment, which includes assessment of all human systems, advanced assessment techniques, concepts, and approaches; and

- Advanced pharmacology, which includes pharmacodynamics, pharmacokinetics, and pharmacotherapeutics of all broad categories of agents,
- Provide a basic understanding of the principles of decision-making in the APN role.
- Prepare the graduate to assume responsibility and accountability for health promotion and/or maintenance as well as the assessment, diagnosis, and management of patient problems, which includes the use and prescription of pharmacologic and nonpharmacologic interventions; and
- Ensure clinical and didactic coursework is comprehensive and sufficient to prepare the graduate to practice in the APN role and population focus. (adapted from APRN, 2008)

However, the minimal requirements for a common trunk can be determined to achieve preparation for all APN roles. The suggestion is a minimum of 80 ECTS within a 90 ECTS program as the common trunk for all APN roles.

The common trunk for all MScN programs, regardless of preparation for the CNS or NP roles, should consist of the following necessary contents:

Expansion in knowledge and expertise in clinical practice	Practice development/ leadership	Clinical preparation internship/ transfer	Research competencies/ Evidence-based practice	Master thesis
20 ECTS	20 ECTS	10 ECTS	15 ECTS	15 ECTS
600 h of learning	600 h	300 h	450 h	450 h
Knowledge in pathophysiology, knowledge, and skills in physical assessment, and pharmacological or non-pharmacological interventions. in adult care: health challenges in the elder population (geriatric syndrome) need to be addressed.	Understanding of the health care system, change management, and interprofessional collaboration skills are achieved.	Clinical preparation and internships of at least 300 h must be included in the programs. Assignments can differ between roles.	Assessment of literature for providing evidence-based practice. A basic understanding must be achieved through a variety of methodologies and methods to evaluate clinical practice and one's role contribution.	Proposal writing has been excluded from this module. Proof of a systematic approach with appropriate methodology to answer research questions.

Content requirements

Expansion in knowledge and clinical expertise in clinical practice: the health problems of the population are addressed. The Swiss health statistics show that neoplasms, cardiovascular diseases, chronic pulmonary diseases, endocrinological diseases (diabetes mellitus), and musculoskeletal disorders are the prominent noncommunicable disorders (Bundesamt für Statistik, 2023) as are mental health disorders such as depression or addiction. Therefore,

within the common trunk of APN education, the knowledge and skills toward these diseases must be highlighted.

The increase in the aging population is a challenge for the health care system since, with age, the prevalence of chronic diseases increases and the demand on continuity of care and nursing becomes pivotal. Therefore, APNs who work with elderly adult patients must turn their attention specifically to geriatric knowledge.

4 Specialization within programs

With the analysis of the programs, preparation differences between the roles of CNS and NP became obvious. Comparable with international recommendations, it can be seen that CNS are prepared specifically for professional leadership and NP have more hours in pathophysiology, diagnostics, and pharmacological and non-pharmacological interventions (International Council of Nurses, 2020).

With the minimal requirements on ECTS assigned to program contents, the working group proposes that 10 ECTS in a program with a minimum of 90 ECTS can be assigned to role-specific contents. There is a minority position that thinks that the common trunk could be smaller to allow for more specific modules.

Preparing for CNS:

Content: Additional coursework and clinical preparation can cover leadership, change management, project management, practice development, clinical reasoning, and standard development for specific populations or specialties.

	Expansion in knowledge and expertise in clinical practice	Practice development/ leadership	Clinical preparation internship/ transfer	Research competencies/ Evidence-based practice	Master thesis
80	20 ECTS	20 ECTS	10 ECTS	15 ECTS	15 ECTS
	600 h	600 h	300 h	450 h	450 h
CNS		10 ECTS additional (with or without clinical prep.)			
		300 h			
Total CNS 90 ECTS	600 h	900 h	300h	450h	450h

Preparing for NP:

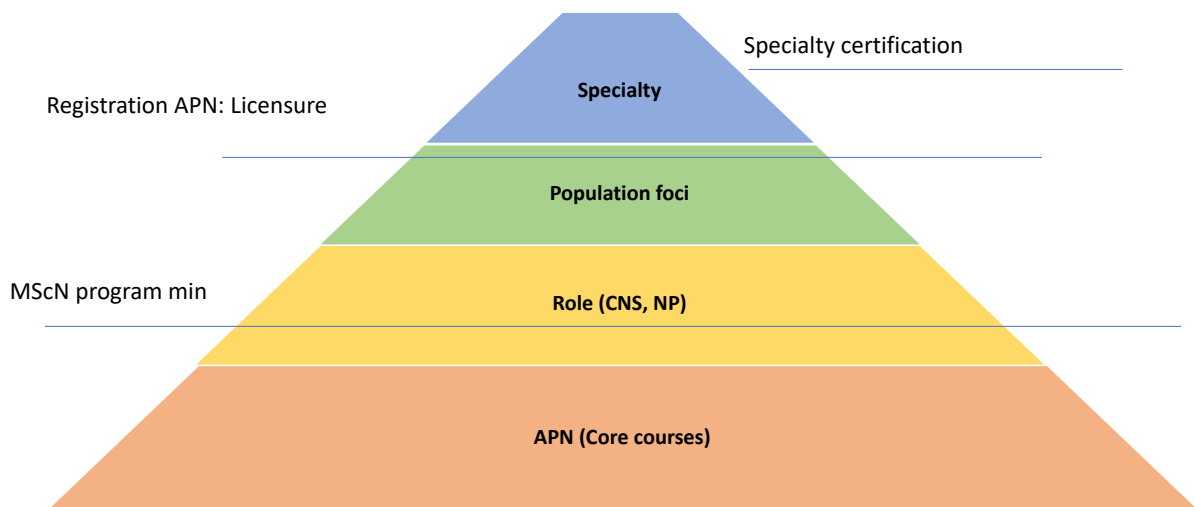
Content: diagnostic means, interpretation of findings, therapeutic decision-making, clinical reasoning, attending a patient roster.

	Expansion in knowledge and expertise in clinical practice	Practice development/ leadership	Clinical preparation internship/ transfer	Research competencies/ Evidence-based practice	Master thesis
80	20 ECTS	20 ECTS	10 ECTS	15 ECTS	15 ECTS
	600 h	600 h	300 h	450 h	450 h
NP	10 ECTS additional (with or without clinical prep.)				
	300 h				
Total NP 90 ECTS	900 h	600 h	300 h	450h	450h

5 Internship Requirement for issuing specific certificates.

The ECTS and content assigned must be seen as minimal requirements for the initial education of APNs. To achieve a specific role and a specialty certificate an internship, including structured education, is pivotal. The working group points out the need for learning in clinical practice (on the job) with structured education for achieving specific certificates and preparing for autonomous practice.

The graph shows the career pathway and the content for education, registration, and certificate acquisition.



In accordance with an initial proposal of the FOPH in the context of the Streiff motion, the working group of the project MiS-APN recommends that after completion of the MScN programs, an internship shall follow. During the internship, consolidation of knowledge and a role in a specific field must be pursued. International literature demonstrates the importance of internships for the transition to an independent practice. The observed variation in length represents advantages and disadvantages accordingly. Transition to practice-legislation requires that newly graduated APNs practice under the supervision or mentorship of an experienced clinician. For example, in the USA, the required hours are widely variable across states, from 1,000 hours up to five years of supervised practice, and are often used as precedents by opponents to unobstructed NP practice (Green, 2022; Kleinpell et al., 2023; Wheeler et al., 2022).

Based on these experiences and to avoid cheap labor and harmful dependencies in Switzerland, the internship must be limited in length but help to achieve specialty knowledge for the chosen population or field of practice and to deepen competencies in entrustable professional activities (EPAs).

The internship is seen as a paid assistant year for APNs, with assigned mentoring and structured education requirements. Finances for the preceptors in clinical practice must be guaranteed. Whether the responsibility to organize the learning in clinical practice during the internship is completely with the employing health care organization (e.g., hospitals, nursing homes, community care, etc.) or shared between universities and employing health care organizations, or entirely with the universities must be defined within the regulatory framework. For APNs already working in the health care system, specific transitional solutions will be put in place.

Content

The learning hours contain three different contents and knowledge and skill acquisitions. 1) The specific role must be practiced in direct clinical settings; 2) knowledge and skills must be adapted to the attended population (e.g., elderly, over the life span, pediatrics); with 3) specific health issues (e.g., neoplasms, end-of life palliative care, cardiovascular diseases, depression, addiction, diabetes, orphan diseases, etc.)

Internship (1800 h) with continuous education (160h)	Role specific (NP or CNS)	Population	Specialty
MscN program	at least 90 ECTS with common trunk of 80 ECT and 10 ECTS additional role specific preparation		

Three different knowledge bases must be pursued:

1. knowledge and skill development in the specific role
 - a. CNS: supervised assignments in project management, standard development for specific patient populations, leadership, interprofessional, or professional project.
 - b. NP: supervised practice in diagnostics, treatment, and counseling of a patient panel; interprofessional collaboration
2. Knowledge and skill development in the chosen population:
 - a. CNS and NP deepen the knowledge base in specific health problems of their populations through structured education in clinical practice (see structured education below).
3. Knowledge and skill development in specialties
 - a. CNS and NP deepen the knowledge base in specialties through structured education (see structured education below).

Duration

The internship must start in the first year after graduation from a MScN preparing at the APN level. The minimum working hours during the internship are 1800 hours. The clinical hours over the minimum of 300 hours during the MScN program can be counted toward these hours.

During the internship, the APNs attend weekly structured education sessions of 4 hours, adding up to a minimum of 160 hours. The education shall not be lumped together but must be divided over the course of the internship.

Structured education

The structured education part of the internship parallels the internship of assistant physicians. The events that count for structured education have been drawn from the Swiss Institute of Postgraduate Education and Medical Training (SIWF/ISFM).

The specific content of the requirements for the population and specialty modules will be developed with members of the professional associations in the specialty area. The group should consist of APNs, physicians, and, where necessary, other health care professionals in the field.

Structured education during the internship can be described as follows:

- Congresses in person, hybrid or virtual
- Interdisciplinary and interprofessional events
 - Lectures
 - Colloquium
 - Clinical conferences
 - CIRS reporting
- Workplace internal educational events
 - Lectures
 - Case conference
 - Seminar
 - Journal club
- Interactive events

- Hand-on courses
- Simulation courses
- Continuous education during clinical work
 - Workplace-based assessments (Mini-CEX, DOPS)
 - Development of competencies (EPAs)
 - Bedside teaching

In addition to structured education, non-structured education can be pursued.

- Teachable moments (at least 10 minutes)
- Self-directed learning
 - E-learning
 - Literature searches
 - Activities with research projects
 - Preparation of exams

(Schweizerisches Institut für ärztliche Weiter- und Fortbildung, 2022)

Further development of internship contents

According to the project plan, two to three of the specifications will be developed after the steering group meeting in January 2024. The specifications will be necessary to eventually issue specific certificates. It would allow to register as an APN with a role as NP or CNS, with focus on a population (e.g., adult, pediatric, mental health, primary care of all ages) and a focus on specialty (e.g., oncology, palliative care, cardiovascular, etc.). The EPAs can be developed according to these roles, population, and specialty foci. The process of obtaining two or three pilot specializations will inform the definition of a generic process for specialization development.

6 Changing from one role to the next

Switzerland is a small country with almost 10 million inhabitants and four language areas. The permeability between roles is important for APNs since the health care system might need a different profile along the professional career of a person, or the person might want to change positions and move to another region with openings in positions with a different profile. Therefore, the programs and the internship must allow for a new focus in role and specialty.

The minimal requirements for Master programs as well as the structured education postgraduation allow APNs to pursue coursework at a university with 10 ECTS and a shortened internship to achieve a new role profile, population focus, and specialty within six months.

7 Re-Registration and Certification

Every five years, at least 8 ECTS are required for re-registration of APNs in Switzerland. The need for specific regulation for CPD within a specialization needs to be explored at a later stage and the required regulation should be put in place accordingly.

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9 References

- APN-CH: Die reglementierende Organisation. (2023). *Advanced- Advocacy—Autonomy*. <https://apn-ch.ch/>, retrieved Dec 16, 2023
- APRN. (2008). *Consensus_Model_for_APRN_Regulation_July_2008.pdf*. https://www.ncsbn.org/Consensus_Model_for_APRN_Regulation_July_2008.pdf
- Bachofner, E., Stamm, S. L., Staudacher, S., & Spichiger, E. (2021). Betreuung durch ein Advanced Nursing Practice-Team – Erfahrungen Lymphombetroffener und ihrer Angehörigen: Eine qualitative Studie. *Pflege*, *34*(5), 231–239. <https://doi.org/10.1024/1012-5302/a000825>
- Bologna, F., Kaufmann, S., Staudacher, S., & Spichiger, E. (2023). Betreuung durch eine Advanced Practice Nurse: Erfahrungen von Patient_innen mit Sarkom und Angehörigen: Eine qualitative Studie. *Pflege*, *36*(1), 2–10. <https://doi.org/10.1024/1012-5302/a000917>
- Bryant-Lukosius, D., & Dicenso, A. (2004). A framework for the introduction and evaluation of advanced practice nursing roles. *J Adv Nurs*, *48*(5), 530–540. <https://doi.org/10.1111/j.1365-2648.2004.03235.x>
- Bundesamt für Statistik. (2023). *Krankheiten*. <https://www.bfs.admin.ch/bfs/de/home/statistiken/gesundheit/gesundheitszustand/krankheiten.html>, retrieved Dec 16, 2023
- Canadian Nurses Association. (2019). *Advanced Practice Nursing: A Pan-Canadian Framework*. CNA.
- De Raeve, P., Davidson, P. M., Bergs, J., Patch, M., Jack, S. M., Castro-Ayala, A., Xyrichis, A., & Preston, W. (2023). Advanced practice nursing in Europe—Results from a pan-European survey of 35 countries. *Journal of Advanced Nursing*, jan.15775. <https://doi.org/10.1111/jan.15775>
- Essig, S. (2019). *APN in der Grundversorgung_Stefan Essig.pdf*. Input und Diskussion svbg/fsas, Bern.
- Green, S. B. (2022). *Transition to practice* [National Association of Pediatric Nurse Practitioners.]. Inside the Beltway. <https://www.napnap.org/inside-the-beltway-february-2022/>
- Gysin, S., Bischofberger, I., Meier, R., van Vught, A., Merlo, C., & Essig, S. (2020). Nurse Practitioners in Swiss Family Practices as Potentially Autonomous Providers of Home Visits: An Exploratory Study of Two Cases. *Home Health Care Management & Practice*, 108482232094628. <https://doi.org/10.1177/1084822320946289>
- Gysin, S., Sottas, B., Odermatt, M., & Essig, S. (2019). Advanced practice nurses' and general practitioners' first experiences with introducing the advanced practice nurse role to Swiss primary care: A qualitative study. *BMC Family Practice*, *20*(1). <https://doi.org/10.1186/s12875-019-1055-z>
- Häfliger, J., Kellerhals, S. D., Grossmann, F., & Lauener, S. K. (2023). „Sich zuhause sicher fühlen“ beginnt im Spital: Eine qualitative Studie zum Erleben von Patient_innen einer APN Hämatologie. *Pflege*, *36*(1), 31–39. <https://doi.org/10.1024/1012-5302/a000899>
- Hamric, A., Spross, J., & Hanson, C. (2009). *Advanced practice nursing: An integrative approach* (4.). Saunders/Elsevier. <http://books.google.ch/books?id=q9GfPwAACAAJ>
- Hamric, AB., & Tracy, M. (2019). A definition of advanced practice nursing. In M. Tracy & E. O'Grady (Hrsg.), *Advanced Practice Nursing: An Integrative Approach* (S. 61–79). Elsevier.
- Imhof, L., Naef, R., Wallhagen, M. I., Schwarz, J., & Mahrer-Imhof, R. (2012). Effects of an Advanced Practice Nurse In-Home Health Consultation Program for Community-Dwelling Persons Aged 80 and Older. *Journal of the American Geriatrics Society*, *60*(12), 2223–2231.

<https://doi.org/10.1111/jgs.12026>

International Council of Nurses. (2020). *Guidelines on Advanced Practice Nursing 2020*.

International Council of Nurses. https://www.icn.ch/system/files/documents/2020-04/ICN_APN%20Report_EN_WEB.pdf

Kleinpell, R., Myers, C. R., & Schorn, M. N. (2023). Addressing Barriers to APRN Practice: Policy and Regulatory Implications During COVID-19. *Journal of Nursing Regulation*, 14(1), 13–20. [https://doi.org/10.1016/S2155-8256\(23\)00064-9](https://doi.org/10.1016/S2155-8256(23)00064-9)

Lauber, E., Kindlimann, A., Nicca, D., Altermatt-von Arb, R., Sgier, C., Staudacher, S., Sailer Schramm, M., Vökt, F., & Zúñiga, F. (2022). Integration of an advanced practice nurse into a primary care practice: A qualitative analysis of experiences with changes in general practitioner professional roles in a Swiss multiprofessional primary care practice. *Swiss Medical Weekly*, 152(2526), w30199. <https://doi.org/10.4414/SMW.2022.w30199>

Nursing and Midwifery Board Ireland. (2017). *Advanced-Practice-Nursing-Standards-and-Requirements-2017.pdf*. Nursing and Midwifery Board Ireland.

Sailer Schramm, M., Brüngger, B., Wyss, C., Röthlisberger, A., Kläy, M., Triaca, H., Grünig, B., Schüller, A., & Blunier, H. (2019). *Tandembetreuung mit Vorteilen für alle Beteiligten*. 5. Schweizer Berufsverband der Pflegefachfrauen und Pflegefachmänner (SBK), APN-CH: Reglementierende Organisation, & Institut für Pflegewissenschaft Universität Basel (INS). (2022). *Masterumfrage 2022—Befragung von in der Schweiz berufstätigen Absolventinnen und Absolventen eines pflegewissenschaftlichen Master of Science in Nursing Studiums*. SBK, APN-CH, INS.

Schweizerisches Institut für ärztliche Weiter- und Fortbildung, S. (2022). *Was ist unter strukturierter Weiterbildung zu verstehen?* (S. 3). SIWF.

https://www.siwf.ch/files/pdf18/strukt_wb_d.pdf

Schwendimann, R., Fierz, K., Spichiger, E., Marcus, B., & De Geest, S. (2019). A master of nursing science curriculum revision for the 21st century – a progress report. *BMC Medical Education*, 19(1), 135. <https://doi.org/10.1186/s12909-019-1588-9>

Soldi, M., Mauthner, O., Frei, I. A., & Hasemann, W. (2021). Experience of adult patients and professionals with a program for the prevention of alcohol withdrawal delirium in the acute care setting—A case study. *Perspectives in Psychiatric Care*, 57(2), 726–733.

<https://doi.org/10.1111/ppc.12604>

Steinbrüchel, C. (2019). Advanced Practice Nurses in der Hausarztpraxis: Unterstützung für die Grundversorgung. *der informierte Arzt*, 3, 24–26.

Stürmer, N., Frei, I. A., & Nicca, D. (2021). Erfahrungen von Advanced Practice Nurses mit einem klinischen Weiterbildungsstudiengang im Kontext ihrer beruflichen Entwicklung. *Pflege*, 34(4), 213–220. <https://doi.org/10.1024/1012-5302/a000822>

Tracy, M. F., O'Grady, E. T., & Phillips, S. J. (2023). *Hamric & Hanson's Advanced Practice Nursing: An Integrative Approach* (7. Aufl.). Elsevier.

Ullmann, P., Schwendimann, R., Keinath, E., Eder, K., Henry, M., Thissen, K., Schönthaler, A., Mauthner, O., Freyer, S., Fierz, K., & others. (2017). *Visionen und Realitäten in der Entwicklung von APN & ANP*.

https://nursing.unibas.ch/fileadmin/pflege/redaktion/Weiterbildung/ANP_plus/APN_Magazin_-_Visionen_und_Realit%C3%A4ten_in_der_Entwicklung_von_APN___ANP.pdf

unimeduisse (Hrsg.). (2023). *Arbeitspapier unimeduisse zur Entwicklung eines Berufsprofils «Nurse Practitioner»*.

Verein für Pflegewissenschaft, (VfP), Schweizerischer Berufsverband der Pflegefachfrauen und Pflegefachmänner, (SBK), & IG Swiss ANP. (2012). *Gemeinsame Definition Advanced Practice Nurse (APN)*. VfP, SBK, IG SwissANP.

Wheeler, K. J., Miller, M., Pulcini, J., Gray, D., Ladd, E., & Rayens, M. K. (2022). Advanced Practice Nursing Roles, Regulation, Education, and Practice: A Global Study. *Annals of Global Health*, 21.