**Job Description of KOICA Volunteer**

**1-1. Nursing volunteer – dispatched to hospital/dispatched to local community**

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| **category** | **details** |
| **A. Management of infection** | 1) Care service for patients with various infectious diseases  |
| 2) Quarantine / reverse quarantine of patients  |
| 3) Aseptic technique / disinfection  |
| 4) Personal hygiene (washing hands, etc.)  |
| 5) Management of hospital sanitation (management of various hospital facilities such as bathrooms, shower stall, etc.)  |
| **B. First aid**  | 1) Care service for emergency patient  |
| 2) Treatment for trauma patient  |
| **C. Healthcare for mother and child** | 1) Birth control/sex education  |
| 2) Care service before and after childbirth |
| 3) Delivery room care  |
| 4) Neonatal care  |
| 5) Care service for infants with serious illness |
| 6) Care service for children and adolescents  |
| **D. Management of surgery patients** | 1) Aseptic technique  |
| 2) Role of circulating nurse and scrub nurse |
| 3) Supply and management of disinfectant products  |
| 4) Care service for patients before and after surgery  |
| **E. Nursing administration** | 1) Management of personnel |
| 2) Management of goods  |
| 3) Management of wards |
| **F. Health education plan** | 1) Hospital protocol / manual plan |
| 2) Patient and guardian education |
| 3) Hospital staff education  |

**1-2. Nursing volunteer – dispatched to school**

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| **category** | **details** |
| **A. Management of infection** | 1) Care service for patients with various infectious diseases |
| 2) Personal hygiene (washing hands, etc.) |
| **B. First aid** | 1) Care service for emergency patient |
| 2) Treatment for trauma patient |
| **C. Sex education**  | 1) Birth control/sex education |
| 2) Management of venereal disease (syphilis, gonorrhea, AIDS) |
| **D. Health education plan/evaluation** | 1) Health education program plan for students (anti-smoking, tetanus, parasite, skin trouble, endemic disease, rabies, nutrient deficiency, etc.)  |
| 2) Health education program plan for employees |
| **E. Environment management**  | 1) Safety management (facilities management and maintenance) |
| 2) Sanitation (dormitory, cafeteria, hydration station, restroom, etc.) |

**2. Architecture**

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| **category** | **details** |
| **A. Architectural design** | 1) Principle of architectural design and methodology of architectural plan  |
| 2) Making of a blueprint by using CAD/ SketchUp program  |
| **B. Building structure**  | 1) Basic principle and understanding of building structure  |
| 2) Type and characteristic of building structural system  |
| **C. Building construction** | 1) Method and characteristic of building construction  |
| 2) Understanding of construction process management  |
| **D. Architectural carpentry** | 1) Theory of carpentry and making of a furniture blueprint  |
| 2) Making furniture by using environment-friendly lumber |
| **E. Architectural equipment** | 1) Concept and theory of environment-friendly architectural system  |
| 2) Understanding and practice of passive architectural equipment  |

**3. Science education**

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| **Category** |
| **A. Physics** |
| **B. Chemistry**  |
| **C. Earth science** |
| **D. Biology** |

**4. Tourism**

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| **category** | **details** |
| **A. Tourism management industry** | 1) Management of travel agency  |
| 2) Management of hotel and food service enterprise |
| **B. Tourism development**  | 1) Investigation of tourism resources and demand  |
| 2) Establishment of tourism development plan and commercialization  |
| **C. Planning and management of festival(event)** | 1) Investigation of local cultural tourism resources  |
| 2) Planning of festival(event)  |
| 3) Management of festival(event) |
| **D. Practical tourism education**  | 1) Guide to tour package |
| 2) Guide to tour attraction  |
| 3) Hotel and food service  |

**5. Machine**

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| **category** | **details** |
| **A. Mechanical design** | 1) Understanding of mechanical design  |
| 2) Theory and practice of CAD |
| **B. Mechanical tools** | 1) Cutting process training (rack)  |
| 2) Cutting process training (milling)  |
| **C. Mechanical tools** | 1) Understanding and training of CNC mechanical tools  |
| 2) Understanding and training of welding process |
| **D. Mechanical drawing** | Mechanical drawing, Auto CAD |

**6. Physical therapy**

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| **category** | **details** |
| **A. Musculoskeletal physical therapy** | 1) Management of chronic musculoskeletal disease in body parts |
| 2) Sports physical therapy |
| 3) Obstetric physical therapy  |
| 4) Physical therapy after musculoskeletal surgery  |
| **B. Nervous system physical therapy** | 1) Management of adults’ nervous system disorder |
| 2) Management of children’s nervous system disorder  |
| 3) Management of spinal cord injury  |
| 4) Hydro physical therapy  |
| **C. Cardiopulmonary physical therapy** | 1) Cardiac rehabilitation  |
| 2) Management of blood vessel disease  |
| 3) Management of lung disease  |
| **D. Skin disorder physical therapy** | 1) Management of bedsore, wound, burn, and frostbite |
| 2) Other skin disorder (psoriasis, shingles, athlete’s foot, leukoplakia) |
| **E. Chronic and intractable disease management**  | Obesity, diabetes, high blood pressure  |

**7. Art education**

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| **Category** | **details** |
| **A. For students** | Idea expression method  |
| Junk art  |
| Origami (paper art)  |
| Art expression (drawing technique according to various materials)  |
| Clay craft  |
| Art therapy  |
| Mural painting  |
| Chalk art  |
| Balloon art  |
| Silk screen  |
| Engraving  |
| Portrait (caricature)  |
| **B. For teachers**  | Making art materials  |
| Teaching method of art |
| Developing art curriculum  |
| **C. For the public** | Education about art business start-up |
| Making useful props |

**8. Beauty treatment education**

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| **category** | **details** |
| **A. Hair care**  | 1) Hair cutting (various cutting techniques by using the tools such as scissor, clipper, etc.)  |
| 2) Hair permanent waving (trend perm technique by using heat wave, cold wave)  |
| 3) Hair coloring (dyeing technique including acidity, alkalinity, and bleaching)  |
| 4) Hairstyling (Style expression including upstyle and the use of dryer, iron, setting machine) |
| 5) Hair and scalp care (treatment for healthy hair and scalp)  |
| **B. Skin care**  | 1) Face care (skin analysis and management for each type)  |
| 2) Whole body care (management of whole body by manipulation)  |
| 3) Special care (management by using devices)  |
| 4) Aromatherapy (Aroma therapy and efficacy)  |
| **C. Makeup**  | 1) Analysis of face shape and basic makeup (skin appearance and basic makeup technique)  |
| 2) Beauty makeup by theme (natural, romantic, modern, wedding makeup, etc.)  |
| 3) Character and art makeup (stage makeup, fantastic makeup)  |
| **D. Nail care** | 1) Basic hand care (cuticle removal, making nail shape, hand massage, nail coloring)  |
| 2) Nail art (nail overlay and extension, nail design)  |
| **E. Beauty education practice**  | 1) Use of MS (PowerPoint, Excel, Word)  |
| 2) Teaching plan, lecture session, and administration (video editing, making teaching material)  |

**9. Radiation**

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| **category** | **details** |
|  | 1) Breast tomography room |
| 2) Cranial tomography room |
| 3) Full body tomography room |
| 4) Pediatric computed tomography room |
| 5) Mammography room  |
| 6) Bone density examination room |
| **B. CT scan room**  | 1) Abdominal CT scan room |
| 2) Other CT scan room |
| **C. Ultrasound room** | 1) Abdominal ultrasound room  |
| 2) Echocardiography room  |
| 3) OB/GYN ultrasound room |
| **D. Blood vessel intervention**  | 1) Nervous system examination room  |
| 2) Cardiovascular system image room  |
| 3) Abdominal angiography room  |
| **E. Computer tomography room** | 1) Computer tomography  |
| **F. MRI room** | 1) MRI |
| **G. Darkroom**  | 1) Darkroom |
| 2) Automatic film developer  |

**10. General health**

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| **category** | **details** |
| **A. Management of infection** | 1) Various infectious diseases |
| 2) Personal hygiene (washing hands, dental care, etc.) |
| **B. Health education plan and evaluation**  | 1) School health education program- Birth control/sex education- Management of venereal diseases (syphilis, gonorrhea, AIDS, etc.)- **First aid**- Safety education  |
| 2) Health education program for local residents (antismoking, tetanus, parasite, skin disease, endemic disease, rabies, nutrient deficiency, etc.) |
| 3) Staff training program  |
| 4) Processing health statistics  |
| **C. Management of facilities and environment** | 1) Safety management (facilities maintenance)  |
| 2) Contamination control (treatment of waste from restaurant, hydration station, sink, restroom, etc.  |

**11. Librarian**

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| **category** | **details** |
| **A. Information education**  | 1) Education for librarians about library management and information service by using IT |
| 2) Education for users about how to use the library and collect data by using IT  |
| **B. Book classification and inventory** | 1) Establishment and maintenance of MARC formats for books and periodicals  |
| 2) Establishment and maintenance of MARC formats for non-literature materials  |
| **C. Establishment of automated system**  | 1) Establishment of automated library system (non-commercial version) and website  |
| 2) Check-out/return service  |
| **D. Library management**  | 1) Collection of books and policy establishment  |
| 2) Establishment of multimedia room and service  |
| **E.** Guided reading | 1) Management of reading forum and guided reading by age  |
| 2) Hosting a book exhibition to promote reading |

**12. Social welfare**

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| **category** | **details** |
| **A. Institution for adolescents and children** | Recreation leadership  |
| Academic teaching ability  |
| Physical education teaching ability |
| Competency to plan program for youth cultural activity  |
| Competency to organize and support youth club activity |
| Competency to develop, plan and execute programs  |
| Communicative ability in interpersonal relations  |
| Competency to counsel and guide institutionalized children  |
| Adolescent counseling ability  |
| Word processing ability (Hangul, Excel, PowerPoint)  |
| Competency to understand adolescent sex culture and develop programs  |
| Leadership |
| Competency to make program manual  |
| Competency to create local community network  |
| Competency to investigate local community and discover resources  |
| **B Institution for people with disabilities** | Competency to provide emergency safety service  |
| Competency to counsel disabled people or parents  |
| Competency to implement activity to protect the rights and interests of disabled people / Ability to execute the program of disability awareness  |
| Competency to support disabled people’s independent living  |
| Competency to support and manage self-help group / Arbitration ability  |
| Competency to counsel and guide in the facility of handicapped people  |
| Development of job skills for disabled people |
| Support and management of activities for people with disabilities  |
| Competency to create a local community network  |
| Competency to investigate local community  |
| Competency to discover resources in the local community  |
| **C. Institution for families and women** | Family therapy and counseling ability |
| Competency to give counsel about sexual abuse and domestic violence |
| Competency to give education about gender perspective (gender equality)  |
| Competency to plan and execute the program to improve conjugal relations  |
| Competency to plan and execute the program to improve parent-child relationship  |
| Competency to plan and execute the program for pregnancy and delivery |
| Competency to carry out hygiene education |
| Sex education  |
| Basic office competency (Hangul, Excel, PowerPoint)  |
| Competency to create a local community network |
| Competency to investigate local community |
| Competency to discover resources in the local community |
| **D. Institution for senior citizens’ welfare**  | Competency to counsel senior citizens and guardians  |
| Basic office competency (Hangul, Excel, PowerPoint) |
| Competency to plan and execute the welfare program for senior citizens |
| Competency to support daily service and make manual  |
| Competency to guide leisure activity for senior citizens  |
| Competency to measure Alzheimer’s test  |
| Case management / service intervention plan  |
| Competency to build a cooperative system with outside organization |
| Organizational administrative work  |
| Competency to create a local community network |
| Competency to investigate local community |
| Competency to discover and use resources in the local community |
| **E. Community center / city hall / school**  | Administrative work  |
| Competency to educate local community residents  |
| Competency to teach students and supervise leisure activities  |
| Planning and execution of local community program  |
| Communicative ability in interpersonal relations |
| Word processing ability (Hangul, Excel, PowerPoint) |
| Competency to create a local community network |
| Competency to investigate local community |
| Competency to discover resources in the local community |

**13. Textiles and clothing**

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| **category** | **details** |
| **A. Weaving**  | 1) Weaving (preparation process, decomposition design)  |
| 2) Knitting (stitch, Jaccard)  |
| **B. Dyeing**  | 1) Dyeing (boiling off/bleaching, room temperature, high temperature, high pressure) |
| 2) Post-processing  |
| **C. Design** | 1) Fashion illustration |
| 2) Pattern design  |
| **D. Tailoring/sewing**  | 1) Tailoring  |
| 2) Fabric sewing (textile, knitting)  |
| 3) Leather/industrial material sewing  |

**14. Mathematics education**

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| **category** | **details** |
| **A. Math software**  | 1) Use of GSP  |
| 2) Use of Maple TA |
| **B. Use of Latex program** | 1) Use of Latex |
| 2) Practice of commands  |
| **C. Flipped Learning** | 1) Coursera |
| 2) Movenote, making video lecture |
| **D. Pertaining to modification**  | 1) Modification by using Hangul |
| 2) Modification by using MS Word  |
| 3) Modification by using PowerPoint |
| **E. Pertaining to secret codes and use of modification**  | Sign and code lectures for middle and high school students  |

**15. Cooking**

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| **category** | **details** |
| **A. Sanitary control**  | 1) Sanitary management of cooking utensils |
| 2) Food hygiene education  |
| **B. Recipe for Korean food**  | 1) Teaching Korean food  |
| 2) Training of recipe for Korean food  |
| **C. Hotel culinary skills**  | 1) Basic understanding of hotel culinary art  |
| 2) Training of various hotel culinary arts (Western, Chinese, Japanese food)  |
| **D. Food materials and kitchen management**  | 1) Understanding of food materials and food culture  |
| 2) Management and establishment of kitchen facilities  |
| **E. Other skills**  | 1) Food styling and carving  |
| 2) Strengthening the competency of local residents to find job or start business  |

**16. Welding**

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| **category** | **details** |
| **A. Theory of welding, practice with sheet metal, repair of welding machine** | 1) Mechanical system, basic engineering, welding engineering, welding materials  |
| 2) Practice with sheet metal  |
| 3) Basic repair of welding machine  |
| **B. Shielded metal arc weld (electric welding)**  | 1) Fillet welding, butt welding  |
| 2) Pipe cutting and welding  |
| **C. CO2 welding and spot welding**  | 1) **CO2 welding** |
| 2) Spot Welding |
| **D. Gas welding and cutting**  | 1) Gas welding  |
| 2) Cutting  |
| **E. TIG/MIG/MAG welding**  | 1) TIG welding (Tungsten Inert Gas arc welding) |
| 2) MIG/MAG welding (Metal Inert Gas arc welding) |

**17. Early childhood education**

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| **category** | **details** |
| **A. Competency to manage teachers**  | Capable of guiding special education course for local teachers and grope for rational methods to make application?  |
| **B. Understanding of early childhood development** | Capable of understanding the stages of early childhood development, and applying it to education?  |
| **C. Guidance on child education course**  | Capable of understanding basic theories and achievement level of child education course, and applying effective teaching method?  |
| **D. Competency to make and use teaching materials and tools**  | Capable of making proper teaching materials and tools according to each student, and using them in the class?  |
| **E. Early childhood music education**  | Capable of understanding basic music theories and teaching children according to their level of development?  |
| Capable of playing instrument for early childhood music education? Instruments played: |
| **F. Early childhood art education**  | Capable of understanding basic theories of art and teaching children according to their level of development?  |
| Capable of learning simple skills, e.g. drawing, making and folding, to use for early childhood art education?  |
| **G. Early childhood physical education**  | Capable of understanding basic theories of physical education and teaching children according to their level of development? |
| Capable of learning simple skills, e.g. gymnastics, ball game, and play-based expression, to use for special physical education? |
| **H. Computer skills**  | Capable of handling computer programs? (Word, Excel, PowerPoint, etc.)  |
| Capable of giving education about information search by using the Internet?  |
| **I. Early childhood experiential education**  | Capable of providing proper guidance and supervision for development of children’s talent and diverse creative experiential activities?  |
| Capable of providing global civic education by introducing various international cultures? |
| Capable of giving education to explore career direction and occupation? |
| **J. Parents education**  | Capable of giving proper instruction to parents concerning early childhood education?  |

**18. Music education**

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| **Category** |
| **A. Choir instruction**  |
| **B. Orchestral music performance and instruction**  |
| **C. Ukulele performance and instruction**  |
| **D. Ocarina performance and instruction** |
| **E. Piano performance and instruction** |
| **F. Guitar performance and instruction** |
| **G. Drum performance and instruction** |
| **H. Music theory education**  |

**19-1. Clinical pathology - dispatched to tuberculosis center**

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| **category** | **details** |
| **A. Stain** | 1) AFB stain |
| 2) Ziehl-Neelson |
| 3) Fluorescene method |
|  **B. TB culture** | 1) Egg based media |
| 2) Agar based media |
| 3) Liquid media |
| **C. Antibiotic Resistance** |
| **D. TB PCR** | MTB |
| NTB(MOTT) |

**19-2. Clinical pathology - dispatched to college**

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| **Category**  |
| **A. Biochemistry**  |
| **B. Hematology**  |
| **C. Immunology**  |
| **D. Microbiology**  |
| **E. Histology**  |
| **F. Molecular biology**  |
| **G. Clinical physiology**  |

**19-3. Clinical pathology - dispatched to hospital**

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| **category** | **details** |
| **A. Biochemistry examination room**  | 1) Liver and kidney examination  |
| 2) Electrolyte examination  |
| 3) Lipid test  |
| 4) Urine speculum examination  |
| **B. Immune serum examination room**  | 1) HBs Ag |
| 2) Anti-HBs Ab |
| 3) Anti-HBc Ab, IgG |
| 4) Anti-HBc Ab, IgM |
| 5) HBe Ag |
| 6) Anti-HBe Ab |
| 7) Anti-HCV Ab |
| 8) Anti-HAV Ab, IgM |
| 9) Anti-HAV Ab, IgG |
| 10) Auto-RPR, Quan |
| 11) Auto-TPLA, Quan |
| 12) Anti-HIV Ab |
| 13) Anti-HIV combo |
| **C. Microbiology examination room**  | 1) AFB stain & culture  |
| 2) Blood culture  |
| 3) Fungus culture  |
| 4) Gram stain & Culture  |
| 5) Occult blood (Hb quantitative analysis)  |
| 6) Stool exam (Parasite)  |
| 7) Stool exam (Protozoa)  |
| **D. Blood test room**  | 1) CBC, Diff. count (X6)  |
| 2) ESR (Erythrocyte sedimentation rate)  |
| 3) PT, aPTT (X2) |
| **E. Blood bank**  | 1) Ab identification  |
| 2) ABO/Rh/Ab screen (Stat) (X3)  |
| 3) Direct antiglobulin test (Coomb's test)  |
| 4) Du test (Weak D test)  |
| 5) Indirect antiglobulin test (Coomb's test)  |
| **F. Biopsy room**  | 1) Clinical specimen reduction |
| 2) Slide production  |
| 3) Slide dyeing and inclusion (H&E, Pop stain and Special stain) |
| 4) Deciphering clinical specimen  |
| **G. Physiologic function test room**  | 1) Electrocardiography  |
| 2) Pulmonary function test  |
| 3) Electromyography  |
| 4) Brainwave test  |

**19-4. Clinical pathology - dispatched to blood center**

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| **Upper category** | **Medium Category**  | **details**  |
| **A. Blood test team**  | A. Screening Inspection item  | 1) HBs Ag |
| 2) HCV |
| 3) HIV |
| 4) VDRL |
| 5) CBC |
| 6) AST |
| 7) ALT |
| 8) Malaria |
| B. ABO blood typing | 1) Major |
| 2) Minor |
| 3) Subtyping |
| C. Rh blood typing | 1) Major |
| 2) Minor |
| 3) Subtyping |
| D. Cross matching | 1) Major |
| 2) Minor |
| 3) Coobs |
| **B. Blood preparation team**  | D. Component transfusion blood preparation  | 1) Whole blood |
| 2) RBC |
| 2) Platelet |
| 3) Plasma |
| 4) Fresh Frozen Plasma(FFP) |
| 5) WBC |

**20. Automobile**

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| **category** | **details** |
| **A. Automotive engine maintenance**  | 1) Engine maintenance (intake and exhaust, cooling, lubrication, fuel, ignition) |
| 2) Gasoline engine electronic control device and diesel engine electronic control device |
| **B. Automotive sash maintenance**  | 1) Brake Transmission and driveline, brake  |
| 2) Suspension, Steering and Wheel & tire, Wheel Alignment |
| **C. Automobile electric/electronic maintenance**  | 1) Equipment for convenience, lighting system and charge, starting the engine, air conditioner  |
| 2) Electric/electronic circuit analysis and trouble shooting, network communication device  |
| **D. Body repair and painting**  | 1) Welding and cutting, panel change, body damage estimation and recovery  |
| 2) Body painting (primer, putty, toning, masking)  |
| **E. Automotive design and performance test**  | 1) System design (engine ancillaries system, sash, body and moving part, wiring design  |
| 2) Performance test (power performance, brake performance, mileage and exhaust gas, vibration noise, thermal performance) |

**21. Electric power**

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| **category** | **details** |
| **A. Electric/electronic basic theories and practice**  | Classification and distinction of electronic components  |
| Use of components  |
| Analytical method of electric circuit  |
| Calculation of resistance value for lighting LED lamp  |
| Making of DC power supply unit  |
| Measurement and test of DC power supply unit  |
| **B. Pneumatic(Hydraulic) control theory**  | Formation of a system for pneumatic control  |
| Principle of pneumatic movement  |
| Type of circuit for pneumatic control  |
| Time control by using electropneumatic timer |
| Design and connection of electropneumatic control circuit  |
| **C. Interior control theory and practice**  | Understanding of sequence components  |
| Formation of switchboard for family use  |
| Principle and instructions of earth leakage circuit breaker |
| Formation of circuit for making switchboard  |
| Connection for making switchboard  |
| Switchboard measurement and test  |
| **D. Automatic control theory and practice**  | Noncontact control  |
| Input/output allotment  |
| Practice of PLC-based circuit  |
| Practice of self-hold, interlock, scan processing circuit  |
| Understanding and practice of alternate circuit  |
| Understanding of PLC-based electropneumatic sequence control  |
| **E. PLC-based electric sequence**  | Application of PLC-based sequence control  |
| Practice of PLC-based sequence control |

**22. Electronics**

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| **category** | **details** |
| **A. Diode** | 1) Voltage wave rectifier circuit  |
| 2) Zener diode constant voltage circuit  |
| **B. Transistor**  | 1) Common-emitter type circuit  |
| **C. Multivibrator**  | 1) Transistor circuit bias design  |
| 2) Theory and practice of unstable multivibrator  |
| **D. Digital signal processing and MATLAB programming**  | 1) MATLAB program theory and practice (Type and characteristics of signal)  |
| **E. Microprocessor**  | 1) C Language, Microprocessor  |
| 2) LED-use output  |
| 3) Switch-use input  |
| 4) External interrupt function, timer/counter, etc.  |
| **F. PLC** | 1) PLC use  |
| 2) a, b, and, or |
| 3) Timer, sensor, interlock circuit, etc.  |

**23. Confectionery and bakery**

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| **category** | **details** |
| **A.** Theory of confectionery and bakery, and practice of operating equipment  | 1) Theory of confectionery and bakery |
| 2) Practice of operating kitchen tools and equipment (improvement of working conditions)  |
| **B. Bakery training**  | 1) Practical bakery training for teachers  |
| 2) Vocational education for employment of women  |
| **C. Confectionery training and food styling**  | 1) Supply of confectionery skills and local technical application  |
| 2) Food styling education  |
| **D. Cake decorating and hygiene education** | 1) Training of cake decorating |
| 2) Purchase of food ingredients and hygiene education  |
| **E. Preparations for various contests and supervision of the club**  | 1) Guidance on preparation for national confectionery and bakery contests  |
| 2) Guidance on clubs and hobby activities  |

**24. Physical education (general)**

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| **category** | **details** |
| **A. Health theory and training**  | 1) Requirements for health (nutrition, exercise, sleep) |
| 2) Nutrition and exercise program according to development over a whole lifetime  |
| 3) Practical training  |
| **B. Physical education teacher and athletic team coach**  | 1) Understanding of challenging activities (track and field: long-distance running, long jump, high jump, horse vault, throw, Korean wrestling) and guidance  |
| 2) Understanding of competitive sports (ball game: badminton, ping pong, dodgeball, soccer, basketball)  |
| 3) Understanding of cooperative activity (tug-of-war, group ball game)  |
| 4) Understanding of expressive activity (gymnastics, dance, rhythm sports)  |
| 5) Making physical education textbook and practical manual  |
| **C. Planning and evaluation of P.E. program**  | 1) Planning and evaluation of P.E. program for students - Planning and opening sports festival - Establishing and operating sports activity club  |
| 2) Planning and evaluating participation in sports contest  |
| **D. Support for athletic activities** | 1) Starting sports business  |
| 2) Maintenance of sports supplies  |
| 3) Starting a program of warm-up exercise and workout for local residents  |
| **E. Safety management and sanitation**  | 1) Education for safety management  |
| 2) Education for sanitation  |

**25. Physical education (Taekwondo)**

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| **category** | **details** |
| **A. Technical Skills** | 1) Instruction for competition  |
| 2) Instruction for techniques  |
| 3) Demonstration and participation  |
| **B. Physical Skills** | 1) Basic Skills |
| 2) Health theory and athletic program according to lifecycle  |
| **C. Character** | 1) Understanding of cooperative activity |
| 2) Understanding of competitive activity  |
| 3) Student counseling  |
| **D. Mental Skills** | 1) Program to improve concentration  |
| 2) Training for mental health (nutrition, exercise, sleep) |
| **E. Tactical Skills** | 1) Establishing Taekwondo team for demonstration and competition |
| 2) Training and teaching method  |

**26. Primary education**

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| **category** | **details** |
| **A. Understanding of child development**  | 1) Capable of understanding the stage of child development, and applying it to education? |
| **B. Guidance on elementary school curriculum**  | 1) Capable of understanding basic theories and achievement level of primary education course, and applying effective teaching method? |
| **C. Music education for children** | 1) Capable of understanding basic music theories and teaching children according to their level of development? |
| 2) Capable of playing instrument for music education? |
| **D. Art education for children**  | 1) Capable of understanding basic theories of art and teaching children according to their level of development? |
| 2) Capable of learning simple skills, e.g. drawing, making and folding, to use for childhood art education? |
| **E. Physical education for children**  | 1) Capable of understanding basic theories of physical education and teaching children according to their level of development? |
| 2) Capable of learning simple skills, e.g. gymnastics, ball game, and play-based expression, to use for childhood physical education? |
| **F. Computer education for children**  | 1) Capable of handling computer programs? (Word, Excel, PowerPoint, etc.) |
| 2) Capable of giving education about information searching by using the Internet? |
| **G. Experiential education for children**  | 1) Capable of providing proper guidance and supervision for development of children’s talent and diverse creative experiential activities? |
| 2) Capable of providing global civic education by introducing various international cultures? |
| 3) Capable of giving education to explore career direction and occupation? |
| **H. Parents education**  | 1) Capable of giving proper education to parents concerning childhood education? |

**27. Computer education (design)**

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| **category** | **details** |
| **A. Visual design**  | 1) Editing design, printed ad design  |
| 2) Package design, other visual design  |
| **B. Digital/multimedia design** | 1) Web design, other digital/multimedia design  |
| 2) Animation, character, game design  |
| **C. Broadcast/video contents design**  | 1) Filming, producing and editing TV videos and movies  |
| 2) Making video contents (scenario, filming, editing)  |
| **D. Product/space design**  | 1) Electric/electronic product design, living/environmental design  |
| 2) Interior decoration design, furniture design  |
| **E. Service/experience design**  | 1) Information design, interaction design  |
| 2) UI/UX design, service design  |
| **F. Others 1** | 1) Education of basic art, basic design  |
| 2) Basic computer, management of computer room  |

**28. Computer education (general)**

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| **category** | **details** |
| **A. Installation and use of Office**  | 1) Installation of English Office  |
| 2) Use of Excel, Power Point, Word  |
| **B. Inner structure of the computer and assembling/disassembling**  | 1) Understanding the inner structure of the computer  |
| 2) Assembling/disassembling the computer  |
| **C. Installation and use of Operating system**  | 1) Installation of English Window 7  |
| 2) Virtual drive, UltraISO  |
| 3) System backup/restoration  |
| **D. PC maintenance**  | 1) BIOS Setup(Award/Phoenix/AMI) |
| 2) Components inspection/components change/hardware diagnosis  |
| 3) OS diagnosis and optimization setting  |
| **E. Network setting**  | 1) Network communication setting  |
| 2) Router and AP setting  |
| 3) Making LAN cable  |

**29. Special education**

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| **category** | **details** |
| **A. Competency to manage teachers** | Capable of guiding special education course for local teachers and grope for rational methods to make application? |
| **B. Understanding of special development** | Capable of understanding the stage of special development, and applying it to education? |
| **C. Guidance on special education curriculum** | Capable of understanding basic theories and achievement level of special education course, and applying effective teaching method? |
| **D. Special rehab treatment education** | Capable of understanding and applying rehab treatment suitable for the development level of special ed students?  |
| **E. Special psychological counseling ability**  | Capable of providing psychological counsel according to the development level of special ed students? |
| **F. Special music education**  | Capable of understanding basic music theories and teaching according to the level of special development? |
| Capable of playing instruments and using them to special music education?  |
| **G. Special art education**  | Capable of understanding basic theories of art and teaching according to the level of special development? |
| Capable of learning simple skills, e.g. drawing, making and folding, to use for special art education? |
| **H. Special physical education**  | Capable of understanding basic theories of physical education and teaching according to the level of special development? |
| Capable of learning simple skills, e.g. gymnastics, ball game, and play-based expression, to use for special physical education? |
| **I. Computer skills**  | Capable of handling computer programs? (Word, Excel, PowerPoint, etc.) |
| Capable of giving education about information searching by using the Internet? |
| **J. Special experiential education**  | Capable of providing proper guidance and supervision for development of special students’ talent and diverse creative experiential activities? |
| Capable of providing global civic education by introducing various international cultures? |
| Capable of giving education to explore career direction and occupation? |
| **K. Parent education** | Capable of giving proper education to parents concerning special education? |

**30. Korean language education**

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| **category** | **details** |
| A. Designing curriculum and syllabus  | 1) Deciding the level and assigning the class for learners  |
| 2) Designing a curriculum of a semester  |
| 3) Making evaluation form and carry out evaluation  |
| 4) Supplementing and developing Korean language main/auxiliary textbook (Korean textbook, dictionary, voice data, etc. based on the local language)  |
| B. Language functional teaching method  | 1) Teaching method for speaking  |
| 2) Teaching method for writing |
| 3) Teaching method for listening  |
| 4) Teaching method for reading  |
| 5) Implementing language functional evaluation (including performance assessment)  |
| C. Teaching methods in addition to language functional classes  | 1) Teaching method for grammar |
| 2) Teaching method for Korean alphabet  |
| 3) Teaching method for TOPIK  |
| 4) Business Korean education for finding job |
| 5) Teaching method for pronunciation  |
| 6) Sino-Korean words education  |
| 7) Educating local residents to be Korean-language teachers  |
| D. Korean culture class | 1) Class combining language and culture  |
| 2) Class using Korean entertainment contents (TV shows, K-pop)  |
| 3) Establishing a class by using newspaper, books  |
| 4) Learning and experiencing food, traditional games, costume  |
| 5) Literature (poetry, novel) class  |
| E. Planning and operating events about Korean language and culture  | 1) Korean speaking contest  |
| 2) Korean writing contest  |
| 3) Korean cultural festival  |
| 4) K-pop competition  |

**31. Youth development**

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| **category** | **details** |
| **A. Institution for teenagers and children** | Recreation leadership  |
| Academic teaching ability |
| Physical education teaching ability |
| Competency to plan programs for youth cultural activity  |
| Competency to organize and support youth club activity  |
| Competency to develop/plan/execute programs  |
| Communicative skills in interpersonal relations  |
| Competency to counsel and guide institutionalized children |
| Adolescent counseling ability  |
| Word processing ability (Hangul, Excel, PowerPoint)  |
| Competency to understand adolescent sex culture and develop programs  |
| Leadership |
| Competency to make program manual  |
| Competency to create local community network  |
| Competency to investigate local community and discover resources  |
| **B Institution for people with disabilities** | Competency to provide emergency safety service  |
| Competency to counsel disabled people or parents  |
| Competency to implement activity to protect the rights and interests of disabled people / Competency to execute the program of disability awareness  |
| Competency to support disabled people’s independent living  |
| Competency to support and manage self-help group / Arbitration ability  |
| Competency to counsel and guide in the facility of handicapped people  |
| Development of job skills for disabled people |
| Support and management of activities people with disabilities  |
| Competency to create a local community network  |
| Competency to investigate local community  |
| Competency to discover resources in the local community  |
| **C. Institution for families and women** | Family therapy and counseling ability |
| Competency to give counsel about sexual abuse and domestic violence |
| Competency to give education about gender perspective (gender equality)  |
| Competency to plan and execute the program to improve conjugal relations  |
| Competency to plan and execute the program to improve parent-child relationship  |
| Competency to plan and execute the program for pregnancy and delivery |
| Competency to carry out hygiene education |
| Sex education  |
| Basic office competency (Hangul, Excel, PowerPoint)  |
| Competency to create a local community network |
| Competency to investigate local community |
| Competency to discover resources in the local community |
| **D. Community center/ city hall / school** | Administrative work  |
| Competency to educate local community residents  |
| Competency to teach students and supervise leisure activities  |
| Planning and execution of local community program  |
| Communicative ability in interpersonal relations |
| Word processing ability (Hangul, Excel, PowerPoint) |
| Competency to create a local community network |
| Competency to investigate local community |
| Competency to discover resources in the local community |

**32. Agriculture**

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| **category** | **details** |
| **A. Vegetable cultivation**  | 1) Types and characteristics of vegetables/management  |
| 2) Soil and plant nutrition, and insect pest control  |
| **B. Greenhouse horticulture**  | 1) Types and characteristics of crop cultivation facilities  |
| 2) Environmental technique of crop cultivation facilities  |
| **C. Crop genetic breeding**  | 1) Reproduction method and heredity of crops  |
| 2) Breeding method of crops  |
| **D. Processing of agricultural products**  | 1) Handling after harvesting agricultural products  |
| 2) Storage and processing of agricultural products  |

**33. Fisheries**

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| **category** | **details** |
| **A. Fishing gear and tools** | 1) Materials and characteristics of fishing gear  |
| 2) Type and use of fishing tools  |
| **B. Fishery and fishing method**  | 1) Process of fishery  |
| 2) Classification and behavior of fishing gear and tools  |
| **C. Current status of international fishery**  | 1) Current status of international fishery |
| 2) Processing and distribution of caught fish  |
| **D. Rearing and managing fish**  | 1) Summary of rearing  |
| 2) Rearing facility and breeding method / disease prevention and control  |
| **E. Maintenance of fishing gear**  | 1) Fishing net  |
| 2) Knotting method  |

**34. Food processing**

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| **category** | **details** |
| **A. New product development by using local specialties**  | 1) Development of agricultural food (jelly, dried fruit, juice, bakery, confectionery, fermented foods, etc.) |
| 2) Development of livestock products (cheese, yogurt, ham, egg processing, etc.) |
| **B. Analysis of food ingredients**  | 1) Analysis of regular ingredients  |
| 2) Equipment analysis (HPLC, GC, spectrophotometry, etc.) |
| **C. Food microorganism and sanitation management**  | 1) Analytical method according to the types of microorganisms  |
| 2) HACCP management  |
| **D. Food physiological phenomenon and storage method**  | 1) Physiological phenomenon according to the types of foods |
| 2) Storage method (refrigerating, freezing, drying, sugar storage, CA storage)  |
| **E. Food packaging**  | 1) Types and characteristics of packing materials  |
| 2) Packing and designing  |

**35. Community development**

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| **category** | **details** |
| **A. Development of farming and fishing village**  | 1) Understanding of community development theory, cultural and religious background  |
| 2) Participation in rural area development for national industrial status  |
| **B. Cultivation of agricultural product and technique to raise livestock**  | 1) Basic technique to raise crop(livestock) suitable for climate (fruit trees, horticulture, floriculture, rice cultivation, sowing, beef cattle, hog raising, poultry farming, etc.)  |
| 2) Technique to handle machines and tools for agriculture and animal husbandry (power unit, irrigation facility, vinyl greenhouse facility, etc.)  |
| **C. Construction of facilities**  | 1) Basic understanding of agricultural/dairy industry facilities and basic environmental management  |
| 2) Installation of local industry facilities and basic technique for maintenance (layout, electricity, piping, cement, painting, carpentering, etc.) |
| **D. Urban living and culture**  | 1) Understanding of urban development plan according to regional characteristics  |
| 2) Understanding standard of urban community economy by considering regional characteristics  |
| **E. Community decision making**  | 1) History of Saemaeul Movement and sense of mission to propagate Saemaeul spirit  |
| 2) Leadership to conduct meetings and decision making for promoting Saemaeul community  |

**36. Stockbreeding**

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| **category** | **details** |
| **A. Breeding pig production**  | 1) Selection of pigs and crossbreeding practice  |
| 2) Artificial insemination of pigs (producing and injecting semen)  |
| **B. Pigs feeding and management**  | 1) Pig breeding management  |
| 2) Pig delivery management and pig growing-fattening management  |
| **C. Big domestic animals feeding and management**  | 1) Cow breeding management and cow growing-fattening management  |
| 2) Milking and milk management practice  |
| **D. Chicken feeding and management**  | 1) Management of laying hens  |
| 2) Management of broiler chickens  |
| **E. Management of pen environment**  | 1) Management of interior pen facility  |
| 2) Excrement handling and recycling  |

**37. Environment**

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| **category** | **details** |
| **A. Basic theory of environment**  | 1) Principle of purifying polluted water and purification method  |
| 2) Basic knowledge of water analysis  |
| **B. Knowledge of water analysis** | 1) Basic knowledge of water analysis |
| 2) Method of water analysis and how to use equipment  |
| **C. Method of environment purification** | 1) Physical purification principle and method  |
| 2) Chemical purification principle and method  |
| **D. Improvement method of waterworks**  | 1) Water environment purification method and waterworks improvement method  |
| 2) Design and application of physical, chemical purification facility  |
| **E. Water quality sanitation management**  | 1) Management of water quality and principle of advanced purification  |
| 2) Purification method of landfill and wastewater disposal facility  |

**38. Management**

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| **Categories**  | **Activity details**  |
| **A. Introduction to business management**  | 1) Basic information for economic studies  |
| 2) Techniques for organizational management |
| **B. Account and asset management**  | 1) Accounting theory and quantitative solutions for business management decisions  |
| 2) Budget planning, performance reviews, and evaluation analysis  |
| 3) Techniques for effective finance in business management  |
| 4) Financial planning, capital calculation, cost of capital, structure of capital, and capital market theories  |
| **C. Marketing**  | 1) Concepts of marketing and its necessity  |
| 2) Marketing function research, concepts, environment, and strategies  |
| **D. International business management**  | 1) Understanding business management, international organizations, and recognizing the importance of financial markets  |
| **E. Human resources management**  | 1) Effective development of human resources to reach an organization’s goals, and case study research  |

**39. Economy**

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| **Categories**  | **Activity details**  |
| **A. Principles of economic studies**  | 1) Product pricing theories  |
| 2) National income and employment decision theories from the standpoint of the national economy  |
| **B. Statistics**  | 1) Statistics praxis |
| 2) Statistical techniques that can be adapted for quality management  |
| **C. Economic policy research**  | 1) Analysis on the effect of government economic policy on economic problems |
| 2) Proposal of plan for a vision for economic policy |
| **D. Econometrics** | 1) Research issues of economic theories with a quantitative analytical framework |
| 2) Conducting quantitative research using empirical figures  |
| **E. Finance**  | 1) Research effective national and regional governments’ financial management  |

**40. Firefighting/disaster prevention**

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| **Categories**  | **Activity details**  |
| **A. Introduction to firefighting studies**  | 1) Firefighting administration, protection, prevention, emergency rescue, and basic concepts of disaster control  |
| **B. Response to fire**  | 1) Predicting fire damage and putting into place varied response measures |
| **C Electronic facilities for firefighting and firefighting facility design**  | 1) Installing electronic fire safety facilities like an automatic fire detection system |
| 2) Practical skill development related to firefighting facility design  |
| **D. Disaster control**  | 1) Mobilize large scale resources in case of disaster and establish a cooperative system of related agencies  |
| 2) Disaster risk analysis and educational training  |
| **E. Firefighting related electrical engineering**  | 1) Basic knowledge of firefighting related electrical engineering, and research into the causes of electric fires  |
| **F. Introduction to firefighting chemistry**  | 1) Hazardous chemicals and pharmaceutical chemicals, and basic knowledge related to hazardous materials and gasses  |

**41. Journalism/broadcasting**

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| **Categories**  | **Activity details**  |
| **A. Principles of broadcasting**  | 1) The nature and characteristics of broadcasting, broadcast mechanisms, and changes in the media environment |
| **B. Principles of mass communication**  | 1) The nature of mass communication, its social functions, and basic theories  |
| 2) Media prospect in an informational society, relations between modern society and mass communication |
| **C. Advertising**  | 1) Meaning and purpose of public relations, public relations case studies |
| **D. Press coverage**  | 1) News coverage and news article writing methods |
| **E. Broadcast production**  | 1) Broadcasting program production and presentation techniques |
| 2) Planning and design methods for production by program genre |

**42. Video media**

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| **Categories**  | **Activity details**  |
| **A. Video production and editing**  | 1) Video production and training on production techniques  |
| 1) Video editing techniques |
| **A. Contents of broadcast**  | 1) Broadcasting video content production and technology |
| 2) How to use cameras  |

**43. General administration**

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| **Categories**  | **Activity details**  |
| **A. Public administration**  | 1) Public administration theory and technique |
| 2) Mandatory knowledge for an organization’s administrative manager |
| 3) Expectable issues for administrational organization management and strategies for response  |
| **B. Personnel administration**  | 1) Personnel administration practice and fundamental theory  |
| 2) Research into the social status of civil servants as public officials and their rights as citizens |
| **C. Policy planning**  | 1) Personnel administration practice and fundamental theory |
| 2) Research into the social status of civil servants as public officials and their rights as citizens |

**44. Geography education**

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| **Categories**  | **Activity details**  |
| **A. Geography information**  | 1) Understanding concepts of geography information systems, system structures, and functional elements  |
| **B. Terrain** | 1) Research on the causes of terrain formation, terrain observations, and the knowledge needed for interpretation  |
| **C. Maps**  | 1) Earth and subsea surfaces, space measurements, topographic map production |
| **D. Environmental geography**  | 1) Raising awareness of environmental issues and seeking solutions to environmental problems from a geographical point of view  |
| **E. Urban geography**  | 1) Studying fundamental problems, such as distribution, classification, location, form, and scale of cities, from a geographical point of view |

**45. Forestry**

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| **Categories**  | **Activity details**  |
| **A. Trees**  | 1) Relationship between the characteristics of trees and their functions, knowledge of biochemistry and pedology |
| 2) Metabolic processes of trees based on their environmental conditions |
| **B. Forest soil**  | 1) Relationship between the characteristics of trees and their functions, knowledge of biochemistry and pedology |
| **C. Policies on and economics of forestry**  | 1) Analysis of phenomena in forestry caused by forestry-related policies |
| 2) Macro-level forest management |
| **D. Social ecology of forestry**  | 1) Applying the multitudinous functions of the forest in forestry |
| 2) Theories and practices related to the public functions of forests |
| **E. Fundamental theories on forestry and forest-tree breeding**  | 1) Forest, the environment, and forestry’s concepts and fundamental theories |
| 2) Knowledge related to forest functions, forest resources, tree characteristics, breeding, forest ecology, forest protection, and forest development |

**46. Nutritional management**

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| **Categories**  | **Activity details**  |
| **A. Nutritional studies**  | 1) Knowledge regarding the interactions between and balance of food, nutrients, and metabolism  |
| **B. Food hygiene**  | 1) Food safety, safe food consumption, and hygienic food management methods |
| **C. Food chemistry**  | 1) Identification of the structures and physicochemical properties of food ingredients |
| 2) Processing and storage of food ingredients |
| **D. Food science**  | 1) Basic knowledge related to food products  |
| 2) Understanding the chemical composition and nutritional value of food |
| **E. Nutritional education**  | 1) Nutrition counseling and consultation, application of nutritional theories, and development of educational media and practice techniques related to guidance  |
| **F. Diet control**  | 1) Nutrition management theories for patients with various illnesses, diet plan preparation  |
| **G. Food analysis**  | 1) Food nutrition analysis methods, characteristics of food ingredients |

**47. Occupational therapy**

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| --- | --- |
| **Categories**  | **Activity details**  |
| **A. Occupational therapy clinical practice** | 1) Clinical practice of occupational therapy for neurological patients |
| **B. Occupational therapy research methods**  | 1) Research in fields related to occupational therapy  |
| **C. Psychosocial occupational therapy** | 1) Accurate diagnosis, establishment of treatment plans, and result analysis of children with developmental disabilities such as learning disabilities, autism, and mental retardation |
| **D. Rehabilitation**  | 1) Evaluating the capabilities of people with disabilities developed pre/post-birth to seek employment  |
| **E. Neurological occupational therapy**  | 1) Various treatment theories and treatment methods for neurological impairment that occur in adult patients, such as strokes, brain injuries, or spinal cord injuries |
| **F. Pediatric occupational therapy**  | 1) An approach to occupational therapy and treatment methods using various treatment theories for children with physical disabilities |
| **G. Occupational performance analysis**  | 1) Analysis of various activities performed in occupational therapy, learning application methods for treatment |

**48. Dental hygiene**

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| --- | --- |
| **Categories**  | **Activity details**  |
| **A. Preventive dentistry**  | 1) Understanding the concept and definition of oral health, oral health care for community residents |
| 2) Establish preventive care plans for the promotion of oral health  |
| **B. Public oral health**  | 1) Basic knowledge of and oral health care systems for the promotion of oral health |
| **C. Periodontology** | 1) Identify pathological changes and physiologically normal states regarding the teeth, promoting preventive measures and treatments for pathological changes |
| **D. Introduction to dental hygiene studies**  | 1) Basic knowledge required for understanding the roles of dental hygienists and the performance of their duties |
| **E. Theories of dental cleaning**  | 1) Factors and prevention methods for periodontal diseases, theories and practices for dental cleaning (scaling)  |