**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) |