Turn Based Combat:

Automatic choosing of attack forms:

Subcommand that allows the player to choose the attack point. Should allow the player to change the attack point anytime during combat, as often as the player likes. Also check that body parts required to carry out the form are in tact and usable.

Automatic choosing of defense form:

Check for forms that are good at defending against the body part being aimed at, and do a range check. Leaning your head back might dodge a punch to the head, but it won't dodge a slash to the head with a sword. Also, a parry shouldn't work against a bash, since bash uses a very short weapon (Body or shield) and parry only works well on long/narrow weapons like daggers and swords.

Basic idea, codewise: Calculate the damages of each valid defense, and choose the one with the smallest damage.

Overall Goal of Defensive Form Choice: Choose the defensive form with enough force and speed to stop the attacking form, but also uses the least exhaustion. The closer the force and speed of the defensive form to the offensive form, the better, so long as the defensive form is higher in both.

DAMAGE FORMULAS:

Chance to hit/defend = [player skill level in form] * [current endurance/max endurance mod] * [current bloodloss/max bloodloss mod] * [current hp/max hp mod] * [limb status mod] * [encumb mod] * [speed/strength mod - think you called it aggressiveness] * [WM mod] * [wieldweight mod]

Damage = [base damage] * [followthrough mod] * [small WM mod] * [tier mod]

Absorption = [armor mod] * [shield mod]

Shield mod only applies if player: has a shield, has the shield skill, and the code determines that the player has successfully used the shield against the attack (based on the skill, weight of the shield, etc)

Overall HP loss = Damage - Absorption

Structure for Wounds (used multiple times in larger body structure):

Minor
Substantial
Gashed
Severed
Broken
Cold
Burned
Numb
Burn Scars

Gash Scars

All fields in struct wounds are integers.

Structure for a body part:

name (left upper arm)
region (arm)
percent_of_body (3.75%)
injuries (of structure type 'wounds')
- Minor (number of minor wounds: 0 - no limit. -1 if can't receive a minor wound (such as your heart.))
- Substantial (number of substantial wounds: 0 - 10. Anything over 10 is a gash. -1 if can't receive a substantial wound (such as your heart.))
- Gashed (number of gashes: 0 - 5. -1 if can't be gashed, such as nothing I can immediately think of.)
- Severed (1 if present but can be severed in combat, 0 if lost and healed, -1 if can't be lost, 2 if severed and bleeding.)
- Broken (number of breaks: 0 - no max. -1 if can't be broken. -2 and smaller for each time healed without OP (so a player can note that his nose has been broken many times)).
- Cold (-1 if can't receive cold damage, 1 if cold)
- Burned (-1 if can't receive burns, 1 if burned)
- Numb (-1 if can't be numb, 1 if numb)
- Burn Scars (tally of burns healed without OP)
- Gash Scars (tally of gashed healed without OP)

injury_data (of structure type 'wounds'. Each field stores the numerical value
given in the injury mod table. These numbers are constant.)
- Minor
- Substantial
- Gashed
- Severed
- Broken
- Cold
- Burned
- Numb
- Burn Scars (0)
- Gash Scars (0)

bloodloss_data (of structure type 'wounds'. Each field stores the numerical value given in the bloodloss mod table. These numbers are constant.)
- Minor
- Substantial
- Gashed
- Severed
- Broken
- Cold
- Burned
- Numb
- Burn Scars (0)
- Gash Scars (0)
Death_if_Broken (1 or -1)
Death_if_Severed (1 or -1)
Mod to unconscious
Mod to numb

Establishing an injury:

When a body part takes a hit, the damage it receives is partially absorbed by armor and other factors. The final number, after these modifiers, is compared against the total number of hit points the targeted body part possesses. The ranges in injury table dictate what kind of wound it is. For instance, the right upper arm is 3.75% of the total hps. If Jake possesses 10000 hps total, then his arm has 375 hps. If the arm is hit for 38 hps, then this is approximately a hit of 10%, which rates as a minor wound according to Table 1.
After this type of wound is established, the Injury_data structure is checked -
if the body part cannot be injured in this fashion (you cannot sever an ear - I
don't want half the mud running around with missing ears :p), then the injury is
downgraded one step. Severed body parts are gashed instead, gashed body parts receive substantial hits, etc.

Some body parts have affects associated with them besides bloodloss. If your head (read: your skull) is broken, in this system, you die instantly. If your heart is gashed, you die instantly. If your right arm is broken and you have a
weapon wielded in your right hand, then it is auto-removed to either your inventory or the ground and you can no longer wield anything in that hand until
it heals. Consequently, since all weapon-wielding forms check that you have a weapon, you won't be able to attempt a weapon-wielding attack/defense until you
equip a left-handed weapon. Some body parts knock the person unconscious, or stun them (they cannot attack until the timer runs out, and their defenses are
reduced in tier).

Some body parts cannot be injured strictly according to this system.
Injury Mod:

The equation is given by multiplying all of the mods in this table together for
each body part. If Bob has two minor cuts on his arm and one gash on his head,
then the mod is minor_arm * minor_arm * gash_head = injury mod. I'll get you a
numerical example soon as I finish the spreadsheet.

The Injury Mod spirals out of control in a hurry if the individual mods are too
small (for instance, if a gash was .65 or even smaller, the first person to receive a gash would probably never be able to win another form - attack or defensive). For this reason, I moderated them so that an combatant still has a
fighting chance (excluding the necessary random element) when he accumulates a
wound or two.